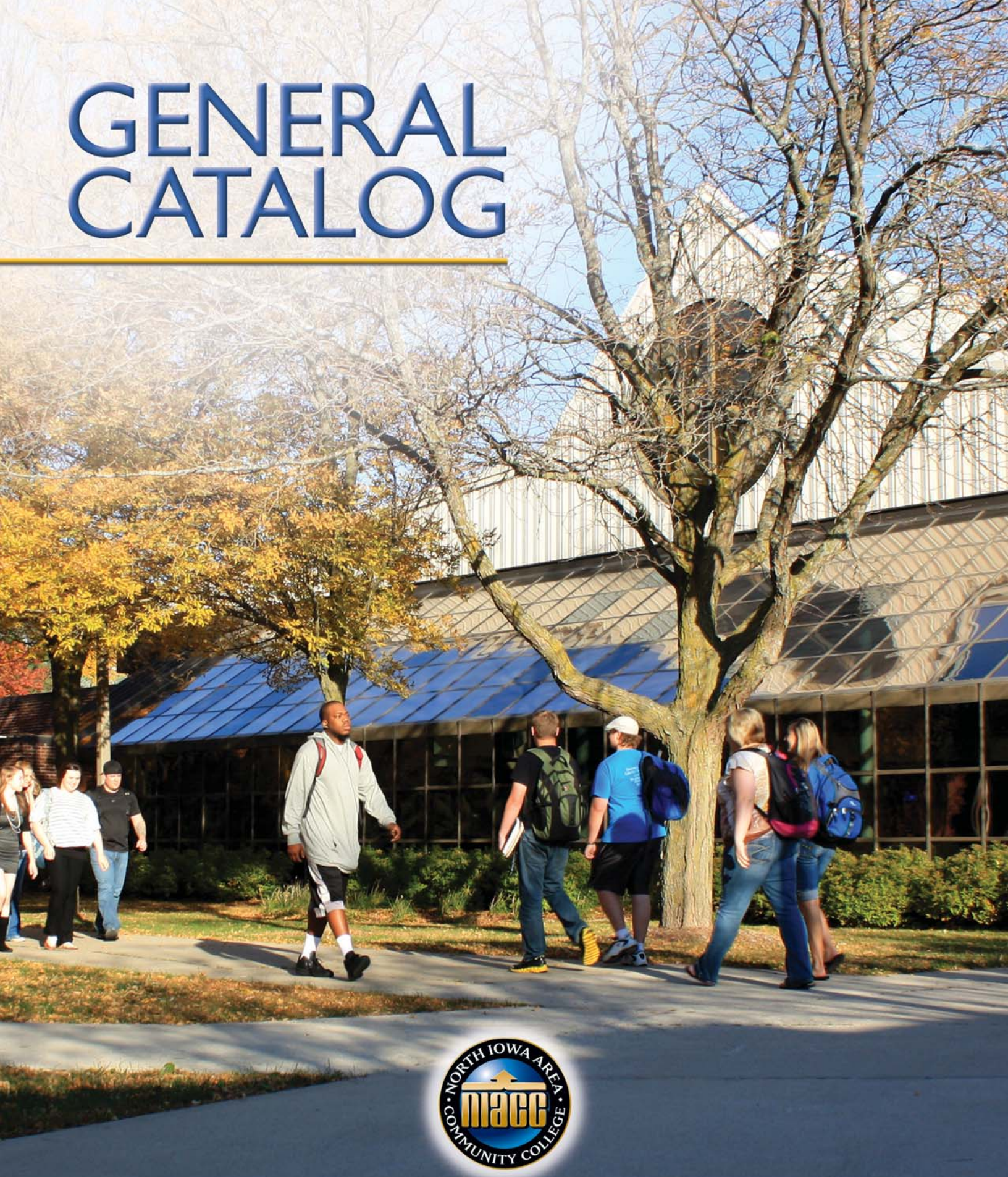
GENERAL CATALOG



NORTH IOWA AREA COMMUNITY COLLEGE

2012 - 2013

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This catalog is published for informational purposes and should not be construed as the basis of a contract between a student and North Iowa Area Community College. Every effort is made to provide information that is accurate at the time the catalog is prepared. However, information concerning regulations, policies, fees, curricula, courses, and other matters contained in this catalog is subject to change at any time during the period for which the catalog is in effect.

For more information about opportunities at North Iowa Area Community College, call the Admissions Office at (641) 422-4245 or 1-888 GO NIACC (466-4222), Ext. 4245.
Address: 500 College Drive, Mason City, IA 50401
Website: www.niacc.edu
E-mail: request@niacc.edu

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General Information

LOCATION AND HISTORY

North Iowa Area Community College (NIACC) is located just off Highway 122, four miles east of downtown Mason City, Iowa, a community of almost 30,000 which serves as an active business center for northern Iowa and southern Minnesota. The community is served by the Mason City airport and a bus line.

The North Iowa Area Community College District (Area 2) was formed in 1966 in compliance with laws enacted by the 1965 Iowa Legislature, which provided for the delivery of postsecondary education in Iowa.

The NIACC Board of Directors assumed operation of Mason City Junior College, which was the first public two-year college in Iowa and one of the earliest in the country having been established in 1918 by the Mason City Independent School District.

Construction of the present campus began in 1970. A campus directory can be found in the back of this catalog.

ACCREDITATION AND APPROVAL

North Iowa Area Community College has been accredited since 1919 by The Higher Learning Commission of the North Central Association, 30 North LaSalle Street, Suite 2400, Chicago, IL 60602, (800) 621-7440.

BOARD OF DIRECTORS

John Heilskov, CPA, Hampton, Board President, 2002-2015

Toni Noah, Retired, Charles City, Board Vice President, 2006-2013

Jean Torgeson, Certified Legal Nurse Consultant, Manly, Past Board President, 2001-2015

David Steffens, Jr., President, Norsemen Trucking, Inc., Lake Mills, 2000-2013

Karen Knudtson, Realtor, Mason City, 1989-2015

Dean Cataldo, Retired, Garner, 2003-2015

Gordon Anderson, Retired, Osage, 2004-2013

Jim Niemants, Investment Representative, Clear Lake, 2005-2013

Robert Davis, Retired, Mason City, 2007-2015

Kathy Grove, Secretary and Treasurer, North Iowa Area Community College

STRATEGIC PLAN 2011-2016

Vision

North Iowa Area Community College is our region's first choice for post-secondary education, recognized for its commitment to quality teaching and learning and dedication to seamless educational opportunities, exemplary programs and services, responsive and collaborative partnerships with business and industry, and steadfast commitment to the individuals we serve locally, regionally, and internationally.

Mission

The mission of North Iowa Area Community College is to enhance the quality of life for the people of North Iowa through comprehensive educational opportunities, progressive partnerships, exemplary service, and responsive leadership.

Core Values

- Academic Excellence
- Integrity
- Community

Strategic Priorities

Keeping NIACC First in Education

Student Quality Experience
NIACC students will have a superior learning experience as evidenced by the College collaborating to increase organizational efficiencies, delivering top-quality service, practicing learning college principles, optimizing financial aid opportunities, and increasing academic quality and student completion and success.

Quality and Relevant Education
NIACC embraces assessment as a critical and essential strategy for the continuous improvement of its programs, courses, and 21st century student learning outcomes.

Educational Center for Excellence
NIACC's Center for Excellence in Teaching and Learning serves as a resource for all employees teaching NIACC courses, in all venues across our district by providing educational support services and supporting innovative pedagogy and assessment methodology.

Expand Outreach Centers
NIACC has a strong and enhanced presence in its regional centers as evidenced by the innovative utilization of technology, expanded educational and cultural offerings, and strong public school partnerships.

Performance Metrics
NIACC has useful and meaningful key performance indicators that measure and communicate the effectiveness of teaching and learning strategies, student engagement, and administrative processes that support the educational process.

Keeping NIACC First in Leadership

Innovative Educational Methods
NIACC's innovation is recognized through the research, development and application of innovative educational methods of instruction, course and program development, workforce preparation, small business development and entrepreneurship, and community engagement.

Premier Employer/Culture
NIACC is an exemplary workplace that serves as a model for other institutions across Iowa and the nation.

Collaboration with Community and Regional Organizations
NIACC promotes economic growth in North Iowa as evidenced through its facilitation of economic and workforce development strategies, which engage and collaborate with the region's economic development corporations, business and industry partners, regional and state organizations, and national initiatives.

Advocacy
NIACC advocates for education, economic vitality and the social welfare of the residents of North Iowa by engaging actively in the legislative process, economic and business development, and community service and cultural efforts.

Keeping NIACC First in Partnership

New Types of Partnerships
NIACC's new partnerships reflect best practices, leveraging technology, facilities, and emerging innovative educational and economic strategies.

New Educational Partnerships
NIACC's new educational partnerships take advantage of new teaching and learning strategies, partnerships with other educational institutions, community-based organizations, governmental agencies, and corporate partners in support of student learning.

New Regional (Community Development) Partnerships to Promote Growth
NIACC's expanded regional partnerships provide benefit to North Iowa communities evidenced by economic growth and opportunities traced back to NIACC's direct involvement.

Partner Viability
Each NIACC partnership provides relevant and effective use of partner resources resulting in mutual benefit to partners, the community and students.

GENERAL EDUCATION

Philosophy
Education is the foundation of a democratic society. General education engages students in an ongoing endeavor to acquire the knowledge and tools necessary to understand their environment and contribute to their communities.

Definition
A collection of diverse experiences in learning that teach generalized skills in communication, critical analysis, research, global awareness, interpersonal relations, aesthetics, math, and technology and survey subject matter to allow for applications of this learning in the classroom and community.

General Education Program
The General Education program at NIACC is based on eight learning objectives:

1. Communication and Interpersonal Skills: Students will possess appropriate reading, writing, speaking, listening and interpersonal skills to interact with others and express themselves effectively through written, oral, visual, and electronic methods.

2. Quantitative Skills: Students will use quantitative skills and the concepts and methods of mathematics to solve problems across disciplines.

3. Critical Thinking: Students will demonstrate goal-directed reasoning to arrive at valid conclusions, meaningful solutions, and informed evaluations.

4. Information Literacy: Students will be able to locate and use information from a variety of appropriate sources to support their judgments and arguments.

5. Technological Skills: Students will demonstrate the ability to access, understand, manage, and use technology needed to solve problems and extend human capabilities.

6. Global Awareness. Students will become familiar with the languages, history, geography, and social norms of other cultures, in order to foster cooperation, understanding, and appreciation.

7. Aesthetics: Students will create, appreciate, understand, and evaluate the nature and value of the fine arts or elements of craftsmanship.

8. Scientific Literacy: Students will demonstrate knowledge and understanding of scientific concepts and processes required for personal decision making and responsible participation in civic affairs.

These learning objectives are addressed in the General Education core of each degree program.

DEGREE REQUIREMENTS

Associate Degrees

Associate in Arts

Purposes of the degree:

1. Provide a degree goal for students who choose to follow a course of study which is specifically designed for transfer to a baccalaureate degree program.
2. Provide the essential general education, grade, and semester hour requirements for upper division status at most senior colleges and universities.

Requirements for the degree include:

1. Completion of at least sixty (60) semester hours of work consisting of courses whose principal design is for a baccalaureate program. Up to 16 semester hours of career courses can be used as elective credit. Developmental courses cannot be used to meet this requirement.
2. One-half of the required semester hours must be completed under the aegis of North Iowa Area Community College including 15 of the last 30 semester hours.
3. A minimum overall cumulative grade point average of 2.00 (C) including a 2.00 (C) cumulative grade point average in all course work at NIACC. Developmental courses are not used in calculating the cumulative grade point average for graduation.
4. Completion of the following General Education Core with a minimum of 40 semester hours:

   Communication. . . . . .8 s.h.

   This requirement can be satisfied by baccalaureate-oriented communication or speech courses with a minimum of two courses in English composition.

   Social Sciences . . . . . .8 s.h.

   Humanities . . . . . .8 s.h.

   Performance courses such as vocal and instrumental music may satisfy no more than four hours of this requirement. (Additional performance courses will be counted as elective credit.)

   Natural Science/Mathematics* . . . . . .8 s.h.

   (including at least one math and at least one science course)

   Distributed Requirement. . . . . .8 s.h.

   (to be taken from among the four divisions above)

   *It is recommended that students take a minimum of four semester hours of laboratory science.

Associate in Science

The purpose of the Associate in Science Degree is to provide a degree goal for students who choose to follow a Natural Science degree program.

Requirements for the degree include:

1. Completion of at least sixty (60) semester hours of work consisting of courses whose principal design is for a baccalaureate program. Up to 16 semester hours of career courses can be used as elective credit. Developmental courses cannot be used to meet this requirement.
2. One-half of the required semester hours must be completed under the aegis of North Iowa Area Community College including 15 of the last 30 semester hours.
3. A minimum overall cumulative grade point average of 2.00 (C) including a 2.00 (C) cumulative grade point average in all course work at NIACC. Developmental courses are not used in calculating the cumulative grade point average for graduation.
4. Completion of the following General Education Core with a minimum of 40 semester hours:

   Communication. . . . . .8 s.h.

   Social Sciences/Humanities . . . . . .8 s.h.

   Natural Science/Mathematics. . . . . .20 s.h.
   (must include at least one math and at least one science course)

   Distributed Requirement. . . . . .4 s.h.

Associate in Science (Business)

The purpose of the Associate in Science (Business) Degree is to provide a degree goal for students who choose to follow a course of study designed to give the student the option of obtaining employment in business or transferring to a four-year institution. Students who know they wish to pursue a four-year degree and want to meet general education requirements of transfer institutions should pursue the A.A. Degree.

Requirements for the degree include:

1. Completion of at least sixty (60) semester hours of work consisting of courses whose principal design is for a baccalaureate program. Up to 16 semester hours of career courses can be used as elective credit. Developmental courses cannot be used to meet this requirement.
2. One-half of the required semester hours must be completed under the aegis of North Iowa Area Community College including 15 of the last 30 semester hours.
3. A minimum overall cumulative grade point average of 2.00 (C) including a 2.00 (C) cumulative grade point average in all course work at NIACC. Developmental courses are not used in calculating the cumulative grade point average for graduation.

4. Completion of a minimum of 30 semester hours in designated business courses. See pages 128-129 for a list of courses.

5. Completion of the following General Education Core:

   Communication. . . . . 8 s.h.

   This requirement can be satisfied by baccalaureate-oriented communication or speech courses with a minimum of two courses in English Composition.

   Social Sciences and/or Humanities . . . . . 9 s.h.

   Natural Science/Mathematics. . . . . 3 s.h.

Associate in Applied Science

Purposes of the degree include:

1. Provide a degree goal for students who choose to follow a course of study which is specifically designed to lead to employment upon completion of two years of study.

2. Provide the student with an entry skill level appropriate to the career for which he/she has been preparing.

3. Provide the student with general education skills: communication, social science and/or humanities, and math and/or science.

Requirements for the degree include:

1. Completion of at least sixty (60) semester hours of a prescribed two-year career curriculum. Developmental courses cannot be used to meet this requirement.

2. One-half of the required semester hours must be completed under the aegis of North Iowa Area Community College (including 15 of the last 30 semester hours), unless specified otherwise by a program's accrediting agency.

3. A minimum overall cumulative grade point average of 2.00 (C) including a 2.00 (C) cumulative grade point average in all course work at NIACC. Developmental courses are not used in calculating the cumulative grade point average for graduation.

4. Completion of a general education core of at least 12 semester hours.

Associate in General Studies

Purposes of the degree include:

1. Provide a degree goal for students who choose to follow an individualized course of study which is not specifically designed for transfer to a baccalaureate degree program.

2. Provide an attainable associate degree for students who complete career programs of less than two years duration.

3. Provide an associate degree for career education students who wish to enroll in selected courses to reach a personal career objective.

4. Provide a degree goal for students whose educational goals shift after initial commitment has been made.

5. Provide a flexible associate degree for students who attend college on a part-time or other nontraditional basis.

Requirements for the degree include:

1. Completion of at least sixty (60) semester hours of work designed to meet the personal or career goals of each individual student. Developmental courses cannot be used to meet this requirement.

2. One-half of the required semester hours must be completed under the aegis of North Iowa Area Community College including 15 of the last 30 semester hours.

3. A minimum overall cumulative grade point average of 2.00 (C) including a 2.00 (C) cumulative grade point average in all course work at NIACC. Developmental courses are not used in calculating the cumulative grade point average for graduation.

General Studies Diploma

The purpose of the diploma is to provide an achievement recognition:

1. For students who may choose to follow an individualized course of study which is not specifically designed for transfer to a degree program.

2. For career education students who wish to enroll in selected courses to reach a personal career objective.

3. For students who attend college on a part-time or other nontraditional basis.

Requirements for the diploma include:

1. Completion of at least thirty (30) semester hours of career courses designed to meet the personal or career goals of each individual student.

2. One-half of the required semester hours must be completed under the aegis of North Iowa Area Community College including 15 of the last 30 semester hours.

3. A minimum overall cumulative grade point average of 2.00 (C) including a 2.00 (C) cumulative grade point average in all course work at NIACC.

Diploma

Purposes of the diploma include:

1. Provide a diploma goal for students who choose to follow a course of study which is specifically designed to lead to employment.

2. Provide the student with an entry skill level appropriate to the career for which he/she has been preparing.

Requirements for the diploma include:

1. Completion of at least thirty (30) semester hours of credit including a minimum of 3 semester hours of general education credit.

2. A minimum overall cumulative grade point average of 2.00 (C) including a 2.00 (C) cumulative grade point average in all course work at NIACC. Developmental courses are not used in calculating the cumulative grade point average for graduation.

Certificates

Certificates of completion are awarded to indicate that a student has satisfactorily completed a program of instruction other than those indicated previously. Certificates are usually issued to students upon completion of a short-term program of study with a 2.00 (C) grade point average.

FACILITIES/SERVICES

The main campus in Mason City consists of contemporary, attractive facilities located around lakes in a park-like setting. The 500-acre campus provides facilities for instructional, administrative, recreational, and community activities. Up-to-date laboratories offer the latest in technological equipment. Adequate parking is available without charge for students and staff members. Residence halls and apartments are situated on a site adjoining the campus to the north.

Agriculture Technology Lab

The NIACC farm lab consists of a cow/calf operation, farrow/breeding facility, pole barn, swine confinement, pasture, and no-till demonstration fields.

Athletic/Recreational Fields

Baseball, softball, soccer, and recreational fields are located on the east edge of the campus.

Career and Internship Center

The Career and Internship Center is located in the Pierce Administration Building, Room 106A, or can be reached by phone at 641-422-4292. The Center provides NIACC students and alumni resources and support in successfully securing employment and internship opportunities. A variety of resources, tools, and activities are available to students and alumni as well as one-on-one support. The Career and Internship Center works in partnership with Iowa Workforce Development through the Workforce Development Partnership to enhance the resources and service available. For more information on the Career and Internship Center and its services, see page 214.

Conference Center

The Muse-Norris Conference Center, located east of the Auditorium and Fine Arts area, serves NIACC and community groups for education-related meetings and activities. A multipurpose recreational area is found on the lower level.

Entrepreneurial Training and Support

The John Pappajohn Business and Entrepreneurial Center provides entrepreneurial training and business support to aspiring entrepreneurs, small business owners, and individuals working in high growth industries. The comprehensive programs are designed to increase successful new business starts, reduce the high failure rate of young ventures, and strengthen business growth opportunities.

For more information, call (641) 422-4111.

Laboratories

The attractive facilities available in the Natural Science and Mathematics Divisions are considered unusually complete for a community college. The math lab and the physical and biological science laboratory areas provide for effective learning opportunities.

The laboratories in the Business Division, Buettner Careers Building, and Murphy Manufacturing Technology Center contain the latest equipment and facilities for proper instruction in the career and technical areas.

Computer labs are available throughout campus (including the residence halls) and are available to all students to use for instructional application, Writer's Workbench analysis, checking e-mail, or web browsing. Lab attendants are on staff to assist students. Students have access to this equipment days and evenings, Monday through Saturday.

Library

Conveniently located in the Clifford H. Beem Center, the NIACC Library serves the College as a vital part of the learning experience. Built in 1977, it is an attractive facility providing seating for 150 people. Conference rooms provide areas for group study. Collections include books, reference materials, and nonbook media in the forms of audiotapes, videotapes, DVDs, and electronic resources. The Library subscribes to state and national newspapers as well as area papers; periodical subscriptions cover a broad spectrum of subjects to meet user needs. Materials are coordinated with the curriculum, supporting the career and technical and the academic. In addition, a collection of contemporary fiction is maintained. The Library's online catalog makes it easy to locate resources. For more information on the Library and its services, see page 194.

North Iowa Community Auditorium

A variety of opportunities are available to NIACC students through the North Iowa Community Auditorium, a modern 1156-seat facility located on the NIACC campus. Students perform regularly on stage through the NIACC vocal and instrumental music departments, as well as the theatre department. In addition to student and community shows, performances by nationally and internationally known artists are available to NIACC students, often at reduced prices.

Before the show or between classes, students may browse through the Auditorium Gallery where they will see various exhibits created by famous artists and NIACC art faculty and students.

On-Campus Housing

The residence hall accommodates up to 450 single men and women on a site adjoining the campus to the north. The residence hall features a commons area, complete with dining, recreational, computer, and study facilities. NIACC student housing also includes lakeside apartments.

Recreation Center

The College opened the Recreation Center during the fall semester of 2008. The facility is just over 41,000 square feet and houses numerous wellness spaces and equipment for students, staff and faculty:

- A suspended walk/jog track
- A state-of-the-art athletic training room
- Two volleyball/basketball/tennis courts
- Athletic Department offices
- Locker rooms for men and women

- Two golf/baseball/softball hitting cages
- Wrestling room
- Intramural/Recreation Office

North Iowa Area Community College recognizes the value of development of both mind and body. The Recreation Center, along with classes and extracurricular activities, enhances the overall experience for our NIACC community.

Small Business Assistance
The Small Business Development Center offers assistance to small business owners or would-be entrepreneurs in all areas of business management, including sources of capital, loan applications, marketing strategies, and financial planning and analysis. Assistance includes counseling, training, and information. Services are either free or low cost.

The SBDC is affiliated with Iowa State University and the U.S. Small Business Administration under Agreement No. 5-7770-0016-14.

For more information, call (641) 422-4342.

Student Activity Center
Located in the heart of campus, the Student Activity Center offers a classy, comfortable atmosphere for studying, dining, lounging, and visiting with classmates and instructors. Meals and snacks may be obtained in the Food Court, Monday through Friday (see page 193 for specific hours). Vending machines are also available.

Student Learning Center
The Student Learning Center, located in Beem Center, offers opportunities to all college students and potential students who wish to:

1. Increase their understanding/learning in NIACC courses through one-on-one or small group academic support.
2. Improve their skills in reading, writing, math, and study techniques (for example, note-taking, test-taking, time management) either as brush-up before enrollment or while participating in a NIACC course.
3. Gain new skills by participating in an individualized course such as high school credit.
4. Validate their skills by participating in a testing program such as GED, ICBE, CLEP. To register for a CLEP exam, call 641-422-4326.

For further information, students should contact their counselor, the Learning Center staff, or refer to the Instructional Resources section of this catalog.

Student Union
The Student Union is a place for student clubs and organizations to meet and host social events and meetings. It is also the location of the Intramurals office. Its use must be reserved in advance, and outside groups may rent the space as well.

Tobacco-Free Campus
Because the College wishes to provide a safe and healthy environment for students and staff members, and in accordance with state law, the use of tobacco products is prohibited in College facilities and on College grounds.

CONTINUING EDUCATION

Office Hours
Continuing Education office hours are Monday through Thursday, 7:00 a.m. - 5:00 p.m. and Friday, 7:00 a.m. - 4:15 p.m.

Business Management
NIACC can help employees learn how to communicate better, deal with workplace stress, delegate effectively, understand motivational concepts, manage their time, and build their leadership skills for maximum organizational effectiveness.

Community Education
North Iowa Area Community College partners with local communities and their school districts and has five outreach centers to remove the barriers of distance in providing lifelong learning opportunities to the people of the area. Most community education centers have an advisory board and an operations board comprised of community members who provide insight for local education programs and facility planning.

Computer Skills
Computer proficiency is a vital part of competitiveness in today's business world. NIACC can provide the highest quality and most cost-effective computer training in North Iowa. Classes are taught on campus or at the work site.

Health & Wellness
A wide range of health-related offerings are provided. Activities for the health professional focus on courses that meet licensing/relicensing requirements for various boards. Courses for the general public are also available. For the convenience of the student, a mix of traditional, online, and hybrid course delivery methods are used.

Lean Enterprise
A Lean Enterprise uses a systematic approach to eliminating waste and producing what your customers want when they want it. It does not matter if your business is a service or a manufacturer, NIACC can implement Lean principles into your workplace. Curriculum is available that specializes in manufacturing, process, office and health care environments.

Lifelong Learning Institute
NIACC offers the opportunity for adults to become a member of the Lifelong Learning Institute, a community of adults of all ages who learn for the joy of learning without grades, tests, papers or long-term classes. The Lifelong Learning Institute serves people of all educational backgrounds and provides the perfect way to expand knowledge while meeting other like-minded adults. The focus of the Lifelong Learning Institute is on fun, friendship and college-level learning. Members can take advantage of short courses, lectures and discussions, study circles, social events, civic engagement opportunities and more. Topics for the courses are based on member requests and interests. Class length varies from one session to 12 weeks of class depending on the course content and instructor. A $99 annual membership fee provides members with a variety of membership benefits. There is no additional tuition for Lifelong Learning Institute courses, lectures and study circles.

Manufacturing Skills & Processes
NIACC can help industries educate new employees or advance the skills of current employees about new processes, procedures and technologies. Standardized offerings include courses through the American Production and Inventory Control Society (APICS), the National Association of Purchasing Management (NAPM), and the American Society of Quality (ASQ).

Online, ICN & Facilities
With Continuing Education's availability of over 500 courses delivered online, a company can benefit from programs across the country. The statewide fiber optics capabilities (ICN) also allow employees to attend seminars and workshops in interactive television classrooms and take courses without leaving town.

Retired Senior Volunteer Program
The Retired Senior Volunteer Program (RSVP) of North Central Iowa is part of a national network of programs called Senior Corps that recruits adults 55 and older to use their skills, talents, and life experience to help meet community needs through volunteer service. Volunteers work with students in elementary and middle schools throughout a four-county area. Partnerships are based on established criteria, which indicate unmet community needs that could be met by the skills, wisdom, and time of RSVP volunteers. RSVP of North Central Iowa focuses on helping children and youth achieve their full potential through assistance with literacy and mentoring. RSVP serves the counties of Cerro Gordo, Hancock, Winnebago, and Worth. NIACC became the sponsor agency of RSVP of North Central Iowa in June 2009.

State Funding Programs
The Iowa Jobs Training program (260F) invests in customized training for existing employees. The program is designed to provide funding to train or retrain a company's workforce. The Iowa New Jobs Training Program (260E) assists businesses that are creating new positions. The program is designed to lower the cost of adding and training the newly created positions. Companies must qualify under the parameters of the programs to receive assistance.

NORTH IOWA AREA COMMUNITY COLLEGE FOUNDATION

The North Iowa Area Community College Foundation was incorporated in 1968 as the official fund-raising arm of the College. It is recognized by the Internal Revenue Service as a 501(c)(3) not-for-profit, tax-exempt corporation operating for the express benefit of the College. It is governed by a Board of Directors who serve in a noncompensated capacity.

The Foundation supports the mission of the College by serving as a financial resource in a variety of areas, including program development, equipment acquisition, building construction, cultural opportunities, and student scholarships. Private gifts through the Foundation have played an important role in the College's history, and there are many ways that individuals, businesses, and organizations may support the College.

The Foundation is authorized to solicit and receive gifts of cash, property, equipment, and/or bequests and to purchase or lease property for the benefit of the College.

Foundation books and records are audited annually.

NONDISCRIMINATION POLICY

North Iowa Area Community College is committed to the policy that all persons shall have access to its programs, facilities, and employment without discrimination based upon race, religion, color, creed, sex (including pregnancy), sexual orientation, gender identity, national origin, marital status, age, disability (physical or mental), veteran status, or genetic information. Any person having concerns with respect to rights under Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, and the Americans with Disabilities Act of 1990, please contact Dr. Terri Ewers, Dean of Student Development, in the Pierce Administration Building, Student Development Office, Room 104B, telephone 641-422-4106.

OFFICE HOURS

The administrative offices of the North Iowa Area Community College are open Monday through Friday from 7:45 a.m. - 4:15 p.m.

Admissions

APPLYING TO THE COLLEGE

INTERNATIONAL STUDENTS

NEW STUDENT REGISTRATION

ORIENTATION

Admissions

Students begin the admissions process by contacting the Admissions Office located on the first floor of the Activity Center. Office hours are 8:00 a.m. to 4:30 p.m., Monday through Friday, and by appointment.

For more information, call 641-422-4245 or 1-888-466-4222, Extension 4245, or visit our website at www.niacc.edu/admission/campusvisit.html.

Applying to the College

North Iowa Area Community College is an "open door" public two-year college. Generally, you will not encounter any problems in being admitted, but you must complete certain admissions steps. (Please note that admission to the College does not ensure admission to all programs offered.)

All application materials are to be submitted to the Admissions Office, North Iowa Area Community College, 500 College Drive, Mason City, Iowa 50401. You may also fill out an on-line application at www.niacc.edu.

1. Carefully complete the NIACC Application for Admission. Note that your social security number and intended major are required on the application. Once you are accepted, you will receive a student identification number. This ID number will be on your acceptance letter.

2. Submit your high school transcript. Upon graduation, you should submit a final transcript. If you obtained your GED, please forward your scores in place of a high school transcript. (If you do not have your high school diploma or equivalent, contact the College to find out how we can help you earn one or go to the following website for more information: http://www.niacc.edu/learningsupport/ged.html. A student will be allowed to take courses for one semester while obtaining the GED. The student will not be eligible for financial aid during the semester he/she is completing the GED.)

3. An assessment of your skills and abilities is required as part of the registration process. You may either submit your American College Test (ACT) scores, Scholastic Aptitude Test (SAT) scores, or a Compass Assessment. Compass Assessment is offered free to students who will be enrolling at NIACC. Contact the Admissions Office for assessment times.

4. If you have earned credits at another college, have your transcript(s) forwarded to NIACC.

Note: Students applying for the Associate Degree Nursing, Practical Nursing, LPN to ADN, or Physical Therapist Assistant Programs need to review the NIACC catalog for additional program requirements: www.niacc.edu/catalog/.

High school students may enroll in Career Link college credit classes provided their high school has knowledge of this concurrent enrollment. Students who desire college classes should meet with their high school counselor first and then complete the course registration forms for NIACC. Postsecondary Enrollment Options (PSEO) classes are another option for high school juniors and seniors (ask your high school counselor for more information).

International Students

International students who desire admission are sent an on-campus international student admission packet. A TOEFL score of 500 (or 80 on the Internet-based version) is required as evidence of command of the English language to profit from the curriculum. Also, evidence of adequate financial resources is required of all international students. All required documents must be returned with the $50 application fee before issuance of Forms I-20A and B (Immigration Certificate of Acceptance). Contact the Admissions Office for an international student admissions packet, or visit our website at www.niacc.edu/admission/international.html.

International students who will be enrolled in on-line classes only at North Iowa Area Community College **will not** be required to complete the international student admissions packet, submit their TOEFL score or pay the $50 application fee. Any international student who will be taking a combination of on-line and on-campus classes will need to follow the application process for on-campus international students.

New Student Registration

Registration information will be mailed in May to students who have indicated a Fall start term on their application for admission; and students indicating a Spring (January) start will receive the information in December. This information is sent out in the order that applications for admissions are received. Selecting a date for your registration can be made on-line or by phone once your receive your registration letter. On your scheduled registration day, you will learn about programs and services available, schedule classes, and arrange payment options. All items listed under Applying to the College must be on file by your registration day or it will delay the registration process.

Summer School Students

If the only term you plan to enroll in is the summer term, you will need to check our website: www.niacc.edu/summer for registration information and instructions.

Orientation

All new and transfer students who are entering NIACC for the first time and who intend to take day classes are required to attend a new student orientation. During orientation, students learn about NIACC policies and procedures, academic requirements, faculty expectations, and are given information about financing their education, student housing, and student activities. Students will also learn how to adapt to their new college environment.

College Essentials

All first-time, full-time students and transfer students with less than 12 hours of credit are required to register for SDV-199, College Essentials. The purpose of the course is to familiarize NIACC students with student systems like Web Advisor, student e-mail, and other campus resources. This online class is a pass/no pass course. Students are expected to complete all sections prior to the Wednesday before mid-term of the semester.

Instructional Resources

LEARNING SUPPORT DIVISION

LIBRARY

TECHNOLOGY SERVICES

Instructional Resources

LEARNING SUPPORT DIVISION

The mission of the Learning Support Division is to provide support and access to educational opportunities for students, and to maintain a wide variety of resources to meet the informational and educational needs of the NIACC community.

This includes assessment, developmentally appropriate classroom and tutorial instruction, and assistance in utilization of library resources.

Assessment/Testing

- College Level Examination Program (CLEP)
  -- To register for a CLEP exam, call 641-422-4326.
- Test Proctoring
  -- For students needing testing accommodations, these are arranged through the special populations counselor.
- Proctoring for Non-NIACC Courses (test fee)
- Police Dispatcher Recertification
- General Educational Development (GED)
  -- GED Testing Site: NIACC Campus--Beem Center Room 103; five tests available in writing and reading skills, social studies, sciences, and mathematics.
  -- Scholarship: For eligible GED candidates enrolling at NIACC each fall semester.
  -- Requirements of GED Testing: Procedures/policies clarified by the GED Chief Examiner.
  -- Testing Center Schedule: www.niacc.edu/learningsupport.
- National Career Readiness Certificate Testing (NCRC))
  -- For information or to schedule assessment, call 641-422-4176.

Adult Literacy

Adult literacy provides adults 17 and older accessible, quality instruction that develops life, work, and literacy skills. These skills provide the opportunity for higher learning, better pay and job potential, and a sense of accomplishment. Programs include Adult Basic Education (ABE), English as a Second Language (ESL), General Education Development (GED), and WorkKeys (Key Train and NCRC). For more information, call 641-422-4176

Adult Basic Education (ABE)
Adult Basic Education (ABE) provides reading, math, writing and English instruction for those who are functioning below a ninth-grade level. Instruction is often contextualized around interest of the students and/or the high demand jobs in the North Iowa area.

English as a Second Language (ESL)
Students learn the English language and the culture of this country. Classes are student centered and communication based. Oral communication, grammar, spelling, and pronunciation are emphasized. Curriculum is flexible based on individual needs.

General Education Development (GED)
GED classes enable adults to acquire their secondary diploma or equivalent. Instructors facilitate learning to meet students' individual needs. Courses of study include mathematics, reading, writing, science, and social studies. Transition to postsecondary and/or employment is emphasized. NIACC scholarships available for eligible GED graduates enrolling at NIACC.

General Education Development Online (i-Pathways)
GED online classes offer a blended approach for students who cannot regularly attend a GED classroom. Students take assessments and tests at their local GED class site, while most of their instruction is online with the i-Pathways instructor.

Adult Experiential Learning Portfolio

Prior learning assessment (PLA) is the process of earning college credit for learning that was acquired from non-classroom experiences like work, professional training, military careers, volunteering, and personal life. CAEL 100, an experiential learning portfolio development class, helps students identify areas of learning they may want to have evaluated for college-level equivalency. This class will guide students through the preparation and compilation of all components required for the evaluation of their portfolio or prior learning through LearningCounts.org. CAEL 100 is facilitated by an instructor who provides guidance for the student in preparing his or her portfolio-based request for credit. This offering will be available starting fall 2012. Please contact the NIACC Continuing Education department for more information (641-422-4358).

Mastery Math, Mastery Writing, and Mastery English as a Second Language (ESL)

Mastery Programs offer students opportunities to develop skills in math, writing, and ESL through individualized, competency-based instruction in a hybrid, arranged schedule format. Students enroll to brush up skills, accelerate learning, prepare for credit courses and as co-enrollment academic support of credit courses. Credit is pass/no pass and does not count towards a degree.

Student Learning Center

The Student Learning Center, located in Beem Center, offers opportunities to all college students who wish to:

1. Learn or improve existing study skills including but not limited to test-taking skills, note-taking, and time management.
2. Improve personal and academic skills in writing, math, and/or reading.

3. Schedule individual or small group appointments for professional tutoring in a variety of subjects offered by the college.
4. Drop in for tutoring in NIACC class work, or to study individually or in small groups at no charge.
5. Study in a comfortable, helpful environment.
6. Participate in student-led study groups known as "Supplemental Instruction."

LIBRARY

The role of the NIACC Library is to support the curriculum and to provide resources and services to meet the needs of students, faculty, and area residents.

The collection contains a wide variety of books, media, and electronic books. Subscriptions include national newspapers, North Iowa area newspapers, and periodicals with ten-year holdings of most titles. Also available are files containing up-to-date pamphlets, career information, and social concerns materials.

The library is open 59 hours per week, including 4 evenings. A professional staff of one full-time librarian assisted by three full-time and several student assistants provide service for all patrons. Library orientation sessions are offered at the beginning of each semester to inform students of library resources, policies, and procedures. An online version of the orientation is also available from the library's web page. An online library handbook is available. A student ID card is required to check out materials. ID cards are available in the Student Development Office.

A word-processing computer and various types of media equipment are available for use in the library. Copying services are provided at a minimal cost.

The library is connected online to thousands of libraries across the country via the OCLC interlibrary loan system. This brings the libraries of the United States to NIACC students. A number of electronic databases, including full-text periodical databases, newspapers, electronic books, and encyclopedias on the World Wide Web, can be accessed through the library's web page using NIACC usernames and passwords. Cooperative agreements with other Iowa community colleges and area libraries provide additional sources of information.

The library continues to implement the utilization of new technologies to meet the information needs of NIACC students. The library uses an online library catalog and circulation system to provide easy access to resources. Internet workstations are available for using the World Wide Web.

The library's Café Bean provides a casual atmosphere where students can meet and relax with coffee. A wireless hub is available for students wishing to use their laptops.

TECHNOLOGY SERVICES

The Technology Services Division provides technology-related support to the campus in the areas of computer services, media services, online course support, and telecommunications. Technology Services staff members set up and maintain the computers in the computer labs, data networks, Internet, and computer applications. In addition, staff members support classroom presentation equipment such as overhead projectors, video projectors, large screen computer displays, and interactive television classrooms (ICN).

E-Mail/Internet
NIACC provides e-mail accounts and on-campus Internet access to all students enrolled in credit classes. Wireless Internet access is available throughout campus and the college residence halls. (See the Technology Policy in the Student Handbook.)

The Iowa Communications Network (ICN)
NIACC is proud to be a part of the ICN, a statewide two-way interactive video/audio/data network with over 800 electronic classrooms, connecting every county in the state. NIACC has three interactive television classrooms on campus in Mason City and one at the NIACC Charles City Center. In addition, there are ICN classrooms at nearly all area high schools. Students can participate in a variety of college classes at the remote sites, communicating with the instructor and other students via two-way video and audio. The ICN also provides Internet and data services to the college.

Online Instruction and Support
NIACC offers many courses that can be taken online via the Internet, which can lead to an Associate in Arts Degree or an Associate in Science (Business) Degree. Online courses provide the flexibility to work on course assignments evenings and weekends to accommodate job and family schedules. While most courses start and end on the traditional semester schedule, some online courses are “open entry” allowing a student to start a few days after they register and complete the course within 15 weeks. A student needs to have access to a computer and an Internet connection, or can use the computers in the NIACC computer labs. New courses are in development every year. For current information, visit the online course web page at http://www.niacc.edu/online/.

24x7 Technical Support

NIACC provides a 24-hours a day, 365 days a year technical help desk for NIACC students, faculty, and staff. The help desk is designed as the first stop for issues or questions related to the technical capabilities and services provided by the College.

The help desk can be contacted in a number of ways: by phone, by e-mail, by web form, or by an online chat session. For urgent issues, contact the help desk by phone at 1-866-614-5020; for less urgent issues, the help desk is available via e-mail (helpdesk@NIACC.edu), by submitting a web form by online chat (both are available at www.NIACC.edu/helpdesk).

Career Programs

AGRICULTURAL TECHNOLOGY

BUSINESS

FAMILY AND HUMAN SERVICES

HEALTH

INDUSTRIAL TECHNOLOGY

PUBLIC SERVICE

General Education Course Categories for Associate in Applied Science and Diploma Programs

To earn an Associate in Applied Science degree, a student must complete a minimum of 12 semester hours (s.h.) of credit in the general education course categories listed on pages 125-126 and/or the courses listed below. Requirements vary according to the major selected. Please consult with an advisor or a faculty member in the major field for further information.

Listed as follows are additional general education courses for Associate in Applied Science degrees and diplomas.

COMMUNICATION

BUS-121	Business Communications	3 s.h.
ENG-701	Communications I	3 s.h.
ENG-702	Communications II	3 s.h.

SOCIAL SCIENCE/HUMANITIES

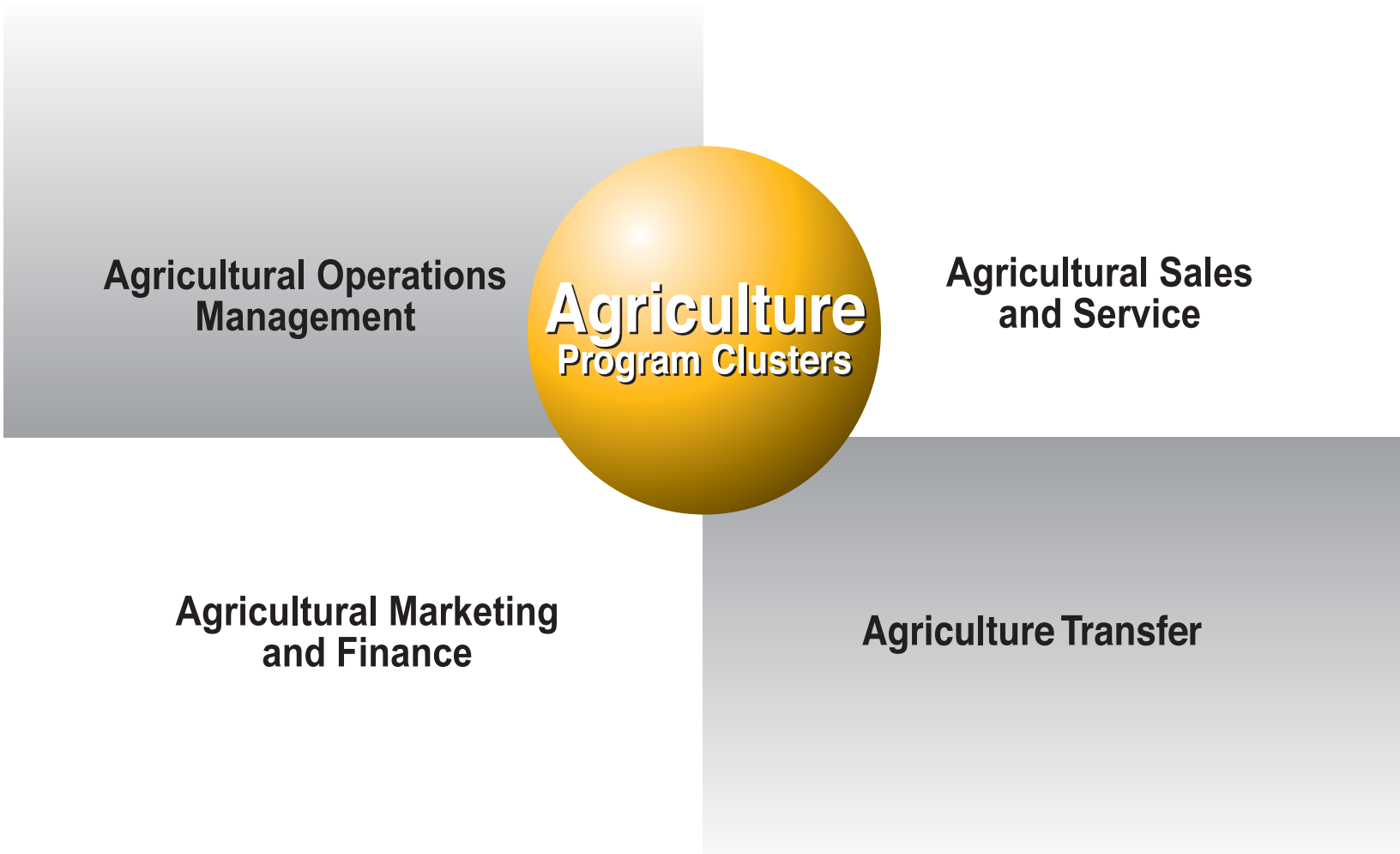
BUS-161	Human Relations	3 s.h.
AGB-101	Agricultural Economics	3 s.h.

MATH/SCIENCE

AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
MAT-710	Business and Financial Math	2 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
PHY-720	Career Physics	4 s.h.

To earn a diploma, a student must complete a minimum of 3 semester hours (s.h.) of credit in the categories listed above. Requirements vary according to the major selected. Please consult with an advisor or a faculty member in the major field for further information.

Agriculture
Division
Associate of Arts Degree
Diploma
Associate of Applied Science Degree


Agricultural Operations Management
Agriculture
Program Clusters
Agricultural Sales and Service
Agricultural Marketing and Finance
Agriculture Transfer

Agriculture Technology Diploma

Agricultural Technology Division

Kevin Muhlenbruch, Agriculture and Industrial Division Chair, 641-422-4291, muhlekev@niacc.edu

The Agriculture Technology Diploma program is designed to provide students with the skills, aptitudes, and knowledge necessary to enter fields related to general agriculture. The program may be completed in two semesters by following the suggested curriculum, or it may be spread over three or more semesters.

Upon satisfactory completion of the prescribed curriculum with an average grade point of 2.00 (C), the student is awarded a diploma. This recognition is granted to a person who has completed 33 semester hours of credit at NIACC.

The curriculum is presented in a format that includes classroom work, laboratory instruction and practice. Situational projects in the area of livestock, crop, and business enterprise management are included in the program. The program offers students desiring more advanced education the option of applying completed course work toward an Associate of Applied Science Degree.

Career Opportunities

- Self-employed Farm or Business Management
- General Livestock or Crop Production
- Custom Livestock Feeding or Crop Production
- Animal Herdsman or Crop Technician
- Niche Market Production
- Agriculture-Related Sales

Required Courses/Suggested Schedule

(For students planning to complete the program in one academic year.)

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
ENG-102	Composition & Speech I	4 s.h.
	Recommended Electives	6 s.h.
		17 s.h.

Second Term

AGA-114	Principles of Agronomy	3 s.h.
ACC-111	Introduction to Accounting	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
	Recommended Electives	6 s.h.
		16 s.h.
	Total Program Hours	33 s.h.

Recommended Elective Courses--Must complete 12 s.h. from the following:

AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-101	Agricultural Economics	3 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-338	Salesmanship & Advertising	2 s.h.
AGB-436	Grain Merchandising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGB-465	Ag Finance Management	2 s.h.
AGC-420	Issues in Agriculture	3 s.h.
AGM-120	Basic Agricultural Mechanics	2 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-317	Animal Nutrition	2 s.h.
AGS-506	Swine Production	2 s.h.
AGS-811	Animal Technologies	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
SDV-210	Cooperative Education Internship	3 s.h.

Agricultural Operations Management

Agricultural Technology Division

Kevin Muhlenbruch, Agriculture and Industrial Division Chair, 641-422-4291, muhlekev@niacc.edu

The Operations Management curriculum is designed to prepare students to farm, be farm managers, or work in a production field. It provides a sound academic foundation with emphasis on farm management, economics, business management, information management, precision agriculture, agronomy, animal science, human relations, and general education. Two eight-week internship experiences are required. Upon successful completion, graduates will receive an Associate in Applied Science Degree.

NIACC's Ag Advantage: *Champions of Agriculture--Providing high quality, vigorous education opportunities to students.*

* Innovative Curriculum
* Industry Partnerships
* Rewarding Internships
* Hands-On Labs
* Highly Regarded by Transfer Institutions
* Technology Emphasis
* Award-Winning Faculty
* Electronic Classrooms
* Satisfied Graduates

Transfer Opportunities: All classes required in our curriculum can be transferred to Iowa State University and/or Northwest Missouri State. Graduates can transfer to ISU as a junior and work toward a bachelor's degree in the College of Agriculture. Staff can advise you as to the best academic path for transfer.

NIACC Farm Lab: The NIACC Farm Lab consists of 260 no-till acres, 110 acres of pasture, livestock facilities for the swine and beef breeding herds, and provides Ag students with "hands-on" learning experiences in the areas of crop protection and management, precision farming technology, crop and livestock management, show pig and club calf production, and business planning and decision making.

Career Opportunities

Internships: Students in Operations Management complete two paid, eight-week internships. During your internships you will apply your academic skills in an actual work environment. The industry contacts made often lead to full-time employment following graduation.

Employment Opportunities: Jobs for Ag Operations Management graduates include self employed in farming, farm management, GPS/GIS service, production assistants, livestock production, herdspersons, crop production, crop input application, and sales.

Earning Potential: Entry-level salaries for recent NIACC agriculture technology graduates ranged between $ 20,000 and $ 50,000 annually.

Required Courses/Suggested Schedule

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGC-190	Skills and Safety in Agriculture	1 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
BIO-196	Introduction to Bio-Technology	4 s.h.
BUS-161	Human Relations	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
		19 s.h.

Second Term

AGA-114	Principles of Agronomy	3 s.h.
AGB-101	Agricultural Economics	3 s.h.
ACC-111	Introduction to Accounting	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
		17 s.h.

Third Term

AGA-852	Principles of Crop Production	3 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-811	Animal Technologies	1 s.h.
		6 s.h.

Second Year

Fourth Term

AGB-436	Grain Merchandising	2 s.h.
AGC-314	Leadership in Agriculture	2 s.h.
SDV-210	Cooperative Education Internship	4 s.h.
	Approved Ag Elective(s)	6 s.h.
		14 s.h.

Fifth Term

AGB-465	Ag Finance Management	2 s.h.
AGM-120	Basic Agricultural Mechanics	2 s.h.
SDV-210	Cooperative Education Internship	4 s.h.
	Approved Ag Elective(s)	8 s.h.
		16 s.h.

	Total Program Hours	72 s.h.

Recommended Agriculture Electives

AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-338	Salesmanship & Advertising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGC-420	Issues in Agriculture	3 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-317	Animal Nutrition	2 s.h.
AGS-506	Swine Production	2 s.h.

Agricultural Sales & Service

Agricultural Technology Division

Kevin Muhlenbruch, Agriculture and Industrial Division Chair, 641-422-4291, muhlekev@niacc.edu

The Sales and Service curriculum is designed to prepare students to work in the agricultural supply and service industry. It provides a sound academic foundation with emphasis on sales/merchandising, economics, business management, information management, precision agriculture, agronomy, animal science, human relations, and general education. Two eight-week internship experiences are required. Upon successful completion of the curriculum with a grade point average of 2.00 (C) or higher, graduates will receive an Associate in Applied Science Degree.

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* Hands-On Labs
* Highly Regarded by Transfer Institutions
* Technology Emphasis
* Award-Winning Faculty
* Electronic Classrooms
* Satisfied Graduates

Transfer Opportunities: All classes required in our curriculum can be transferred to Iowa State University and/or Northwest Missouri State. Graduates can transfer to ISU as a junior and work toward a bachelor's degree in the College of Agriculture. Staff can advise you as to the best academic path for transfer.

NIACC Farm Lab: The NIACC Farm Lab consists of 260 no-till acres, 110 acres of pasture, livestock facilities for the swine and beef breeding herds, and provides Ag students with "hands-on" learning experiences in the areas of crop protection and management, precision farming technology, crop and livestock management, show pig and club calf production.

Career Opportunities

Internships: Students in Sales & Service complete two paid, eight-week internships. During your internships you will apply your academic skills in an actual work environment. The industry contacts made often lead to full-time employment following graduation.

Employment Opportunities: Jobs for Agriculture Sales & Service graduates include salespersons, counter sales, GPS/GIS service, production assistants, department managers, marketing, insurance, conservation and agency services, and business assistants and managers.

Earning Potential: Entry-level salaries for recent NIACC agriculture technology graduates ranged between $ 20,000 and $ 50,000 annually.

Required Courses/Suggested Schedule

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGC-190	Skills and Safety in Agriculture	1 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
BIO-196	Intro to Bio-Technology	4 s.h.
BUS-161	Human Relations	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
		19 s.h.

Second Term

AGA-114	Principles of Agronomy	3 s.h.
AGB-101	Agricultural Economics	3 s.h.
ACC-111	Introduction to Accounting	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
		17 s.h.

Third Term

AGA-852	Principles of Crop Production	3 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-811	Animal Technologies	1 s.h.
		6 s.h.

Second Year

Fourth Term

AGB-436	Grain Merchandising	2 s.h.
AGC-314	Leadership in Agriculture	2 s.h.
SDV-210	Cooperative Education Internship	4 s.h.
	Approved Ag Elective(s)	6 s.h.
		14 s.h.

Fifth Term

AGB-338	Salesmanship & Advertising	2 s.h.
AGB-465	Ag Finance Management	2 s.h.
SDV-210	Cooperative Education Internship	4 s.h.
	Approved Ag Elective(s)	8 s.h.
		16 s.h.

Total Program Hours 72 s.h.

Recommended Agriculture Electives

AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-338	Salesmanship & Advertising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGC-420	Issues in Agriculture	3 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-317	Animal Nutrition	2 s.h.
AGS-506	Swine Production	2 s.h.

Agricultural Marketing and Finance

Agricultural Technology Division

Kevin Muhlenbruch, Agriculture and Industrial Division Chair, 641-422-4291, muhlekev@niacc.edu

The Marketing and Finance curriculum is designed to prepare students to work in the agricultural service industry. It provides a sound academic foundation with emphasis on business management, economics, information management, sales and marketing, precision agriculture, farm production, human relations, communication, and general education. An eight-week internship experience is required. Upon successful completion of the curriculum with a grade point average of 2.00 (C) or higher, graduates will receive an Associate in Applied Science Degree.

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* Satisfied Graduates

Transfer Opportunities: All classes required in our curriculum can be transferred to Iowa State University and/or Northwest Missouri State. Graduates can transfer to ISU as a junior and work toward a bachelor's degree in the College of Agriculture. Staff can advise you as to the best academic path for transfer.

NIACC Farm Lab: The NIACC Farm Lab consists of 260 no-till acres, 110 acres of pasture, livestock facilities for the swine and beef breeding herds, and provides Ag students with "hands-on" learning experiences in the areas of crop protection and management, precision farming technology, crop and livestock management, show pig and club calf production, and business planning and decision making.

Career Opportunities

Internships: Students in Marketing and Finance complete one paid, eight-week internship. During your internship you will apply your academic skills in an actual work environment. The industry contacts made often lead to full-time employment following graduation.

Employment Opportunities: Jobs for Agricultural Marketing & Finance graduates include salespersons, accountants, GPS/GIS service, commodity marketing, department managers, production marketing, insurance, conservation, and government agency services, and business assistants and managers.

Earning Potential: Entry-level salaries for recent NIACC agriculture technology graduates ranged between $20,000 and $50,000 annually.

Required Courses/Suggested Schedule

First Year

First Term

AGA-154	Fundamentals of Soil Science	3 s.h.
AGC-190	Skills and Safety in Agriculture	1 s.h.
AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
BUS-161	Human Relations	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
	Math Elective	4 s.h.
		19 s.h.

Second Term

ACC-121	Principles of Accounting I	3 s.h.
AGA-114	Principles of Agronomy	3 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
		17 s.h.

Third Term

AGA-852	Principles of Crop Production	3 s.h.
AGP-331	Precision Agriculture	2 s.h.
AGS-811	Animal Technologies	1 s.h.
		6 s.h.

Second Year

Fourth Term

ACC-122	Principles of Accounting II	3 s.h.
AGB-436	Grain Merchandising	2 s.h.
AGC-314	Leadership in Agriculture	2 s.h.
BUS-185	Business Law I	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
	Approved Ag Elective(s)	2 s.h.
		15 s.h.

Fifth Term

AGB-338	Salesmanship & Advertising	2 s.h.
AGB-438	Ag Futures & Future Options	2 s.h.
AGB-465	Ag Finance Management	2 s.h.
SDV-210	Cooperative Education Internship	4 s.h.
	Approved Ag Elective(s)	6 s.h.
		16 s.h.

	Total Program Hours	73 s.h.

Recommended Agriculture Electives

AGA-855	Site Specific Crop Management	2 s.h.
AGA-860	Soils and Crop Management	2 s.h.
AGB-213	Ag Real Estate Evaluation	2 s.h.
AGB-438	Ag Futures & Futures Options	2 s.h.
AGC-420	Issues in Agriculture	3 s.h.
AGM-120	Basic Agricultural Mechanics	2 s.h.
AGS-227	Beef Cattle Production	2 s.h.
AGS-317	Animal Nutrition	2 s.h.
AGS-506	Swine Production	2 s.h.

Business Division

Transfer Degree

Career Programs

Career Option Programs

Business Program Clusters

Accounting

- Accounting-Associate in Applied Science
- Accounting with Computers
- Accounting Certificate

Information Technology

- Business Technology Specialization
- Information Assurance and Security
- Information Technology Specialist
- Foundations of Technology Certificate

Marketing/Management

- Banking, Insurance, and Financial Management
- Entrepreneurship and Small Business Management
- The Pappajohn Entrepreneurial Certificate
- Foundations in Business Certificate
- General Business
- Hospitality/Food Service Management
- Marketing and Sales
- Sport Management
- Supervision and Management

Professional Administrative Services

- Administrative Office Associate
- Administrative Office Specialist
- Legal Office Associate
- Legal Office Specialist
- Medical Coding
- Medical Office Associate
- Medical Office Specialist
- Medical Transcription
- Software Applications Skills Certificate
- Software Applications Specialist Certificate

BUSINESS

Laura Merfeld, Division Chair
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merfelau@niacc.edu

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The Pappajohn Entrepreneurial Certificate - page 37
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Medical Office Associate - page 49
Medical Transcription - page 51
Software Applications Specialist Certificate - page 51
Software Applications Skills Certificate - page 52

BUSINESS DIVISION

The Business Division provides courses and programs for students who wish to transfer to a baccalaureate degree granting institution, for students who are undecided and are interested in a career option program, or for students who want a specific career program.

Transfer Student Opportunities
Are you interested in transferring to a four-year college or university and earning a bachelor's degree?

Students earning an Associate in Science (Business) degree may wish to apply their studies toward a bachelor's degree in a business-related field at a four-year college or university. Students need courses that will facilitate their transfer to four-year institutions of their choice. Please consult with a NIACC counselor for assistance in determining a schedule to meet your goal.

Students need to take courses that will facilitate their transfer to the institution of their choice. Courses that would assist students who are business majors would be accounting, computers, statistics, and spreadsheets. Other business courses may also transfer to many institutions (see pages 208-210 for specific degree requirements).

Career Option Student Opportunities
For students interested in the business area but undecided as to what degree to pursue, career option programs provide the flexibility these students need. Upon completion of a career option program, a student may choose to pursue a baccalaureate degree or go directly to a chosen occupational area. Career option programs are available in Information Technology and Marketing/Management (see pages 208-210 for specific degree requirements).

Career Student Opportunities
Students who are focused on a particular occupation may choose from a variety of business career programs. These programs follow a curriculum that assists each student in developing the knowledge, skills, and abilities necessary to be successful in his/her chosen field.

The Business Division's highest priority is to assist students in reaching their individual educational goals. Each instructor is dedicated to providing the highest quality instruction to facilitate this process.

Students should note that programs in the Business Division have courses that are common in more than one program. Students are afforded the opportunity to be flexible within the Business Division when looking at the wide variety of programs that are being offered.

Accounting - Associate in Applied Science Degree

Opportunities await graduates of NIACC's Associate in Applied Science Degree. This program is designed to prepare students for an exciting career in the accounting/bookkeeping job market--a field offering students many dynamic and challenging career opportunities. This program may be completed in four semesters by following the suggested curriculum, or it can be spread over five or more semesters to meet the scheduling needs of the student. The Career and Internship Center is available to assist students with job placement options. For specific transfer options, students should contact the NIACC Business Division or a NIACC counselor.

Upon completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Applied Science Degree. Students who have completed the Accounting with Computers Diploma Program may apply semester hours earned from that program toward an Associate in Applied Science Degree. Students who plan to pursue a four-year degree and need to meet general education requirements of transfer institutions should strive for an Associate in Arts Degree. Several of the first-year requirements are the same for both the A.A.S. and the A.A. Degree.

Career Opportunities

Employment opportunities may be found in a wide variety of businesses:

- Agricultural Industries
- Banks and Financial Institutions
- Educational Institutions
- Federal, State, and Local Government Agencies
- Hospitals and Health Care Providers
- Insurance Companies

Occupational titles include:

- Accounting Clerk
- Accounts Receivable/Payable Manager
- Bookkeeper
- Credit Analyst
- Credit Counselor
- Contract Administrator
- Financial Planner
- Payroll Manager
- Tax Preparer

Required Courses/Suggested Schedule

First Year

First Term

ACC-121	Principles of Accounting I	3 s.h.
ADM-105	Introduction to Keyboarding	1 s.h.
	OR ADM-108 Keyboarding Skill Development (1 s.h.)	
	OR ADM-123 Document Formatting (3 s.h.)	
ADM-131	Office Calculators	1 s.h.
BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
ENG-102	Composition & Speech I	4 s.h.
MAT-110	Math for Liberal Arts	3 s.h.
	OR appropriate level math course until minimum requirement is met (3 s.h.)	
		15-17 s.h.

Second Term

ACC-122	Principles of Accounting II	3 s.h.
BCA-129	Basic Word Processing	2 s.h.
BCA-152	Comprehensive Spreadsheets	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Elective(s)	1 s.h.
		16 s.h.

Second Year

Third Term

ACC-311	Computer Accounting	3 s.h.
BUS-161	Human Relations	3 s.h.
BUS-185	Business Law I	3 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ACC-135	Personal Income Tax	3 s.h.
		15 s.h.

Fourth Term

ACC-161	Payroll Accounting	3 s.h.
BUS-107	Business Careers	1 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
	Business Elective(s)	4 s.h.
	Elective(s)	3 s.h.
		14 s.h.
	Total Program Hours	60-62 s.h.

Business Electives

ACC-111	Introduction to Accounting	3 s.h.
ADM-123	Document Formatting	3 s.h.
BCA-100	Computer Literacy	1 s.h.
BCA-101	Introduction to Computers and Information Systems	3 s.h.
BCA-103	Management Information Systems	3 s.h.
BCA-163	Microsoft Access	1 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BUS-102	Introduction to Business	3 s.h.
BUS-121	Business Communications	3 s.h.
BUS-130	Introduction to Entrepreneurship	3 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation and Opportunity Analysis	2 s.h.
BUS-186	Business Law II	3 s.h.
BUS-225	Business Internships	1-5 s.h.
CIS-332	Database and SQL	3 s.h.
MAT-161	Business Statistics	3 s.h.
MGT-101	Principles of Management	3 s.h.
MGT-130	Principles of Supervision	3 s.h.
MGT-170	Human Resource Management	3 s.h.

For additional Business electives, see pages-127-129.

Accounting with Computers/Diploma

The Accounting with Computers/Diploma Program is designed to provide students with the skills and knowledge necessary to enter the field of bookkeeping and accounting in an entry-level position. The program is very technically focused to provide the student with essential job-related accounting and computer skills. The program may be completed in two semesters by following the suggested curriculum, or it may be spread over three or more semesters to meet the scheduling needs of the students. Upon satisfactory completion of the prescribed curriculum with an average grade point of 2.00 (C), the student is awarded a diploma. This recognition is granted to a person who has completed at least thirty-one (31) semester hours of credit.

The curriculum is presented in a format that includes classroom work, laboratory instruction and practice, and computerized accounting. Several accounting simulation projects, including manual and computerized, are completed to give the students experience in keeping a complete set of books. Many hours of computer experience in accounting, keyboarding, and word processing prepare students for full-time employment or for more advanced education in the accounting field. The program also offers students desiring more advanced education the option of applying completed course work toward an Associate in Applied Science Degree or an Associate in General Studies Degree. Program graduates may also continue work toward an Associate in Arts Degree.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

(For students planning to complete the program in one academic year)

First Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
ADM-123*	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-121	Business Communications	3 s.h.
BUS-161	Human Relations	3 s.h.
		16 s.h.

* Prerequisite: Keyboarding skill of 30 wam with 3 errors or less is recommended.

Second Term

ACC-135	Personal Income Tax	3 s.h.
ACC-161	Payroll Accounting	3 s.h.
ACC-311	Computer Accounting	3 s.h.
BCA-129	Basic Word Processing	2 s.h.
BCA-152	Comprehensive Spreadsheets	3 s.h.
BUS-107	Business Careers	1 s.h.
		15 s.h.

Total Program Hours 31 s.h.

Career Opportunities

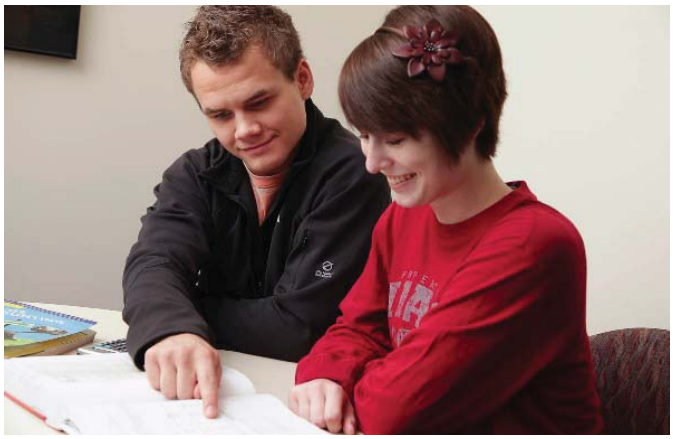
Employment opportunities may be found in a variety of businesses:

- Agricultural Industries
- Banks and Financial Institutions
- Educational Institutions
- Federal, State, and Local Government Agencies
- Manufacturing Companies
- Wholesale and Retail Firms

Occupational titles include:

- Accounting Clerk
- Accounts Payable Clerk
- Accounts Receivable Clerk
- Bank Teller
- Billing Clerk
- Bookkeeper
- Collections Clerk
- Data Entry
- General Office Clerk
- Inventory Clerk
- Payroll Clerk

Accounting Certificate Program



Are you looking to sharpen your accounting skills? The Accounting Certificate Program offerings provide you with a great opportunity to enhance your present skills or add new skills to your resume. You will spend time between the classroom and the computer lab working as a team with instructors dedicated to making you job ready or helping to prepare you to continue your education in an accounting-related program.

Upon completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a certificate. For students desiring to continue their education, they are eligible to go on to complete an Accounting with Computers/Diploma or an Associate in Applied Science Degree.

Required Courses

ACC-111	Introduction to Accounting	3 s.h.
ACC-121	Principles of Accounting I	3 s.h.
ACC-122	Principles of Accounting II	3 s.h.
ACC-161	Payroll Accounting	3 s.h.
ACC-311	Computer Accounting	3 s.h.
		15 s.h.

Career Opportunities

Students have the option of obtaining employment using their accounting skills. Some job opportunities are listed below:

- Accounts Payable or Accounts Receivable Clerk
- Bookkeeper
- Computer Accounting Clerk
- Help Desk
- Payroll Clerk

Business Internships

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2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Business Technology Specialization

NIACC's Business Technology Specialization is designed for students who are interested in developing a solid foundation in business and have a keen interest in computers. Students will prepare themselves for the continually changing marketplace by learning both "job getting" and "job keeping" skills. This program provides students with a real "competitive advantage" when pursuing employment.

Upon completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Science (Business/Information Systems Technology) Degree. Students who know they wish to pursue a four-year degree and want to meet general education requirements of transfer institutions should pursue the A.A. degree. This will necessitate a slightly different curriculum.

Required Courses/Suggested Schedule

First Year

First Term

BCA-101	Introduction to Computers & Information Systems	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
NET-112	Home/Office Computer Management	3 s.h.
	OR NET-113, IT Essentials I (4 s.h.)	
	Information Technology Elective(s)**	3 s.h.
	Humanities/Social Science Elective	3 s.h.
		16-17 s.h.

Second Term

BCA-185	Beginning Web Page Development	3 s.h.
	OR CIS-210, Web Development I (3 s.h.)	
ENG-103	Composition & Speech II	4 s.h.
	Information Technology Elective(s)**	6 s.h.
	Humanities/Social Science Elective	3 s.h.
		16 s.h.

Second Year

Third Term

NET-117	Home/Office Network Management	3 s.h.
	OR NET-213, CISCO Networking (4 s.h.)	
	Information Technology Elective(s)**	2 s.h.
	Business Elective	3 s.h.
	Humanities/Social Science Elective	3 s.h.
	Natural Science/Mathematics Elective	3 s.h.
		14-15 s.h.

Fourth Term

GRA-299	Electronic Portfolio	3 s.h.
	Information Technology Elective(s)**	3 s.h.
	Business Elective(s)	9 s.h.
		15 s.h.
	Total Program Hours	61-63 s.h.

Career Opportunities

Support staff in Accounting, Help Desk, Information Systems Technology, Management Information Systems, Personal Computer Hardware and/or Software, and Web Design.

For specific information, contact the Career and Internship Center or the NIACC Business Division.

Recommended Business Elective Courses:

ACC-135	Personal Income Tax	3 s.h.
ADM-145	Advanced Desktop	3 s.h.
BCA-136	Advanced Word Processing*	3 s.h.
BCA-163	Microsoft Access	1 s.h.
BCA-170	Personal Information Management	2 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BUS-102	Introduction to Business	3 s.h.
BUS-107	Business Careers	1 s.h.
BUS-161	Human Relations	3 s.h.
BUS-225	Business Internships^	1-5 s.h.
MGT-101	Principles of Management	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
MKT-140	Principles of Selling	3 s.h.
MKT-150	Principles of Advertising	3 s.h.

*Prerequisites: BCA-215 Computer Business Applications and BCA-129 Basic Word Processing

^Prerequisite BUS-107 Business Careers

Electives may be from all Business courses in the catalog in any combination if prerequisites are met or instructor permission is obtained, AND minimum degree requirements are met.

**Recommended Information Technology Elective Courses:

BCA-103	Management Information Systems	3 s.h.
CIS-125	Intro to Programming Logic With Language	3 s.h.
CIS-232	Web Development II	1 s.h.
GRA-108	Visual Communication	3 s.h.
GRA-151	Web Design	3 s.h.
NET-304	Windows Workstation Operating Systems	4 s.h.

Electives may be from all Information Technology courses in the catalog in any combination if prerequisites are met or instructor permission is obtained, AND minimum degree requirements are met.

Business Internships

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1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Foundations of Technology Certificate

Students select one from each category and one additional Information Technology course of their choice:

Basic Computer Hardware

NET-112 Home/Office Computer Management ..... 3 s.h.
NET-113 IT Essentials I ..... 4 s.h.

Web Page Design

BCA-185 Beginning Web Page Development ..... 3 s.h.
CIS-210 Web Development I ..... 3 s.h.

Networking

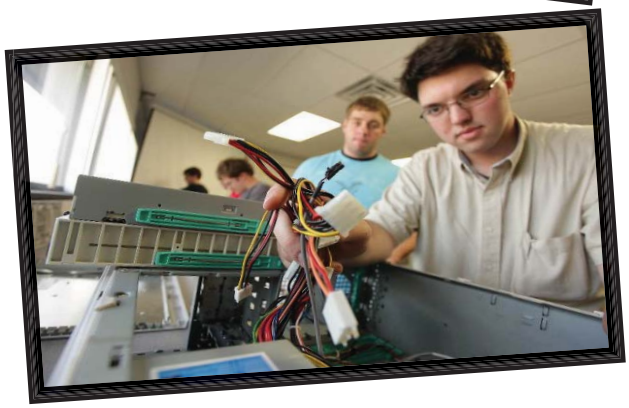
NET-117 Home/Office Network Management ..... 3 s.h.
NET-213 CISCO Networking ..... 4 s.h.

Elective

Students pick one additional IT course of their choice ..... 3-4 s.h.

Total Hours ..... 12-15 s.h.

(Course substitutions may be made with permission of the Division Chair.)



Information Assurance and Security

(Pending approval of the Iowa Department of Education)

The Information Assurance and Security program prepares the student to understand networking components with specialization in securing and protecting the network while being able to prepare and conduct investigations based on intrusions or access by other than authorized individuals, systems, viruses, malware and spyware. This professional demonstrates the skills required to protect a network, improve and maintain network security and conduct investigations if a threat or intrusion has been identified.

This program provides the student with an opportunity to pursue the certifications listed below:

- CISCO Certified Network Associate (CCNA)
- CCNA Security Certification
- COMPTIA Security+
- COMPTIA A+ Hardware Certification
- COMPTIA Network+
- Microsoft Certified Professional for Windows 7
- Microsoft Certified Technology Specialist
- Linux+
- Security Certified Network Professional (SCO-471)

Upon satisfactory completion of the prescribed curriculum (at least 60 semester hours) with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Applied Science Degree.

Career Opportunities

Students have the option of obtaining employment using their computer skills or transferring to a four-year institution and receiving a baccalaureate degree. Some job opportunities are listed below:

- Manage an entire network in a small- to medium-size business
- Work in IT department with networking responsibilities
- Manage an entire IT department for a small business
- Develop your own consulting business
- Computer Support and Security Specialist
- LAN or WAN Administrator
- Network Technician

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

CFR-110	Ethics and the Information Age	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
NET-113	IT Essentials I	4 s.h.
NET-213	CISCO Networking	4 s.h.
		15 s.h.

Second Term (Spring Semester)

CFR-100	Computer Forensics I	3 s.h.
MAT-110	Math for Liberal Arts	3 s.h.
NET-223	CISCO Routers	4 s.h.
NET-304	Windows Workstation Operating Systems	4 s.h.
		14 s.h.

Third Term (Summer)

CFR-150	Computer Forensics II	3 s.h.
NET-136	Operating Systems II	3 s.h.
NET-261	Virtualization/Cloud Operations	3 s.h.
		9 s.h.

Second Year

Fourth Term (Fall Semester)

ENG-103	Composition and Speech II	4 s.h.
NET-201	Network LANs and WANs	5 s.h.
NET-262	Hardening the Infrastructure	4 s.h.
NET-613	Information Data Assurance	3 s.h.
		16 s.h.

Fifth Term (Spring Semester)

NET-215	CISCO Network Security (CCNA Security)	4 s.h.
NET-295	Information Assurance and Security Capstone	5 s.h.
NET-324	Windows Network Management	4 s.h.
	Humanities Elective(s)	3 s.h.
		16 s.h.
	Total Program Hours	70 s.h.

Business Internships

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2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Information Technology Specialist

(Pending approval of the Iowa Department of Education)

The Information Technology Specialist program prepares the student to understand networking components, personal computer repair, troubleshooting, and management of workstations and server systems. The professional demonstrates the skills required to develop, establish, set up, maintain, and repair any issue that may arise while users are conducting work-related concepts, including basic protection theory on viruses, malware, and spyware that may enter a computer system during daily usage.

This program provides the student with an opportunity to pursue the certifications listed below:

- CISCO Certified Network Associate (CCNA)
- COMPTIA Security+
- COMPTIA A+ Hardware Certification
- COMPTIA Network+
- Microsoft Certified Professional for Windows 7
- Microsoft Certified Technology Specialist
- Microsoft Information Technology Professional (Windows Server)
- Linux+

Upon satisfactory completion of the prescribed curriculum (at least 60 semester hours) with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Applied Science Degree.

Career Opportunities

Students have the option of obtaining employment using their computer skills or transferring to a four-year institution and receiving a baccalaureate degree. Some job opportunities are listed below:

- Hardware Support for a small- to medium-size business
- Help Desk Support
- Technical Writers
- IT Sales and/or Training
- PC Technician Repair

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

CFR-110	Ethics and the Information Age	3 s.h.
ENG-102	Composition and Speech I	4 s.h.
NET-113	IT Essentials I	4 s.h.
NET-213	CISCO Networking	4 s.h.
		15 s.h.

Second Term (Spring Semester)

NET-133	IT Essentials II	4 s.h.
NET-223	CISCO Routers	4 s.h.
NET-304	Windows Workstation Operating Systems	4 s.h.
	Social Science Elective(s)	3 s.h.
		15 s.h.

Third Term (Summer)

NET-136	Operating Systems II	3 s.h.
NET-324	Windows Network Management	4 s.h.
NET-782	Computer Users Support	3 s.h.
		10 s.h.

Second Year

Fourth Term (Fall Semester)

ENG-103	Composition and Speech II	4 s.h.
NET-201	Network LANs and WANs	5 s.h.
NET-314	Windows Server	4 s.h.
NET-613	Information Data Assurance	3 s.h.
		16 s.h.

Fifth Term (Spring Semester)

MAT-110	Math for Liberal Arts	3 s.h.
NET-290	Information Technology Specialist Capstone	5 s.h.
	Humanities Elective(s)	3 s.h.
	Natural Science Elective(s)	3 s.h.
		14 s.h.
	Total Program Hours	70 s.h.

Business Internships

It's as easy as 1, 2, 3!

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2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

PAPPAJOHN ENTREPRENEURIAL CENTER

Entrepreneurship and Small Business Management

Want to make a million dollars, be the next Bill Gates, or be your own boss? The Entrepreneurship and Small Business Management Program provides students with an understanding of the many facets of entrepreneurship. Students will learn the process of identifying a business opportunity and developing an organization to establish a new venture. The curriculum will provide students with the proper tools to evaluate the feasibility of a new venture and to identify the available resources for assisting an entrepreneur during the start-up phase of the business.

Career Opportunities:

- By taking entrepreneurial courses, you will become a motivated and valued employee, captain, leader, owner, or boss that understands how to take a problem and turn it into an opportunity.
- Learn the ABC's of starting and managing your own business.
- Understand the difference between a good idea and a real business opportunity.
- Knowing the basics of starting a company creates both value and experience that will be used throughout your career, despite the area of interest.

Upon completion of the curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Science (Business/Entrepreneurship) Degree. With a few additional courses, a student can also earn an Associate in Arts Degree; assistance from a NIACC counselor is advised to ensure proper course curricula.

Required Courses/Suggested Schedule

First Year

First Term

BUS-102	Introduction to Business	3 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation, and Opportunity Analysis	2 s.h.
ENG-102	Composition & Speech I	4 s.h.
MAT-156	Introduction to Statistics	3 s.h.
		14 s.h.

Second Term

ACC-121	Principles of Accounting I	3 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
MKT-110	Principles of Marketing	3 s.h.
MKT-140	Principles of Selling	3 s.h.
		16 s.h.

Second Year

Third Term

ACC-122	Principles of Accounting II	3 s.h.
BUS-185	Business Law I	3 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
MGT-101	Principles of Management	3 s.h.
	Elective(s)	3 s.h.
		15 s.h.

Fourth Term

BUS-186	Business Law II	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
MAT-140	Finite Math	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Elective	1 s.h.
		13 s.h.

BUS-225C*	Business Internships	3 s.h.

Total Program Hours 61 s.h.

* Prerequisite: BUS-107 Business Careers. Please meet with your advisor in the Pappajohn Center prior to scheduling this class. May be taken during your summer session, third or fourth semester.

To add A.A. Degree:

Move 4 s.h. of electives to General Education Core
Add 13 s.h. of General Education Core
Total ..... 17 s.h.

Business Internships

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   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

The Pappajohn Entrepreneurial Certificate

The John Pappajohn Entrepreneurial Certificate is designed for the aspiring student entrepreneur and is ideal for any student who someday would like to own and operate a business of his or her own.

Career Opportunities:

- This specially designed certificate course allows students in any academic program to learn the essential elements of creating and managing their own entrepreneurial venture.
- Students will focus on the core business disciplines that will assist them in any new business venture.
- Learn how to create a road map that will allow you to attract start-up funding, market your idea, and grow your entrepreneurial venture.
- The Entrepreneurial Certificate Program will teach you the basics of business ownership, and these skills will help you find employment.

Strengths:

Students will be able to explore a new business idea, conduct market research, prepare marketing and financial plans, and learn basic skills on how to own, operate, and manage the business.

Required Courses/Suggested Schedule

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
BUS-102	Introduction to Business	3 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation, and Opportunity Analysis	2 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
	Total Program Hours	16 s.h.

Banking, Insurance, and Financial Management

Drive a car? Rent or own a home? Manage a Fortune 500 company? Chances are you answered yes to at least one of those questions. Banking, Insurance and Financial Management are everywhere and savvy students can use this training to their career advantage. A Banking, Insurance and Financial Management Degree will provide students with the fundamental knowledge, skills and tools necessary to move into their career or advance in their educational program. Improve your own personal balance sheet with an A.S.B. degree in NIACC's Banking, Insurance and Financial Management.

Career Opportunities:
Successful graduates can find job opportunities in the following occupational areas:

- Management
- Customer Service
- Sales
- Commercial Bankers/Lenders
- Financial Analysts
- Investment Bankers
- Private Wealth Managers

For specific information, contact the Career and Internship Center or the NIACC Business Division.

Upon satisfactory completion of the first year of the curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a diploma.

Upon completion of the second year of the curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Science (Business/Banking, Insurance and Financial Management) Degree. Students who know they wish to pursue a four-year degree and want to meet general education requirements of transfer institutions should pursue the A.A. Degree. This will necessitate a slightly different curriculum.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-121	Principles of Accounting I	3 s.h.
	OR ACC-111 Introduction to Accounting (3 s.h.) *if necessary*	
BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-102	Introduction to Business	3 s.h.
BUS-161	Human Relations	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
		16 s.h.

Second Term

ACC-122*	Principles of Accounting II	3 s.h.
BUS-260	Introduction to Insurance	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
FIN-101	Principles of Banking	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
		16 s.h.

*Prerequisite: ACC-121 Principles of Accounting I

Second Year

Third Term

BUS-185	Business Law I	3 s.h.
BUS-266	Property and Casualty Insurance	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Natural Science/Mathematics	3 s.h.
	Elective(s)	3 s.h.
		15 s.h.

Fourth Term

BCA-152	Comprehensive Spreadsheets	3 s.h.
BUS-186	Business Law II	3 s.h.
BUS-267	Life, Health, & Disability Insurance	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Elective(s)	3 s.h.
		15 s.h.

	Total Program Hours	62 s.h.

Recommended Elective Courses

ACC-135	Personal Income Tax	3 s.h.
ACC-311	Computer Accounting	3 s.h.
ADM-123	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
BUS-107	Business Careers	1 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation, and Opportunity Analysis	2 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
BUS-225	Business Internships (Prereq: BUS-107 Business Careers)	1-5 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
MGT-101	Principles of Management	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
MKT-140	Principles of Selling	3 s.h.
POL-111	American National Government	3 s.h.
POL-112	American, State, & Local Government	3 s.h.

For additional Business electives, see pages-127-129.

General Business

The General Business Program provides the student with a broad base of knowledge to assume a wide variety of professional business positions in our ever-changing business environment.

Career Opportunities:
Some of the occupational areas in which job opportunities may be found are:

- Sales
- General Business (office, shipping and receiving, quality control)
- Management
- Positions within industrial, wholesale or retail firms

For specific information, contact the Career and Internship Center or the NIACC Business Division.

Employment Outlook:
Whether a business is not-for-profit, governmental, or an international corporation, it needs people with skills in general business. All organizations offer careers that rely heavily on effective business management techniques, making general business an excellent foundation.

Strengths:
NIACC's General Business Program is a dual-purpose program designed to give the student the option of obtaining employment upon graduation or transferring to a four-year institution.

Upon completion of the curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Science (Business/General Business) Degree. Students who know they wish to pursue a four-year degree and want to meet general education requirements of transfer institutions, should pursue the A.A. Degree. This will necessitate a slightly different curriculum.

Foundations in Business - Certificate

The Foundations in Business Certificate is designed to expose students to core business courses.

These courses may apply to most certificates, diplomas, and degrees in the Business Division. Many of these courses are offered every semester in multiple formats.

Choose any three courses from the list below to customize the Certificate:

ACC-111	Introduction to Accounting	3 s.h.
ACC-311	Computer Accounting*	3 s.h.
BCA-215	Computer Business Applications	3 s.h.
BUS-102	Introduction to Business	3 s.h.
BUS-130	Introduction to Entrepreneurship	3 s.h.
BUS-161	Human Relations	3 s.h.

*Prerequisite ACC-111 Introduction to Accounting or ACC-121 Principles of Accounting I.

Upon satisfactory completion of the prescribed curriculum (9 semester hours) with an average grade point of 2.00 (C) or higher, the student is awarded the Foundations in Business Certificate.

Required Courses/Suggested Schedule

First Year

First Term

BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-102	Introduction to Business	3 s.h.
BUS-185	Business Law I	3 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
		16 s.h.

Second Term

BUS-186	Business Law II	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
MAT-156	Introduction to Statistics	3 s.h.
	Business Elective(s)	3 s.h.
		16 s.h.

Second Year

Third Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
BUS-161	Human Relations	3 s.h.
MGT-101	Principles of Management	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Business Elective(s)	3 s.h.
		15 s.h.

Fourth Term

BCA-152	Comprehensive Spreadsheets	3 s.h.
MAT-140	Finite Math	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
	Business Elective(s)	6 s.h.
		15 s.h.
	Total Program Hours	62 s.h.

Recommended Business Electives:

ACC-122	Principles of Accounting II	3 s.h.
ACC-135	Personal Income Tax	3 s.h.
ADM-131	Office Calculators	1 s.h.
BUS-107	Business Careers	1 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
BUS-225	Business Internships (Prereq: BUS-107 Business Careers)	1-5 s.h.
BUS-260	Introduction to Insurance	3 s.h.
BUS-298	Seminar in Entrepreneurship	3 s.h.
MAT-161	Business Statistics	3 s.h.
MGT-130	Principles of Supervision	3 s.h.
MGT-170	Human Resource Management	3 s.h.
MKT-140	Principles of Selling	3 s.h.
MKT-150	Principles of Advertising	3 s.h.

For additional Business electives, see pages-127-129.

Hospitality/Food Service Management

Does a career in Hospitality/Food Service Management sound appetizing? This program is designed to give students the option of articulation to a four-year institution or employment upon graduation. Graduates will be prepared for careers in food preparation, entry-level supervision or management positions, as well as food marketing or food distribution sales representatives.

Career Opportunities:
A wide variety of employment opportunities are available including:

- Catering and Banquet Manager
- Cook or Chef's Assistant
- Food Production Manager
- Kitchen or Dining Room Supervisor
- Restaurant Manager/Assistant Manager

Employment Outlook:
Bureau of Labor Statistics (BLS) data shows the field of food management, particularly in institutions such as schools, hospitals, nursing homes, restaurants, hotels, and prisons, to be in the top ten job growth areas by 2012.

Students who complete the first year, as well as Business Internships, with a grade point average of 2.00 (C) or higher are awarded a NIACC diploma. Students can also go on to earn an Associate in Applied Science degree with an emphasis in Hospitality/Food Service Management.

Students wishing to pursue a four-year degree and want to meet general education requirements of transfer institutions should pursue the A.A. degree. This will necessitate a slightly different curriculum.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

BUS-102	Introduction to Business	3 s.h.
BUS-107	Business Careers	1 s.h.
ENG-105	Composition I	3 s.h.
HCM-103	ServSafe Food Safety+	1 s.h.
HCM-135	Food Production+	4 s.h.
HCM-607	Hospitality and Restaurant Management+	2 s.h.
		14 s.h.

BUS-225	Business Internships+ (Prereq: BUS-107 Business Careers)	4 s.h.
	A student may enroll in this course in any term.	

Second Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
BCA-215	Computer Business Applications	3 s.h.
BUS-161	Human Relations	3 s.h.
HCM-239	Customer Service+	2 s.h.
HCM-283	Controlling Food Service Costs+	2 s.h.
HCM-325	Human Resources Management and Supervision+	2 s.h.
		15 s.h.

Second Year

Third Term

HCM-232	Culinary Nutrition	2 s.h.
MKT-140	Principles of Selling	3 s.h.
SPC-111	Public Speaking	2 s.h.
	Business Elective(s)	3 s.h.
	Math/Social Science/OR Humanities Elective(s)	6 s.h.
		16 s.h.

Fourth Term

HCM-205	Dinner and Front of the House	3 s.h.
HCM-236	Culinary Arts and Book of Yields	2 s.h.
MGT-101	Principles of Management	3 s.h.
	Business Elective(s)	3 s.h.
	Math/Social Science/OR Humanities Elective(s)	3 s.h.
		14 s.h.

	Total Program Hours	63 s.h.

^ Prerequisite BUS-107 Business Careers

Recommended Electives

ACC-122	Principles of Accounting II	3 s.h.
ACC-135	Personal Income Tax	3 s.h.
ADM-131	Office Calculators	1 s.h.
BCA-152	Comprehensive Spreadsheets	3 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation, and Opportunity Analysis	2 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
BUS-185	Business Law I	3 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
FLS-141	Elementary Spanish I	3 s.h.
MGT-170	Human Resource Management	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
MKT-150	Principles of Advertising	3 s.h.
PHI-105	Introduction to Ethics	3 s.h.

For additional Business electives, see pages-127-129.

Marketing and Sales

The Marketing and Sales Degree helps students explore several important areas of an organization, including marketing, promotion and sales. To successfully communicate an idea, to serve the needs of your customers more effectively, and to be competitive in the marketplace, learning effective selling skills is essential for everyone. From the CEO to the Administrative Assistant, everyone in every company is selling every hour of every day whether they are aware of this fact or not!

Career Opportunities:

Successful graduates can find job opportunities in the following occupational areas:

- Sales Representative
- Department Manager
- Store Manager
- Promotion/Advertising
- Merchandise Buying/Planning
- Sales
- Human Resources Management

Strengths:

Marketing is an attitude, philosophy, and perspective that stresses customer relationships to provide satisfaction. Marketing plays an important role in society, is important to business, and offers outstanding career opportunities.

Upon satisfactory completion of the first year of the curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a diploma.

Upon satisfactory completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Science (Business/Marketing and Sales) Degree. Students who know they wish to pursue a four-year degree and want to meet general education requirements of transfer institutions should pursue the A.A. Degree. This will necessitate a slightly different curriculum.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-121	Principles of Accounting I	3 s.h.
	OR ACC-111 Introduction to Accounting (3 s.h.)	
BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-102	Introduction to Business	3 s.h.
BUS-161	Human Relations	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
		16 s.h.

Second Term

BUS-121	Business Communications	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
MKT-110	Principles of Marketing	3 s.h.
MKT-140	Principles of Selling	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
		16 s.h.

Second Year

Third Term

BUS-107	Business Careers	1 s.h.
BUS-185	Business Law I	3 s.h.
MKT-160	Principles of Retailing	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Natural Science/Mathematics Elective(s)	3 s.h.
	Business Elective(s)	2 s.h.
		15 s.h.

Fourth Term

BCA-152	Comprehensive Spreadsheets	3 s.h.
BUS-225	Business Internships	3 s.h.
MKT-150	Principles of Advertising	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Business Elective(s)	3 s.h.
		15 s.h.

Total Program Hours 62 s.h.

Recommended Business Electives

ADM-131	Office Calculators	1 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
BUS-186	Business Law II	3 s.h.
BUS-298	Seminar in Entrepreneurship	3 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
MAT-710	Business & Financial Math	2 s.h.
MGT-101	Principles of Management	3 s.h.
MGT-130	Principles of Supervision	3 s.h.
MGT-170	Human Resource Management	3 s.h.
MKT-170	Retail Buying	3 s.h.
SPC-111	Public Speaking	2 s.h.

For additional Business electives, see pages-127-129.

Sport Management

Did you know that "sports" is a $200 billion dollar industry in the U.S. alone? Those dollars spell opportunity for students with a love of sports and ability to organize and manage. In the exciting Sport Management Program, which combines a solid business foundation with experiential learning, you'll be able to start your career running.

Career Opportunities:

Career opportunities include, but are not limited to:

- Athletic Director
- Municipal Parks and Recreational Sport Leadership
- Sport Management
- Sport Marketing
- Sport Facility Management
- Sport Event Management
- Tourism Director
- Community/Voluntary Agency Sport Programming

Upon completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Science (Business/Sport Management) Degree. Students who know they wish to pursue a four-year degree and want to meet general education requirements of transfer institutions should pursue the A.A. Degree. This will necessitate a slightly different curriculum.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

BUS-102	Introduction to Business	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
MGT-220	Introduction to Sport Management	3 s.h.
	Elective(s)	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
		16 s.h.

Second Term

BCA-101	Introduction to Computers and Information Systems	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
MGT-221	Current Issues in Sport	3 s.h.
	Natural Science/Mathematics Elective(s)	3 s.h.
	Elective(s)	3 s.h.
		16 s.h.

Second Year

Third Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
BUS-107	Business Careers	1 s.h.
	AND	
BUS-225	Business Internships*	2 s.h.
	OR Business Elective(s) (3 s.h.)	
BUS-161	Human Relations	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
		15 s.h.

Fourth Term

BUS-185	Business Law I	3 s.h.
BUS-225	Business Internships*	3 s.h.
MGT-101	Principles of Management	3 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
	Elective(s)	3 s.h.
		15 s.h.

Total Program Hours	62 s.h.

* Business Internships may be repeated for up to six credits.

Elective Business Courses:

ACC-135	Personal Income Tax	3 s.h.
BCA-152	Comprehensive Spreadsheets	3 s.h.
BUS-121	Business Communications	3 s.h.
MGT-130	Principles of Supervision	3 s.h.
MKT-150	Principles of Advertising	3 s.h.

Recommended Physical Education Courses:

PEA-146	Physical Fitness I	1 s.h.
PEA-147	Physical Fitness I Lab	1 s.h.
PEC-110	Coaching Ethics, Techniques, and Theory	1 s.h.
PEC-115	Athletic Development and Human Growth	1 s.h.
PEC-122	Introduction to Anatomy and Physiology for Coaching	1 s.h.
PEC-127	Care & Prevention of Athletic Injuries	2 s.h.
PEC-161	Sports Officiating	3 s.h.

Supervision and Management

The Supervision and Management Program is designed to meet the needs of students who want a foundation in developing skills in the areas of supervising people and the overall management of a business enterprise.

Career Opportunities:
Occupational titles include:

- Supervisor
- Supervisor Trainee
- Lead Person
- Manager
- Manager Trainee

Strengths:
The intent of this program is to develop abilities to organize, coordinate, and evaluate the functions of a unit, department, or branch of an organization either in an industrial management or administrative management capacity.

Upon satisfactory completion of the first year of the curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a diploma.

Upon completion of the second year of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Science (Business/Supervision and Management) Degree.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
BUS-185	Business Law I	3 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
MGT-130	Principles of Supervision	3 s.h.
		16 s.h.

Second Term

BCA-101	Introduction to Computers and Information Systems	3 s.h.
BUS-161	Human Relations	3 s.h.
MGT-101	Principles of Management	3 s.h.
MGT-170	Human Resource Management	3 s.h.
	Business Elective(s)	3 s.h.
		15 s.h.
	Total Program Hours	31 s.h.

Career Option
Students in the Supervision and Management Career Option Program supplement the diploma program with the following additional courses:

Second Year

Third Term

MAT-110	Math for Liberal Arts	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
	Humanities/Social Science Elective	3 s.h.
	Elective(s)	4 s.h.
		13 s.h.

Fourth Term

ACC-122	Principles of Accounting II	3 s.h.
BUS-186	Business Law II	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.
ENG-103	Composition & Speech II	4 s.h.
	Elective(s)	3 s.h.
		16 s.h.
	Total Program Hours	60 s.h.

Recommended Business Electives:

ACC-135	Personal Income Tax	3 s.h.
BUS-107	Business Careers	1 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
BUS-225	Business Internships (Prereq: BUS-107 Business Careers)	1-5 s.h.
BUS-298	Seminar in Entrepreneurship	3 s.h.

For additional Business electives, see pages-127-129.

Administrative Office Associate - Diploma

The Administrative Office Associate - Diploma Program is designed to prepare students for employment with financial institutions, retail establishments, manufacturers, private organizations, and Civil Service.

The graduate's duties include keyboarding, filing, record keeping, operating office machines, transcribing, using a computer for word processing, spreadsheet, electronic presentation, and database projects, handling telephone services, and taking care of general office administration.

NIACC's classrooms are equipped with the latest in computers, office machines, and equipment. They are also staffed by qualified instructors in the business field.

Upon satisfactory completion of the prescribed curriculum (at least 30 semester hours) with an average grade point of 2.00 (C), the student is awarded a diploma in Administrative Office Associate.

Career Opportunities

Successful graduates can find job opportunities in the following occupational areas:

- Administrative Assistant
- Secretary
- Records Manager
- Receptionist
- Machine Transcriber
- Information Processing Operator

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
ADM-123*	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
BCA-129	Basic Word Processing	2 s.h.
BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-121	Business Communications	3 s.h.
		15 s.h.

* Prerequisite: Keyboarding skill of 30 wam with 3 errors or less is recommended.

Second Term

ADM-162**	Office Procedures	3 s.h.
BCA-152*	Comprehensive Spreadsheets	3 s.h.
BUS-107	Business Careers	1 s.h.
	Business Electives	8 s.h.
		15 s.h.

* Prerequisite: BCA-215 or BCA-101
** Prerequisite: BCA-129 and BUS-121

Total Program Hours 30 s.h.

Recommended Electives:

BCA-136	Advanced Word Processing	3 s.h.
BCA-163	Microsoft Access	1 s.h.
BCA-170	Personal Information Management	2 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BCA-185	Beginning Web Page Development	3 s.h.
BUS-102	Introduction to Business	3 s.h.
BUS-161	Human Relations	3 s.h.
BUS-225	Business Internships	1-5 s.h.
NET-112	Home/Office Computer Management	3 s.h.

NOTE: *Business Internships (BUS-225) is a* ***strongly recommended*** *Business elective. For more information, please contact Laura Merfeld at 1-888-466-4222, Ext. 4355.*

For additional Business electives, see pages-127-129.

Administrative Office Specialist - Degree

The Administrative Office Specialist - Degree Program is designed to prepare students for employment with financial institutions, retail establishments, manufacturers, private organizations, and Civil Service.

The graduate's duties include transcribing dictation; keyboarding correspondence, reports, and records; filing; handling telephone services; making appointments and receiving visitors; ordering supplies; making travel arrangements; taking care of general office administration; and using computers for word processing, spreadsheet, electronic presentation, and database projects.

NIACC's classrooms are equipped with the latest in computers, office machines, and equipment. They are also staffed by qualified instructors in the business field.

Upon satisfactory completion of the prescribed curriculum (at least 60 semester hours) with an average grade point of 2.00 (C), the student is awarded an Associate in Applied Science Degree.

Career Opportunities

Successful graduates can find job opportunities in the following occupational areas:

- Administrative Assistant
- Executive Secretary
- Receptionist
- Office Manager
- Records Manager
- Information Processing Supervisor

For specific information contact the Career and Internship Center or the NIACC Business Division.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
ADM-123*	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
ENG-102	Composition & Speech I	4 s.h.
	Humanities/Social Science Elective(s)	3 s.h.
		14 s.h.

* Prerequisite: Keyboarding skill of 30 wam with 3 errors or less is recommended.

Second Term

BCA-129	Basic Word Processing	2 s.h.
ENG-103	Composition & Speech II	4 s.h.
	Business Electives	10 s.h.
		16 s.h.

Second Year

Third Term

BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-121	Business Communications	3 s.h.
	Business Elective(s)	3 s.h.
	Humanities Elective(s)	3 s.h.
	Social Science Elective(s)	3 s.h.
		15 s.h.

Fourth Term

ADM-162***	Office Procedures	3 s.h.
BCA-136*	Advanced Word Processing	3 s.h.
BCA-152**	Comprehensive Spreadsheets	3 s.h.
BUS-107	Business Careers	1 s.h.
	Business Elective(s)	2 s.h.
	Natural Science/Mathematics Elective(s)	3 s.h.
		15 s.h.

* Prerequisites: BCA-129 and BCA-215 or BCA-101
** Prerequisites: BCA-215 or BCA-101
*** Prerequisites: BCA-129 and BUS-121

Total Program Hours 60 s.h.

Recommended Electives:

BCA-163	Microsoft Access	1 s.h.
BCA-170	Personal Information Management	2 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BCA-185	Beginning Web Page Development	3 s.h.
BUS-102	Introduction to Business	3 s.h.
BUS-161	Human Relations	3 s.h.
BUS-225	Business Internships	1-5 s.h.
MGT-101	Principles of Management	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
NET-112	Home/Office Computer Management	3 s.h.

NOTE: *Business Internships (BUS-225) is a* ***strongly recommended*** *Business elective. For more information, please contact Laura Merfeld at 1-888-466-4222, Ext. 4355.*

For additional Business electives, see pages-127-129.

Legal Office Associate - Diploma

The Legal Office Associate - Diploma Program is designed to prepare students for employment with law offices, insurance companies, financial institutions, courts and police departments, as well as in legal departments of business firms and government offices.

The graduate's duties include transcribing dictation; preparing letters, memos, court and client documents; filing; handling telephone services; making appointments and receiving clients; ordering supplies; making travel arrangements; taking care of general office administration; and using a computer for word processing, spreadsheet, electronic presentation, and database projects.

NIACC's classrooms are equipped with the latest in computers, office machines, and equipment. They are also staffed by qualified instructors in the business and legal fields.

Upon satisfactory completion of the prescribed curriculum (at least 30 semester hours) with an average grade point of 2.00 (C), the student is awarded a diploma in Legal Office Associate.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
ADM-123*	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
BCA-129	Basic Word Processing	2 s.h.
BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-121	Business Communications	3 s.h.
		15 s.h.

* Prerequisite: Keyboarding skill of 30 wam with 3 errors or less is recommended.

Second Term

ADM-162*	Office Procedures	3 s.h.
ADM-185	Legal Terminology and Transcription	2 s.h.
BUS-107	Business Careers	1 s.h.
BUS-185	Business Law I	3 s.h.
	Business Electives	6 s.h.
		15 s.h.

* Prerequisites: BCA-129 and BUS-121

Total Program Hours	30 s.h.

Recommended Electives:

BCA-136	Advanced Word Processing	3 s.h.
BCA-152	Comprehensive Spreadsheets	3 s.h.
BCA-163	Microsoft Access	1 s.h.
BCA-170	Personal Information Management	2 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BCA-185	Beginning Web Page Development	3 s.h.
BUS-102	Introduction to Business	3 s.h.
BUS-161	Human Relations	3 s.h.
BUS-225	Business Internships	1-5 s.h.
NET-112	Home/Office Computer Management	3 s.h.

NOTE: *Business Internships (BUS-225) is a* ***strongly recommended*** *Business elective. For more information, please contact Laura Merfeld at 1-888-466-4222, Ext. 4355.*

For additional Business electives, see pages-127-129.

Career Opportunities

Successful graduates can find job opportunities in the following occupational areas:

- Legal Office Assistant
- Legal Secretary
- Legal Transcriber
- Legal Records Manager
- Legal Information Processing Operator
- Receptionist
- Appointment Clerk

For specific information contact the Career and Internship Center or the NIACC Business Division.

Legal Office Specialist - Degree

The Legal Office Specialist - Degree Program is designed to prepare students for employment in law offices, insurance companies, financial institutions, courts and police departments, as well as in legal departments of business firms and government offices.

The graduate's duties include transcribing dictation; preparing letters, memos, court and client documents; filing; handling telephone services; making appointments and receiving clients; ordering supplies, making travel arrangements; taking care of general office administration; and using a computer for word processing, spreadsheet, electronic presentation, and database projects.

NIACC's classrooms are equipped with the latest in computers, office machines, and equipment. They are also staffed by qualified instructors in the business and legal fields.

Upon satisfactory completion of the prescribed curriculum (at least 60 semester hours) with an average grade point of 2.00 (C), the student is awarded an Associate in Applied Science Degree.

Career Opportunities

Successful graduates can find opportunities in the following occupational areas:

- Legal Office Assistant
- Legal Secretary
- Legal Transcriber
- Legal Information Processing
- Receptionist
- Legal Records Manager
- Appointment Clerk

For specific information contact the Career and Internship Center or the NIACC Business Division.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
ADM-123*	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
ENG-102	Composition & Speech I	4 s.h.
POL-111	American National Government	3 s.h.
		14 s.h.

* Prerequisite: Keyboarding skill of 30 wam with 3 errors or less is recommended.

Second Term

BCA-129	Basic Word Processing	2 s.h.
BUS-107	Business Careers	1 s.h.
ENG-103	Composition & Speech II	4 s.h.
	Business Elective(s)	3 s.h.
	Humanities/Social Science Elective(s)	6 s.h.
		16 s.h.

Second Year

Third Term

BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BUS-121	Business Communications	3 s.h.
BUS-185	Business Law I	3 s.h.
	Business Elective(s)	3 s.h.
	Natural Science/Mathematics Elective(s)	3 s.h.
		15 s.h.

Fourth Term

ADM-162*	Office Procedures	3 s.h.
ADM-185	Legal Terminology and Transcription	2 s.h.
BCA-136**	Advanced Word Processing	3 s.h.
BCA-152***	Comprehensive Spreadsheets	3 s.h.
	Business Elective(s)	4 s.h.
		15 s.h.

* Prerequisites: BCA-129 and BUS-121
** Prerequisites: BCA-129 and BCA-215 OR BCA-101
*** Prerequisites: BCA-215 or BCA-101

Total Program Hours 60 s.h.

Recommended Electives:

BCA-163	Microsoft Access	1 s.h.
BCA-170	Personal Information Management	2 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BCA-185	Beginning Web Page Development	3 s.h.
BUS-102	Introduction to Business	3 s.h.
BUS-161	Human Relations	3 s.h.
BUS-186	Business Law II	3 s.h.
BUS-225	Business Internships	1-5 s.h.
MGT-101	Principles of Management	3 s.h.
NET-112	Home/Office Computer Management	3 s.h.

NOTE: *Business Internships (BUS-225) is a* ***strongly recommended*** *Business elective. For more information, please contact Laura Merfeld at 1-888-466-4222, Ext. 4355.*

For additional Business electives, see pages-127-129.

Medical Coding - Diploma

The Medical Coding Diploma Program is designed to prepare students to work specifically with the medical reimbursement process. The program has been developed to assist students in becoming knowledgeable in the basics of health insurance, compliance issues for insurance carriers, basic coding, and an overview of the roles and responsibilities of a medical coder.

No prerequisites required; however, knowledge of medical terminology and/or experience in a medical office or care facility is highly recommended.

Upon satisfactory completion of the prescribed curriculum (at least 30 semester hours) with an average grade point of 2.00 (C), the student is awarded a diploma in Medical Coding.

Career Opportunities

Medical coding is one of the fastest growing opportunities in health care. Continuous changes in the medical billing and coding industry have created an incredible demand for those trained in this area. Students completing this program will have entry-level employment opportunities as medical billers, medical coders, or other health insurance-related positions in a wide variety of medical settings including, but not limited to:

- Physician Practices
- Chiropractic Offices
- Hospitals
- Nursing Facilities
- Insurance Companies
- Billing Service Companies

For specific information contact the Career and Internship Center or the NIACC Business Division.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

BCA-129	Basic Word Processing	2 s.h.
BUS-121	Business Communications	3 s.h.
HIT-246	Coding I (ICD-9)	3 s.h.
HSC-120	Medical Terminology I	3 s.h.
HSC-144	Basic Pharmacology	2 s.h.
HSC-150	Body Structure & Function	4 s.h.
		17 s.h.

Second Term

ADM-131	Office Calculators	1 s.h.
ADM-215*	Medical Office Procedures	3 s.h.
BUS-107	Business Careers	1 s.h.
HIT-247	Coding II (CPT)	3 s.h.
HSC-121	Medical Terminology II	3 s.h.
	Business Electives	2 s.h.
		13 s.h.

* Prerequisites: BCA-129 and BUS-121

Total Program Hours 30 s.h.

Recommended Electives:

ACC-111	Introduction to Accounting OR ACC-121 Principles of Accounting I (3 s.h.)	3 s.h.
BCA-215	Computer Business Applications OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	3 s.h.
BUS-161	Human Relations	3 s.h.
BUS-225	Business Internships	1-5 s.h.

NOTE: *Business Internships (BUS-225) is a strongly recommended Business elective. For more information, please contact Laura Merfeld at 1-888-466 4222, Ext. 4355.*

For additional Business electives, see pages-127-129.

Medical Office Associate - Diploma

The Medical Office Associate - Diploma Program is designed to prepare students for employment in physicians' offices, hospitals, clinics, public health departments, Civil Service, medical laboratories, pharmaceutical houses, insurance companies, business and industrial firms with large medical departments, and foundations devoted to medical research.

The graduate's duties include transcription, preparing correspondence and medical records, filing, mailing, ordering supplies, handling telephone services, making appointments and receiving visitors, taking care of general office administration, and using a computer for word processing, spreadsheet, electronic presentation, and database projects.

NIACC's classrooms are equipped with the latest in computers, office machines, and equipment. They are also staffed by qualified instructors in the business and medical fields.

Upon satisfactory completion of the prescribed curriculum (at least 30 semester hours) with an average grade point of 2.00 (C), the student is awarded a diploma in Medical Office Associate.

Career Opportunities

Successful graduates can find job opportunities in the following occupational areas:

- Medical Office Assistant
- Medical Secretary
- Medical Records Manager
- Medical Information Processing Operator
- Receptionist
- Appointment Clerk

For specific information contact the Career and Internship Center or the NIACC Business Division.

Required Courses/Suggested Schedule

First Year

First Term

BCA-129	Basic Word Processing	2 s.h.
BUS-121	Business Communications	3 s.h.
HSC-120	Medical Terminology I	3 s.h.
HSC-144	Basic Pharmacology	2 s.h.
HSC-150	Body Structure & Function	4 s.h.
		14 s.h.

Second Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
ADM-123***	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
ADM-215**	Medical Office Procedures	3 s.h.
BUS-107	Business Careers	1 s.h.
HIT-210*	Basic Medical Insurance & Coding	2 s.h.
	OR HIT-246, Coding I (3 s.h.) and HIT-247, Coding II (3 s.h.)	
HSC-121	Medical Terminology II	3 s.h.
		16 s.h.

* Prerequisites: HSC-150 and HSC-120, or permission of instructor
** Prerequisites: BCA-129 and BUS-121
*** Prerequisite: Keyboarding skill of 30 wam with 3 errors or less is recommended.

Total Program Hours 30 s.h.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Medical Office Specialist - Degree

The Medical Office Specialist - Degree Program is designed to prepare students for employment in physicians' offices, hospitals, clinics, public health departments, Civil Service, medical laboratories, pharmaceutical houses, insurance companies, business and industrial firms with large medical departments, and foundations devoted to medical research.

The graduate's duties include transcribing dictation, preparing correspondence and medical records, filing, mailing, ordering supplies, handling telephone services, making appointments and receiving visitors, taking care of general office administration, and using a computer for word processing, spreadsheet, electronic presentation, and database projects.

NIACC's classrooms are equipped with the latest in computers, office machines, and equipment. They are also staffed by qualified instructors in the business and medical fields.

Upon satisfactory completion of the prescribed curriculum (at least 60 semester hours) with an average grade point of 2.00 (C), the student is awarded an Associate in Applied Science Degree.

Business Internships

It's as easy as 1, 2, 3!

1. Talk to the Business Internship Coordinator or your Counselor to decide when in your college career you should participate in an internship.
2. Enroll in and pass Business Careers (BUS-107).
   - Business Careers is a 1 s.h., 5-week, pass/no pass course that is a prerequisite to Business Internships ~ it can be taken at any time prior to a Business Internship.
3. Upon passing Business Careers, the student is eligible for a Business Internship (BUS-225).
   - Students may register for a Business Internship only when they have located, secured and have had the internship site approved with the Business Internship Coordinator.
   - Business Internship credit ranges from 1 s.h. to 5 s.h. ~ this must be determined prior to registering for the course.

All students are highly encouraged to participate in a Business Internship before graduating.

Required Courses/Suggested Schedule

First Year

First Term

ACC-111	Introduction to Accounting	3 s.h.
	OR ACC-121 Principles of Accounting I (3 s.h.)	
ADM-123*	Document Formatting	3 s.h.
ENG-102	Composition & Speech I	4 s.h.
HSC-144	Basic Pharmacology	2 s.h.
HSC-150	Body Structure & Function	4 s.h.
		16 s.h.

* Prerequisite: Keyboarding skill of 30 wam with 3 errors or less is recommended.

Second Term

ADM-131	Office Calculators	1 s.h.
BCA-215	Computer Business Applications	3 s.h.
	OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	
BIO-102	Introductory Biology	3 s.h.
BIO-103	Introductory Biology Lab	1 s.h.
BUS-107	Business Careers	1 s.h.
ENG-103	Composition & Speech II	4 s.h.
	Social Science or Humanities Elective(s)	3 s.h.
		16 s.h.

Second Year

Third Term

BCA-129	Basic Word Processing	2 s.h.
BUS-121	Business Communications	3 s.h.
HSC-120	Medical Terminology I	3 s.h.
	Social Science or Humanities Elective(s)	6 s.h.
		14 s.h.

Fourth Term

ADM-215***	Medical Office Procedures	3 s.h.
BCA-136*	Advanced Word Processing	3 s.h.
BCA-152****	Comprehensive Spreadsheets	3 s.h.
HIT-210**	Basic Medical Insurance & Coding	2 s.h.
	OR HIT-246, Coding I (3 s.h.) and HIT-247, Coding II (3 s.h.)	
HSC-121	Medical Terminology II	3 s.h.
		14 s.h.

* Prerequisites: BCA-215 or BCA-101 and BCA-129
** Prerequisites: HSC-150 and HSC-120, or permission of instructor
*** Prerequisites: BCA-129 and BUS-121
**** Prerequisite: BCA-215 or BCA-101

Total Program Hours 60 s.h.

Career Opportunities

Successful graduates can find job opportunities in the following occupational areas:

- Medical Office Assistant
- Medical Secretary
- Medical Records Manager
- Medical Information Processing Operator
- Receptionist
- Appointment Clerk

For specific information contact the Career and Internship Center or the NIACC Business Division.

Medical Transcription - Diploma

The Medical Transcription - Diploma Program is designed to prepare students for employment transcribing in physicians' offices, hospitals, clinics, public health departments, Civil Service, medical laboratories, pharmaceutical houses, insurance companies, business and industrial firms with large medical departments, and foundations devoted to medical research.

NIACC's classrooms are equipped with the latest in computers, office machines, and equipment. They are also staffed by qualified instructors in the business and medical fields.

Upon satisfactory completion of the prescribed curriculum (at least 30 semester hours) with an average grade point of 2.00 (C), the student is awarded a diploma in Medical Transcription.

Required Courses/Suggested Schedule

First Year

First Term

BCA-129	Basic Word Processing	2 s.h.
BUS-121	Business Communications	3 s.h.
HIT-630	Medical Transcription I	3 s.h.
HSC-120	Medical Terminology I	3 s.h.
HSC-144	Basic Pharmacology	2 s.h.
HSC-150	Body Structure & Function	4 s.h.
		17 s.h.

Second Term

BUS-107	Business Careers	1 s.h.
HIT-631*	Medical Transcription II	3 s.h.
HIT-632*	Medical Transcription III	3 s.h.
HSC-121	Medical Terminology II	3 s.h.
HSC-155	Laboratory Tests	2 s.h.
	Elective (Strongly recommend BIO-206, Anatomy & Physiology I)	1 s.h.
		13 s.h.

* Prerequisite: HIT-630

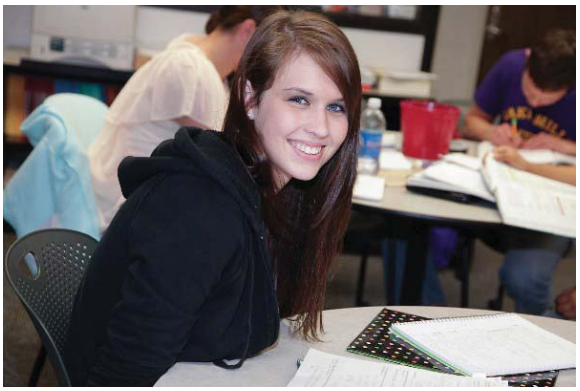
Total Program Hours 30 s.h.

Career Opportunities

Successful graduates can find job opportunities in the following area:

- Medical Transcriptionist

For more specific information contact the Career and Internship Center or the NIACC Business Division.



Software Applications Specialist - Certificate

The Software Applications Specialist - Certificate is designed to expose students to Microsoft software.

These courses are business electives and may apply to diplomas or degrees. Many of these courses are offered on an arranged basis or online.

Upon satisfactory completion of the prescribed curriculum (at least 15 semester hours) with an average grade point of 2.00 (C), the student is awarded a certificate.

Required Courses/Suggested Schedule

BCA-129	Basic Word Processing	2 s.h.
BCA-136*	Advanced Word Processing	3 s.h.
BCA-152**	Comprehensive Spreadsheets	3 s.h.
BCA-163	Microsoft Access	1 s.h.
BCA-170	Personal Information Management	2 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BCA-215	Computer Business Applications	3 s.h.

* Prerequisites: BCA-129, BCA-215 or BCA-101
** Prerequisites: BCA-215 or BCA-101

Total Program Hours 15 s.h.

Career Opportunities

Successful graduates can find job opportunities in the following areas:

- Software Specialist
- Help Desk Support

For more specific information contact the Career and Internship Center or the NIACC Business Division.

Software Applications Skills - Certificate

The Software Applications Skills - Certificate is designed to expose students to Microsoft software.

These courses are business electives and may apply to diplomas or degrees. Many of these courses are offered on an arranged basis or online.

Upon satisfactory completion of the prescribed curriculum (at least 10 semester hours) with an average grade point of 2.00 (C), the student is awarded a certificate.

Required Courses

ADM-105	Introduction to Keyboarding	1 s.h.
ADM-108	Keyboarding Skill Development	1 s.h.
BCA-100	Computer Literacy	1 s.h.
BCA-129	Basic Word Processing	2 s.h.
BCA-163	Microsoft Access	1 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BCA-215	Computer Business Applications	3 s.h.
		10 s.h.

Family and Human Services

Transfer Degree

Diploma

Certificate

Early Childhood Education

Family and Human Services Programs

Human Services

FAMILY AND HUMAN SERVICES

William Backlin, Division Chair
(641) 422-4326
backlwil@niacc.edu

Early Childhood Education - Diploma

The Early Childhood Education Diploma program is designed to provide an introduction to the physical, social, emotional, and intellectual development of children from birth through age 8. This program helps prepare students for a rewarding career nurturing the growth and development of young children. Students learn about child development, the child care field, and appropriate practices while working with children. In addition, this program addresses the competencies and functional areas necessary for students to begin the assessment and testing process for the Child Development Associate National Credential administered by the Council for Early Childhood Professional Recognition.

Students can enter employment in an early childhood area upon completion of the program. Additionally, students have the option to continue their education and earn an associate and/or bachelor degree.

Upon satisfactory completion of the prescribed curriculum (at least 30 semester hours) with an average grade point of 2.00 (C), the student is awarded a diploma.

Career Opportunities

Successful graduates can find job opportunities in the following occupational areas:

- Child Care Centers
- Preschools
- In-home Day Care Centers

Required Courses

ECE-103	Introduction to Early Childhood Education	3 s.h.
ECE-131	Home and School Relationships in Early Childhood	3 s.h.
ECE-133	Child Health, Safety, and Nutrition	3 s.h.
ECE-159	Early Childhood Curriculum II	3 s.h.
ECE-170	Child Growth and Development	3 s.h.
ECE-243	Early Childhood Guidance	3 s.h.

Suggested Electives - 12 s.h. needed

ART-102	Art for Elementary Education	3 s.h.
BIO-123	Inquiry Into Life Science	4 s.h.
EDU-216	Introduction to Teaching	3 s.h.
EDU-219	Field Experience and Seminar	1 s.h.
EDU-235	Children's Literature	3 s.h.
EDU-246	Including Diverse Learners	3 s.h.
MAT-153	Math for Elementary Teachers I	4 s.h.
MAT-154	Math for Elementary Teachers II	4 s.h.
PSY-223	Child and Adolescent Psychology	3 s.h.
PSY-281	Educational Psychology	3 s.h.

Human Services

A.A. Degree with Human Services Certificate

Students interested in careers in Human Services may graduate from NIACC with an Associate of Arts Degree with a Human Services certificate. The Human Services program prepares students for entry-level jobs or for transfer to a four-year degree program. The program emphasizes skills needed in working with consumers such as interviewing, completing an assessment of individual/family needs, making appropriate referrals, and assisting with counseling. By the end of the program, students will be able to interact effectively with consumers in a human services agency such as public/private social services agencies, treatment centers, group homes, supported living and work programs, and state or county departments of social services.

Upon completion of the two-year curriculum with a grade point average of 2.00 (C), the student is awarded an Associate in Arts Degree with a Human Services certificate.

General Education Core Requirements

ENG-102	Composition & Speech I	4 s.h.
ENG-103	Composition & Speech II	4 s.h.
PSY-111	Introduction to Psychology	3 s.h.
PSY-121	Developmental Psychology	3 s.h.
SOC-110	Introduction to Sociology	3 s.h.
SOC-115	Social Problems	3 s.h.
SOC-120	Marriage and Family	3 s.h.
	Biological Sciences, Physical Sciences, Health and Nutrition, or Nutrition	3-5 s.h.
	Humanities Electives (Spanish Recommended)	8 s.h.
	Mathematics*	3-4 s.h.
	Additional general education course	0-3 s.h.

Suggested Courses:

	PSY-241 Abnormal Psychology	3 s.h.
	OR	
	PSY-223 Child and Adolescent Psychology	3 s.h.

*General Education courses must total at least 40 semester hours to meet A.A. degree requirements.

Human Services Core Requirements

BCA-215	Computer Business Applications	3 s.h.
HSV-152	Introduction to Counseling	3 s.h.
HSV-153	Professional Ethics	3 s.h.
PSY-223	Child and Adolescent Psychology	3 s.h.
SDV-210	Cooperative Education Internship	1 s.h.
	OR SOC-881 Social Responsibility and Community Service (2 s.h.)	
	OR SOC-949A Special Topics in Social Science (1 s.h.)	
SOC-150	Introduction to Human Services	3 s.h.
SOC-215	Prime for Life: Substance Abuse	1 s.h.

Career Opportunities

- Social Work Associate
- Case Aide
- Parent-skill Worker
- Family Support Advocate
- Residential Treatment Associate
- Long-term Care Facility Associate
- Early Childhood Assistant
- Youth Counselor

Long Term Care

- Activity Coordinator
- Medication Aide
- Nurse Aide
- Supervising in Healthcare

Medical Assistant

Emergency Medical Services

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician

Wellness, Exercise Science and Leisure Services

Health Program Clusters

Physical Therapist Assistant

Nursing

- Nursing Associate Degree
- Practical Nursing Diploma
- ADN Option for LPNs
- BSN Partnership

Radiologic Technology

Health Related Options

- Medical Laboratory Technician
- Medical Coding
- Medical Office Associate
- Medical Office Specialist
- Medical Transcription

HEALTH

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HEALTH RELATED OPTIONS

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HEALTH DIVISION

Health Care programs offer a wide variety of employment opportunities. Health care curriculums, although independent in structure, often provide for educational mobility through common course requirements. Students entering the Medical Assistant Program may note similar course work in the Medical Office Specialist, Medical Office Associate, or Medical Transcription Programs. Common support courses can also be noted between the Practical Nursing Program and the Medical Assistant Program, allowing students the ability to apply course work in multiple areas. Career mobility is also facilitated in the LPN to ADN option for licensed practical nurses who desire to pursue the registered nurse licensure. In addition, the Associate Degree nurse is also provided educational mobility options through The University of Iowa's RN to BSN progression program. Although the Physical Therapist Assistant Program and the Medical Laboratory Technician Program provide specialized curriculums that will not allow for direct transfer into advanced degree programs, the program course work provides foundational knowledge and skills compatible with the pursuit of related degrees.

- Emergency Medical Services and Long Term Care offer various programs with credit and non-credit options. Course offerings provide educational opportunities to assist individuals in attaining and maintaining licensure or certification status required in designated areas of health care.

- The Pharmacy Technician program offers two options: certificate and diploma. These options correlate with placement in retail or hospital-based settings.

- Radiologic Technology is a program provided in cooperation with Mercy Medical Center-North Iowa. General education requirements obtained at NIACC provide the necessary complement for students enrolled at MMC-NI to allow attainment of an Associate in Applied Science Degree.

- Wellness, Exercise Science and Leisure Services courses offer opportunities in a variety of careers that allow for direct employment or transfer options for students desiring advanced degrees in professions associated with health, wellness, physical education, exercise science, strength training, leisure services, and recreation.

Students interested in pursuing careers in the health field should schedule an appointment with the Division Chair or the Health Professions Counselor to discuss course and career transferability options.

Emergency Medical Services

Emergency Medical Responder

Emergency Medical Responder is the entry-level course in the Emergency Medical Services (EMS) Program. This 45-hour course provides the student with the necessary skills and knowledge to identify and treat life-threatening emergencies, wounds and fractures, medical and environmental emergencies, and patient access and handling. This course utilizes a combination of classroom lectures and skill practice. An additional 6 hours is required to complete the psychomotor and cognitive examinations required for certification. Upon successful completion of the course, students will be eligible to test for EMS certification through the National Registry of EMT's.

Entrance Requirements for EMR:

1. Must be at least 17 years of age at the time of enrollment.
2. Must be able to speak, write, and read English proficiently.
3. Must be physically and emotionally capable of performing all functions and skills of an EMT.
4. Must possess maturity of judgment and sound moral character.
5. Must provide documentation of current certification in BLS for Healthcare Providers.

Note: A criminal background check and adult/dependent abuse checks will be required. Drug testing may also be required by individual agencies. Results of these checks will be used by contracted clinical facilities to determine clinical eligibility. Costs for background checks will be included in tuition costs. All other costs will be the responsibility of the student.

Emergency Medical Technician

Emergency Medical Technicians can transport patients that are sick or injured. This 130-hour course provides the student with the necessary knowledge and skills to perform emergency care and transport. It includes a Preparatory Module, Function and Development of the Human Body Module, Pharmacology Module, Airway Management Module, Patient Assessment Module, Medical Emergencies Module, Shock Module, Trauma Module, Special Patient Populations Module, and EMS Operations Module. An additional 18 hours of hospital-based clinical and 12 hours of ambulance ride time is required. Upon successful completion of the course, students will be eligible to test for EMS certification through the National Registry of EMT's.

Entrance Requirements for EMT:

1. Must be at least 17 years of age at the time of enrollment.
2. Must be able to speak, write and read English proficiently.
3. Must be physically and emotionally capable of performing all functions and skills of an EMT.
4. Must possess maturity of judgment and sound moral character.
5. Must provide documentation of current certification in BLS for Healthcare Providers.
6. A physical examination, immunization record, and background check is required prior to beginning the hospital or field clinical portion of the course.

Note: A criminal background check and adult/dependent abuse checks will be required. Drug testing may also be required by individual agencies. Results of these checks will be used by contracted clinical facilities to determine clinical eligibility. Costs for background checks will be included in tuition costs. All other costs will be the responsibility of the student.

Advanced Emergency Medical Technician

The Advanced Emergency Medical Technician (AEMT) course significantly expands on the knowledge and skills of an EMT. This 113-hour course consists of didactic and hands-on lab skill sessions. Content consists of in-depth anatomy and physiology, understanding of disease processes, effects of intravenous therapy, and pharmacology. Additional advanced-level skills will be introduced including IV therapy and medication administration. An additional 52 hours of hospital clinical and 48 hours of ambulance ride time are required. Upon successful completion of the course, students will be eligible to test for EMS certification through the National Registry of EMT's.

Entrance Requirements for Advanced EMT:

1. Must be at least 17 years of age at the time of enrollment.
2. Must be able to speak, write, and read English proficiently.
3. Must be physically and emotionally capable of performing all functions and skills of an AEMT.
4. Must possess maturity of judgment and sound moral character.
5. Must provide documentation of current certification in BLS for Healthcare Providers and State of Iowa EMT-B or EMT certification.
6. A physical examination, immunization record, and background check is required prior to beginning the hospital or field clinical portion of the course.

Note: A criminal background check and adult/dependent abuse checks will be required. Drug testing may also be required by individual agencies. Results of these checks will be used by contracted clinical facilities to determine clinical eligibility. Costs for background checks will be included in tuition costs. All other costs will be the responsibility of the student.

Long Term Care

Nurse Aide

The Nurse Aide course prepares individuals to work in long-term care facilities (LTC) and hospitals. For acceptance into ADN and PNN programs, the Nurse Aide course is required.

Nurse Aide classes are offered monthly in the NIACC area. Upon completion of the Nurse Aide course, a state written test and a skills demonstration test must be completed with a score of 70 percent or better. Passing these tests is required in order to be placed on the Department of Inspections and Appeals Direct Care Worker Registry. Placement on the Iowa Direct Care Worker Registry is necessary to be employed as a nurse aide in long-term care in Iowa; this includes nursing facilities and skilled nursing units in hospitals.

Entrance Requirements for Nurse Aide:

1. Must be 16 years or older.
2. High school diploma or GED.
3. Strength and endurance to meet the requirements in performing skills such as lifting and moving residents.
4. Health history and current immunization records are required prior to beginning clinical. The immunization requirements include TB test, Hepatitis B vaccine, or signing a waiver for the hepatitis vaccine.
5. Criminal background checks and adult/dependent and child abuse checks are required by law. Results of those checks will be used to determine clinical eligibility (a student may be denied clinical access and be unable to complete the course). Costs for background checks will be included in tuition costs.

For further information, contact the health professions counselor at 1-888-466-4222, Ext. 4207 or 641-422-4207.

Nurse Aide - Related Courses

HSC-171	Nurse Aide Theory	2 s.h.
HSC-174	Nurse Aide Clinical	1 s.h.

Medication Aide

The Medication Aide course (HSC-179) prepares people to safely administer non-parenteral medications in nursing facilities and related areas. The emphasis is on safe administration of medications. It qualifies the aide to administer medications in long-term care, residential care, nursing, skilled, adult day care, and assisted living facilities. (3 s.h.)

Prerequisites:

1. MUST BE EMPLOYED IN:
   - A certified nursing facility -- minimum of 6 months employment by facility sponsor, must be on the Iowa Direct Care Workers Registry, and must provide documentation from administrator of facility in which he/she is employed; OR
   - A residential or related type of licensed facility -- minimum of 6 months employment by facility sponsor, must provide evidence of successful completion of residential attendant course, and must provide recommendation from administrator of facility in which he/she is employed; OR
   - An assisted living program -- minimum of 6 months employment by facility sponsor, must provide recommendation from administrator of facility in which he/she is employed, and have completed 75-hour Nurse Aide course or Residential Attendant course.
2. Have aptitude for reading, writing, and mathematics.

Activity Coordinator

The Activity Coordinator course (HSC-185) prepares the participant to function as an entry-level activity coordinator in a long-term care facility. (4 s.h.) (No prerequisites.)

Supervising in Healthcare

The Supervising in Healthcare course (HSC-290) enables the nurse to gain knowledge and develop skills in managing personnel and clients in healthcare facilities. The course focuses on supervisory skills for nurses in long-term care facilities. (3 s.h.)

Prerequisites:

1. Current RN or LPN

Medical Assistant

The Medical Assistant Program is designed to prepare men and women to function as members of the health care delivery team and perform administrative and clinical procedures. This most often occurs in ambulatory settings such as medical offices and clinics.

NIACC's classrooms include the latest in computers, office, and laboratory equipment. The NIACC Medical Assistant Diploma Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org), 1361 Park Street, Clearwater, FL 33756 (phone: (727) 210-2350), upon the recommendation of the Medical Assisting Education Review Board (MAERB) of the American Association of Medical Assistants Endowment (AAMAE).

Entrance Requirements

Students are encouraged to meet with the counselor prior to program enrollment to arrange for assessment in keyboarding, reading, writing, and math to determine if additional course work is required to promote success. A minimum requirement of 35 wpm keyboarding is required to enter the program. Students will be assessed before the fall term begins to allow for additional classwork if indicated. A physical examination providing evidence of current immunization and sound physical and mental health is also required prior to Clinical Procedures I. Criminal background checks and adult/dependent abuse checks will be required. Drug testing may also be required by individual agencies. Results of these checks will be used by contracted clinical facilities to determine clinical eligibility. Costs for requirements will be the responsibility of the student.

Students must attain a grade point average of 2.00 (*C*) in program courses to proceed to the practicum. (A minimum grade of *C-* is allowed in Medical Office Procedures, Clinical Procedures I and II, Body Structure and Function (or Anatomy and Physiology I and II), and a minimum grade of *C* is required in Medical Terminology.) All first term courses must be successfully completed as stated above prior to entering into the second term. In addition, students must meet all course requirements prior to beginning the practicum. The student may be required to travel a distance for the practicum. Practicums are randomly assigned to the student and available sites are dependent on the permission of the specific agency. No remuneration is provided during the practicum experience.

Further information regarding progression in the program and specific program policies is provided to the MA student in the individual program handbook. Students are provided this handbook during the first MA class day. Students are referred to this handbook throughout the program.

Upon completion of the prescribed curriculum with a 2.00 GPA and a minimum overall cumulative college grade point average of 2.00 (C), the student is awarded a diploma. In addition, the student is eligible for the national certification examination to become a CMA (Certified Medical Assistant).

Beginning with the January 2001 administration of the Certification Examination, a student with a felony record may not be eligible for Certification Examination unless the AAMA Certifying Board grants a waiver based on one or more of the mitigating circumstances listed in the Disciplinary Standards. The student can verify certification eligibility prior to entering the program by contacting the AAMA Certifying Board at the following address: AAMA (American Association of Medical Assistants), 20 North Wacker Drive, Ste. 1575, Chicago, IL 60606-2903.

Career Opportunities

Medical Assistant is one of the nation's fastest growing careers through 2018, according to the United States Bureau of Labor Statistics. This can be attributed to a predicted surge in the number of physicians' offices and outpatient care facilities. Technological advancements and the growing number of elderly Americans who need medical treatment are also factors for the increased demand for medical assistants.

Administrative duties include scheduling and receiving patients, preparing and maintaining medical records, performing basic secretarial skills and medical transcription, handling telephone calls, writing correspondence, serving as liaison between the physician and other individuals, and managing practice finances.

Clinical duties include asepsis and infection control, taking patient histories and vital signs, performing first aid and CPR, preparing patients for procedures, assisting the physician with examinations and treatments, collecting and processing specimens, performing selected diagnostic tests, and preparing and administering medications as directed by the physician.

Medical Assistants work in offices for:
- Doctors
- Clinics

Medical Assistants work with:
- Medical equipment such as x-ray and EKG machines
- Lab samples and equipment
- Telephones, computers, and other office equipment
- Patient medical records
- Insurance forms and other papers

Required Courses/Suggested Schedule

First Term

BCA-129	Basic Word Processing	2 s.h.
BUS-121	Business Communications	3 s.h.
HSC-120	Medical Terminology I	3 s.h.
HSC-150	Body Structure and Function	4 s.h.
	OR BIO-206, Anatomy and Physiology I (4 s.h.)	
	OR BIO-207, Anatomy and Physiology II (4 s.h.)	
MAP-353	Clinical Procedures I	4 s.h.
		16 s.h.

Second Term

ACC-111	Introduction to Accounting	3 s.h.
ADM-131	Office Calculators	1 s.h.
ADM-215*	Medical Office Procedures	3 s.h.
BUS-161	Human Relations	3 s.h.
HIT-210	Basic Medical Insurance & Coding	2 s.h.
MAP-358	Clinical Procedures II	5 s.h.
BUS-107	Business Careers	1 s.h.
		18 s.h.

*Prerequisites: BCA-129, Basic Word Processing, and BUS-121, Business Communications

Summer Term

MAP-622	Medical Assistant Practicum	6 s.h.
	Total Program Hours	40 s.h.

Courses may be taken over a two-year period with Clinical Procedures I and II taken in the final year. Students may re-enter Clinical Procedures I and II a maximum of one time. Students may repeat the Practicum one time only.

Medical Laboratory Technician (Academic Affiliate with Hawkeye Community College)

The Medical Laboratory Technician Program prepares men and women to work under the supervision of the medical technologist, pathologist, or other qualified physician in a medical laboratory. A technician performs tests that aid in the diagnosis and treatment of disease.

Specific tasks which the Medical Laboratory Technician might perform include collection of blood and other specimens, preparation and examination of stained slides of blood cells or bacteria, microscopic examination of urine, blood, and other body fluids, grouping and typing of blood, and the analysis of body fluids for chemical components.

The first two semesters of the program may be taken at NIACC and the completion of the program is taken at Hawkeye Community College, Waterloo, Iowa. The final semesters of the program are provided in the clinical setting, which may occur in a location of the student's choice. This placement, however, is dependent on a space available basis in the agency of choice. Upon completion of the prescribed curriculum, the student is awarded an Associate in Applied Science Degree by Hawkeye Community College and is then prepared to work in hospital laboratories, clinics, physicians' offices, public health agencies, research institutions, and the Armed Forces. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

Graduates of the Medical Laboratory Technician Program are eligible for the national certification examination.

Medical Laboratory Technicians may continue their education at the college level and become Medical Laboratory Scientists.

Entrance Requirements

Students must make formal application for the Medical Laboratory Technician (MLT) Program to Hawkeye Community College. Students may prepare for the program and complete two semesters of the MLT Program while attending NIACC.

Applicants must be high school graduates or the equivalent to be eligible for admission to the MLT Program. Applicants must then satisfy at least one of the following routes of requirements for entry into the program.

Route 1: Score at least the following standard score on each COMPASS assessment (43 on Algebra, 82 on Reading, and 65 on Writing) or receive a standard score of 19 on each of the ACT subtests of Math, Reading, and English. Students must also have completed one year of high school algebra, chemistry, and biology.

Route 2: Successfully complete the following NIACC courses with a 2.00 GPA.
BIO-102 Introductory Biology AND
BIO-103 Introductory Biological Lab
ENG-015 Elements of Writing
MAT-063 Elementary Algebra
RDG-125 College Reading Strategies

Route 3: Successfully complete 4 out of the following 6 courses at HCC or NIACC with a minimum grade point average of 2.75.
MLT-101 (NIACC) Intro to Lab Science
MAT-110 (NIACC) Math for Liberal Arts
HSC-120 (NIACC) Medical Terminology I
MLT-120 (NIACC) Urinalysis
MLT-110 (HCC) Fundamental Lab Techniques
MLT-130 (HCC) Hematology

Career Opportunities

Medical Laboratory Technicians work for:
- Hospitals and medical laboratories
- Offices and clinics of physicians
- Blood banks
- Health maintenance organizations
- Public health agencies
- Pharmaceutical firms
- Research and testing laboratories
- The Federal Government

The required related courses may be taken prior to enrolling or during the time the student is enrolled in the program. However, it is recommended that the curriculum be followed once the student is enrolled.

Students who withdraw from the program will be readmitted on a space-available basis. Preference will be given to those students who have been academically successful.

Required Courses/Suggested Schedule

First Year

First Term - NIACC

BIO-206	Anatomy and Physiology I	4 s.h.
CHM-122	Introduction to General Chemistry	4 s.h.
ENG-105	Composition I	3 s.h.
MLT-101**	Intro to Lab Science	2 s.h.
SOC-110	Introduction to Sociology	3 s.h.
	OR PSY-111 Introduction to Psychology (3 s.h.)	
		16 s.h.

Second Term - NIACC

BIO-186	Microbiology	4 s.h.
BIO-207	Anatomy and Physiology II	4 s.h.
HSC-120	Medical Terminology I	3 s.h.
MLT-120**	Urinalysis I	3 s.h.
SPC-111	Public Speaking	2 s.h.
		16 s.h.

Summer Session - Hawkeye

MLT-110**	Fundamental Lab Techniques	3 s.h.
MLT-130	Hematology	3 s.h.
MLT-250	Clinical Microbiology	4 s.h.
		10 s.h.

Second Year

First Term - Hawkeye

MLT-230**	Advanced Hematology	3 s.h.
MLT-260	Immunohematology	4 s.h.
MLT-233	Hemostasis & Thrombosis	2 s.h.
MLT-240	Clinical Chemistry I	7 s.h.
MLT-252**	Parasitology	1 s.h.
MLT-270	Immunology and Serology	2 s.h.
		19 s.h.

*Second and Summer Terms - Area II Clinical Sites**
(24-week term, clinical internship)

MLT-284	Clinical Practicum: Immunohematology	2 s.h.
MLT-285	Clinical Practicum: Chemistry	4 s.h.
MLT-286	Clinical Practicum: Immunology and Serology II	1 s.h.
MLT-291	Lab Survey & Review	1 s.h.
MLT-287	Clinical Practicum: Hematology	4 s.h.
MLT-288	Clinical Practicum: Microbiology	4 s.h.
MLT-283	Clinical Practicum: Urinalysis	1 s.h.
		17 s.h.

Total Program Hours 78 s.h.

*As identified in the curriculum, this program is offered over a two-year period of time. The first two semesters are taken at NIACC. The next summer session and fall semester are taken at Hawkeye Community College in Waterloo, Iowa. The final semester is a 24-week clinical internship. NIACC and Hawkeye will attempt to secure clinical experiences in the NIACC area (not guaranteed).

**Courses may be take prior to acceptance into the MLT Program at Hawkeye Community College.

Associate Degree Nursing

Associate Degree Nursing is designed to prepare men and women for general staff registered nursing positions which involve direct care of patients. There are two routes of entry into the program: one for beginning students and one for Licensed Practical Nurses. Individuals considering enrollment or currently enrolled in the nursing program should be aware that prior felony convictions may prohibit eligibility for licensure upon completion of the program.

Entrance Requirements

The applicant must complete the application process through the health professions counselor located in the Student Development Office. The ADN Program offers two starts: Summer Term II and Fall Semester. A ranking process will be used by the admissions committee in the review of ADN applications. Applicants will receive points for the requirements met and applicants will be ranked by the number of points earned.

All applicants must complete a high school diploma or equivalency program. The date of formal application to the program will be the date the applicant submits a complete application to the ADN Program. Final acceptance to the program will be when the applicant has been selected according to the ranking process and has successfully completed all of the prerequisites for the ADN Program. The date of application will be factored in if two or more applicants tie for the same rank. Completed applications are reviewed starting in December for the next academic year.

Applicants will be ranked by the following criteria:

1. One point will be earned for graduating in the upper half of a high school class or for achieving a GED average standard score of 530 or higher.
2. One point will be earned for graduating from high school with at least a 3.00 GPA.
3. One point will be earned for an ACT composite score of 20. Students who have not taken the ACT should contact the Admissions Office or go to ACT's website (www.ACT.org) for information about the test. Some students may have COMPASS or ASSET or SAT scores that were used for initial placement in NIACC courses; these tests will not be used for the ACT ranking points. If an ADN applicant wants to earn this point, then the applicant must take the ACT exams.
4. One point will be earned for achieving a 2.25 GPA with completion of at least 12 credit hours of the prescribed support courses in the Associate Degree Nursing curriculum. If a student has exceeded 12 credit hours from the prescribed curriculum, these courses will also be included in the calculation of the GPA.
   OR
   two points will be earned for achieving a 3.00 GPA with completion of at least 12 credit hours of the prescribed support courses in the Associate Degree Nursing curriculum. If a student has exceeded 12 credit hours from the prescribed curriculum, these courses will also be included in the calculation of the GPA.
5. One point will be earned for the completion of an Associate in Arts or an Associate in Science Degree,
   OR
   two points will be earned for the completion of a Bachelor's Degree.
6. One point will be earned for completion with a grade of C or higher, BIO-206, Anatomy and Physiology I, and BIO-207, Anatomy and Physiology II.

Applicants who do not meet requirements or those with a poor academic history may meet entrance requirements by successfully completing approved college courses. These options should be discussed with the heath professions counselor. Applicants who do not secure a position in the class must reapply on an annual basis and will be ranked the following year with all new applicants.

Nurse Aide Training:
Successfully complete the 75-hour Nurse Aide Training course (HSC-171 and HSC-174) with a grade of C or higher, or provide a current CNA certification card or proof of employment as a CNA (minimum of 500 hours).

Prerequisites

The following required courses must be completed with a grade of C or higher.

Mathematics:
1. One full-year course (2 semesters) of high school Algebra II
   OR
   One semester of an equivalent math course (e.g., MAT-102, Intermediate Algebra)

Science:
2. Chemistry: two semesters of high school/college preparatory chemistry
   OR
   One semester of an equivalent chemistry course (e.g., CHM-122 Intro to General Chemistry)

Computer Technology/Course Recommendations:
Four to six semesters of high school English and four to six semesters of social studies are strongly recommended.

Since the NCLEX-RN licensing exam is a computerized test, two semesters of high school computer classes or one semester of a computer application class are also strongly recommended.

An application to the ADN Program, high school transcript, GED scores (if applicable), all college transcripts, and results of the ACT must be in the applicant's folder before the admissions committee takes action on acceptance into the Associate Degree Nursing Program. Upon acceptance, a physical examination providing evidence of current immunization and sound physical and mental health is required.

The prescribed course requirements scheduled for the freshman year must be taken in the sequence and time lines indicated. However, the support courses (noted with an * in the curriculum) may be taken prior to enrolling or during the time the student is in the nursing program. Note: If support courses are being taken in the sequence with a nursing course, both the support courses and the nursing course must be successfully completed to continue in the program.

Career Opportunities

- Hospitals, nursing facilities, and clinics
- Health maintenance organizations
- Private offices and clinics of doctors and dental surgeons
- Government agencies and the military
- Visiting nurse associations
- Community Healthcare agencies
- Temporary staff agencies
- Entrepreneurial ventures

Associate Degree Nursing (Continued)

Students must attain a *C* grade in all nursing courses and prescribed courses. An overall 2.00 GPA in the prescribed curriculum and a minimum overall cumulative college grade point average of 2.00 is required for graduation from the ADN Program.

Students who withdraw from the program must make formal application for reentry and upon acceptance will be considered on a space-available basis. Readmission criteria is addressed in the ADN Student Handbook. Reentry requirements include current physicals/immunization records, current CPR certification, and current evidence of TB testing within the academic year. Options will be discussed on an individual basis for students unsuccessful at any level of the program.

Any transfer student applying for admission, who has been enrolled in a nursing curriculum other than NIACC, will be required to meet with the Division Chair to discuss placement in the curriculum. Course syllabi and clinical site information from the transferring institution will be required for review. The student will also be requested to provide written authorization allowing contact with instructors from the transfer institution regarding class and clinical performance. A letter of reference regarding theory, clinical, and overall student conduct will be required from the chair of health programs at the transfer institution. Information acquired from these contacts will be considered in acceptance and proper placement into a NIACC nursing curriculum.

Upon satisfactory completion of the prescribed curriculum and assigned comprehensive review activities, the student is awarded an Associate in Applied Science Degree and is eligible for the NCLEX-RN exam. After passing this examination, the graduate receives registered nurse status. The program is approved by the Iowa Board of Nursing and accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road N.E., Suite 850, Atlanta, GA 30326, (404-975-5000), www.nlnac.org.

Further information regarding progression in the program and specific program policies is provided to the ADN student in the individual program handbook distributed during the first ADN class. Students are referred to this handbook throughout the program. A copy of the ADN Student Handbook is available on request from the Health Division and is posted on the ADN program website at http://www.niacc.edu/health/adnurse.html.

Students should be aware that they will travel a distance for various clinical experience and that some clinical experiences will be scheduled during evening/night hours and weekends. Online access for web-enhanced course assignments is required. Computer labs on campus are available during designated hours.

Drug testing may be required by individual agencies. Criminal background checks and adult/dependent abuse checks will be required for all incoming students and students reentering the program. Results of the background and abuse checks will be reviewed by the State Department of Human Services to determine eligibility for clinical enrollment in the program. Costs for requirements will be the responsibility of the student.

For graduates wishing to obtain a baccalaureate degree in nursing, the ADN Program articulates into other BSN programs in Iowa. The University of Iowa College of Nursing offers its satellite RN to BSN Progression Program on the NIACC campus. Through this program RNs may complete all course work for their BSN locally.

Required Courses/Suggested Schedule

First Term (Summer - 6 weeks or Fall - 15 weeks)

BIO-186	Microbiology*	4 s.h.
ENG-105	Composition I*	3 s.h.
		7 s.h.

Second Term

ADN-100	Nursing I	8 s.h.
BIO-206	Anatomy and Physiology I**	4 s.h.
PSY-111	Introduction to Psychology*	3 s.h.
PSY-121	Developmental Psychology*	3 s.h.
		18 s.h.

Third Term

ADN-103	Nursing II	10 s.h.
BIO-151	Nutrition*	3 s.h.
BIO-207	Anatomy and Physiology II**	4 s.h.
		17 s.h.

Fourth Term

ADN-603	Nursing III	12 s.h.
SOC-110	Introduction to Sociology*	3 s.h.
		15 s.h.

Fifth Term

ADN-604	Nursing IV	12 s.h.
ENG-106	Composition II*	3 s.h.
		15 s.h.

Total Program Hours	72 s.h.

* Prescribed support courses which may be taken prior to entering the nursing program. Once in the nursing program, courses must be taken in the identified sequence and successfully completed with a *C* or higher grade for a student to progress in the program.

** Anatomy and Physiology I and II must be completed within five years of beginning the program.

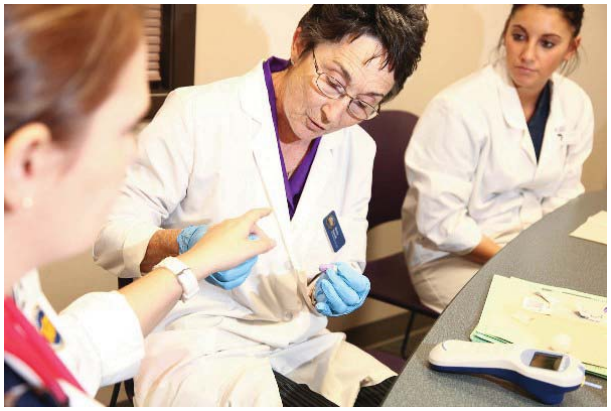
NOTE: A current "Healthcare Provider (CPR) Certification" offered by the American Heart Association is required. The current certification/renewal needs to be completed prior to Nursing I or any reentry into the program. A yearly TB test is also required prior to Nursing I or any reentry into the program. Students must be current with these requirements or will not be allowed in the clinical area.

Students seeking entrance into the nursing program should be aware that nursing courses with a clinical component may not be taken by a person:

a) who has been denied licensure by the Iowa Board of Nursing;
b) whose licensure is currently suspended, surrendered or revoked in any United States jurisdiction;
c) whose license/registration is currently suspended, surrendered or revoked in another country due to disciplinary action.

ADN Option for Licensed Practical Nurses

A limited number of Licensed Practical Nurses who meet the following criteria will be eligible to enter the Associate Degree Nursing Program on a space-available basis. Criteria include: graduation from an approved Practical Nursing Program with a 3.00 cumulative GPA in the nursing courses; a current, unencumbered license; have practiced nursing within the past two years; meet ADN Program prerequisites; and have completed the support courses required during the first year of the ADN Program. For proper placement in the program the student must also provide evidence of a curriculum that reflects sufficient theory, clinical hours, and experiences comparable to the first year of the program. If, as a practical nursing student, the cumulative GPA for the nursing classes is below 3.00, the returning student would be required to enroll in ADN-103, Nursing II. Therefore, the LPN candidate should apply at least a year before the desired date of entering Nursing III to allow for placement in Nursing II, if necessary. One year must transpire from completion of a Practical Nursing Program and entry into the ADN Program. In addition, the student must be employed as an LPN in at least a part-time status during the one-year interval. If entering Nursing II, at least 500 hours of employment must be documented by the employer and 1,000 hours are required prior to entering Nursing III. Individual consideration will be given to applicants who have not practiced nursing within the last two years or who have practiced in a nontraditional setting. This may include a challenge examination. A verification of current skills and total hours of employment from the employers will also be used to assess appropriate placement in the program. LPN to ADN students are admitted in the fall semester only.



Eighteen semester hours of first year nursing credit will be awarded upon successful completion of Nursing III, the first course with a clinical component. In the event a student is not successful in Nursing IIA or Nursing III, the student will be evaluated on an individual basis and may be required to apply for reentry into the program for the second semester of the freshman year on a space-available basis.

Students should be aware that they will travel a distance for clinical experience and that some clinical experiences will be scheduled during evening/night hours and weekends. Online access for web-enhanced course assignments is required. Computer labs on campus are available during designated hours. Drug testing may be required by individual agencies. Criminal background checks and adult/dependent abuse checks will be required for all incoming students. Results of the background and abuse checks will be reviewed by the State Department of Human Services to determine eligibility for clinical enrollment in the program. Costs for requirements will be the responsibility of the student.

Prerequisites

The following required courses must be completed with a grade of C or better.

Mathematics:

1. One full-year course (2 semesters) of high school Algebra II
   OR
   one semester of an equivalent math course (e.g., MAT-102, Intermediate Algebra)

Science:

1. Chemistry: two semesters of high school/college preparatory chemistry
   OR
   one semester of an equivalent chemistry course (e.g., CHM-122, Introduction to General Chemistry)

2. Anatomy & Physiology: college level A&P for two semesters (e.g., BIO-206 Anatomy and Physiology I and BIO-207 Anatomy and Physiology II). Anatomy and Physiology I and II must be completed within five years of beginning the Nursing II or III course. Anatomy and Physiology I and II must be completed prior to entering ADN-103 or ADN-603.

Computer Technology:

Since the NCLEX-RN exam is a computerized test, computer competencies are strongly recommended.

Other elements of the selection process include high school and college GPA and ACT scores. All criteria for the ADN Program apply and should be reviewed. This information must be in the applicant's file before the admissions committee will act on the application. Upon acceptance, a physical examination providing evidence of current immunization and sound physical and mental health is required.

Since the applicant's progress toward meeting prerequisites and admission requirements must be tracked, applicants to the Licensed Practical Nursing to Associate Degree Nursing Program must complete the application process through the health professions counselor located in the Student Development Office. Expected date of graduation will determine when the application to the program must be submitted.

Any transfer student applying for admission, who has been enrolled in a nursing curriculum other than NIACC, will be required to meet with the Division Chair to discuss placement in the curriculum. Course syllabi and clinical site information from the transferring institution will be required for review. The student will also be requested to provide written authorization allowing contact with instructors from the transfer institution regarding class and clinical performance. A letter of reference regarding theory, clinical, and overall student conduct will be required from the chair of health programs at the transfer institution. Information acquired from these contacts will be considered in acceptance and proper placement into a NIACC nursing curriculum.

ADN Option for Licensed Practical Nurses (Continued)

Students must attain a *C* grade in all ADN courses and prescribed support courses to continue in the ADN Program. An overall 2.00 GPA in the prescribed curriculum and a minimum overall cumulative college grade point average of 2.00 is required for graduation from this program.

Further information regarding progression in the program and specific program policies is provided to the ADN student in the individual program handbook. Students are provided this handbook during the first ADN class day. Students are referred to this handbook throughout the program. A copy of the ADN Student Handbook is available on request from the Health Division and is posted on the ADN program website at http://www.niacc.edu/health/adnurse.html.

Upon satisfactory completion of the prescribed curriculum and assigned comprehensive review activities, the student is awarded an Associate in Applied Science Degree and is eligible for the NCLEX-RN exam. After passing this examination, the graduate receives registered nurse status. The program is approved by the Iowa Board of Nursing and accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road N.E., Suite 850, Atlanta, GA 30326, (404-975-5000), www.nlnac.org.

Required Courses/Suggested Schedule

The following are the support courses required prior to beginning the nursing aspect of the curriculum. These courses must be completed with a minimum of a *C* grade.

BIO-186	Microbiology	4 s.h.
BIO-151	Nutrition	3 s.h.
ENG-105	Composition I	3 s.h.
PSY-111	Introduction to Psychology	3 s.h.
PSY-121	Developmental Psychology	3 s.h.
BIO-206	Anatomy & Physiology I and Lab**	4 s.h.
BIO-207	Anatomy & Physiology II and Lab**	4 s.h.

Prescribed Curriculum

First Term (Summer - one week, end of August)

ADN-104	Nursing IIA	1 s.h.
		1 s.h.

Second Term (Fall)

ADN-603	Nursing III	12 s.h.
SOC-110	Introduction to Sociology*	3 s.h.
		15 s.h.

Third Term (Spring)

ADN-604	Nursing IV	12 s.h.
ENG-106	Composition II*	3 s.h.
		15 s.h.

* Prescribed support courses which may be taken prior to entering the program.
** Must be taken within 5 years of beginning the Nursing II or III course.

NOTE: A current "Healthcare Provider (CPR) Certification" offered by the American Heart Association is required. The current certification/renewal needs to be completed prior to entry into the program. A yearly TB test is also required prior to entry into the program. Students must be current with these requirements or will not be allowed in the clinical area.

Students seeking entrance into the nursing program should be aware that nursing courses with a clinical component may not be taken by a person:

a) who has been denied licensure by the Iowa Board of Nursing;
b) whose licensure is currently suspended, surrendered or revoked in any United States jurisdiction;
c) whose license/registration is currently suspended, surrendered or revoked in another country due to disciplinary action.

Career Opportunities

- Hospitals, nursing facilities, and clinics
- Health maintenance organizations
- Private offices and clinics of doctors and dental surgeons
- Government agencies and the military
- Visiting nurse associations
- Community Healthcare agencies
- Temporary staffing agencies
- Entrepreneurial ventures

Practical Nursing

Practical Nursing is designed to prepare individuals to work in nursing situations which are relatively stable and unchanging. They are also prepared to assist experienced registered nurses and physicians in nursing situations that are complex and changing. Individuals considering enrollment or currently enrolled in the nursing program should be aware that prior felony convictions may prohibit eligibility for licensure upon completion of the program.

Students should be aware they may need to travel a distance for clinical experience and that some clinical experiences will be scheduled during evening/night hours and weekends. Drug testing may be required by individual agencies. Criminal background checks and adult/dependent abuse checks will be required for all incoming students. Results of the background and abuse checks will be reviewed by the State Department of Human Services to determine eligibility for clinical enrollment in the program. Costs for requirements will be the responsibility of the student.

Entrance Requirements

The applicant must complete the application process through the health professions counselor located in the Student Development Office. Entrance requirements include the following criteria:

1. Completion of a high school diploma or equivalency program.
2. Completion of high school with a grade point average of 2.00 or higher.
3. Satisfactory COMPASS assessment test results in reading, writing, and math (these are administered by NIACC).
4. Approved applicants are accepted into the program chronologically, based on the date of application. Completed applications are reviewed beginning in October of the year prior to the June start date and completed by the end of January of each year.

Nurse Aide Training:

Successfully complete the 75-hour Nurse Aide Training course (HSC-171 and HSC-174) with a grade of C or higher, or provide a current CNA certification care or proof of employment as a CNA (minimum 500 hours).

Applicants who do not meet requirements or those with a poor academic history may meet entrance requirements by successfully completing approved college courses and/or increasing assessment test results in an approved manner. This should be discussed with the health professions counselor.

Biology, general math (Essentials of Math, Math for Liberal Arts, Algebra), and six semesters of English are recommended prior to applying to the program. Since the NCLEX-PN exam is a computerized test, a computer class is strongly recommended. An application to the Practical Nursing Program, high school transcript, GED scores (if applicable), and all college transcripts must be in the applicant's folder before the Admissions Committee takes action on acceptance into the Practical Nursing Program. After acceptance, a physical examination providing evidence of current immunization and sound physical and mental health is required.

Applicants who have been previously enrolled in an approved nursing program may request consideration for advanced standing.

Students must complete all course requirements in the first two terms before enrolling in the third term. Students should be aware they may need to travel a distance for clinical experience and that some clinical experiences will be scheduled during evening hours and weekends.

Students who withdraw from the program must make formal application for reentry and upon acceptance will be considered on a space-available basis. After being accepted into the program, a student may delay entrance into the program no more than two (2) years. A student will be required to reapply to the program after this period of time. Readmission criteria is addressed in the PN Student Handbook. A student may reenter the nursing curriculum one time.

Students must attain a *C* grade in all nursing courses and at least a *C-* in prescribed support courses to continue sequential progression in the PN Program. However, an overall 2.00 GPA in the prescribed curriculum and a minimum overall cumulative college grade point average of 2.00 is required for graduation from the PN Program. If the student wishes to later seek application to the ADN Program, a cumulative GPA of 2.50 in the nursing courses must be attained, as well as a *C* grade in all support courses required for the ADN Program. If the student has not attained a 2.50 cumulative nursing course GPA, the student will be required to enroll in Nursing II, ADN-103, of the ADN Program.

Any transfer student applying for admission, who has been enrolled in a nursing curriculum other than NIACC, will be required to meet with the Division Chair to discuss placement in the curriculum. Course syllabi and clinical site information from the transferring institution will be required for review. The student will also be requested to provide written authorization allowing contact with instructors from the transfer institution regarding class and clinical performance. A letter of reference regarding theory, clinical, and overall student conduct will be required from the chair of health programs at the transfer institution. Information acquired from these contacts will be considered in acceptance and proper placement into a NIACC nursing curriculum.

Upon satisfactory completion of the prescribed curriculum, a diploma is awarded and the graduate is eligible for the NCLEX-PN exam. After passing this examination, the graduate receives licensed practical nurse status and is prepared to work in a beginning licensed practical nurse position under the supervision of qualified personnel. The program is approved by the Iowa Board of Nursing.

Students seeking entrance into the nursing program should be aware that nursing courses with a clinical component may not be taken by a person

a) who has been denied licensure by the Iowa Board of Nursing;
b) whose licensure is currently suspended, surrendered or revoked in any United States jurisdiction;
c) whose license/registration is currently suspended, surrendered or revoked in another country due to disciplinary action.

Practical Nursing (Continued)

Required Courses/Suggested Schedule

First Year

First Term (Summer - 6 weeks)

ENG-105	Composition I*	3 s.h.
HSC-150	Body Structure and Function**	4 s.h.
	OR Anatomy and Physiology I and II	
PNN-603	Practical Nursing I	4 s.h.
		11 s.h.

**Body Structure and Function must be completed within five years of beginning the nursing component of the curriculum.

Second Term (Fall)

PNN-604	Practical Nursing II	13 s.h.
PSY-111	Introduction to Psychology*	3 s.h.
		16 s.h.

Third Term (Spring)

PNN-607	Practical Nursing III	13 s.h.
PSY-121	Developmental Psychology*	3 s.h.
		16 s.h.

Total Program Hours 43 s.h.

* Prescribed support courses which may be taken prior to entering the nursing program.

NOTE: A current "Healthcare Provider (CPR) Certification" offered by the American Heart Association is required. The current certification/renewal needs to be completed prior to the fall term or any reentry into the program. A yearly TB test is also required prior to the Fall term or any reentry into the program. Students must be current with these requirements or will not be allowed in the clinical area.

Career Opportunities

Licensed Practical Nurses work indoors for:
- Hospitals, nursing homes, clinics, and other healthcare facilities
- Health maintenance organizations
- Private doctors' offices
- Public health agencies
- Home healthcare services
- Government agencies
- Welfare and religious organizations
- Nurses registries and temporary health agencies
- Private duty

Licensed Practical Nurses work with:
- Patients and their families
- Thermometers, stethoscopes, and other medical equipment
- Bandages, catheters, and other medical supplies
- Patients' records and charts
- Various types of medication
- Physicians' orders
- Appointment books

Pharmacy Technician - Diploma and Certificate

The Pharmacy Technician program is a two or three semester program (depending on the option taken) that prepares the graduate to function as a health professional under the direct supervision of a registered pharmacist in a retail setting. Pharmacy Technicians require a broad knowledge of the practice of pharmacy and knowledge of techniques required to measure, mix, count, label and record amounts and dosages of medications. In addition, Pharmacy Technicians verify prescriptions from physicians and help maintain patient records and insurance information.

Upon completion of the preadmission math requirement and the courses listed below with a grade point average of 2.00 (C) or higher, graduates will be awarded a diploma or certificate of completion as a Pharmacy Technician and will be eligible for the National Certification Exam offered by the Pharmacy Technician Certification Board.

Entrance Requirements

1. A high school diploma or its equivalent, or permission of the Division Chair.
2. A high school GPA of 2.00 or higher.
3. A score of 52 or higher on the Algebra component of the COMPASS test or ACT Math score of 21 or higher. If unable to achieve this score, MAT-063, Elementary Algebra, will be required simultaneously with PHR-105, Introduction to Pharmacy Technician, and PHR-941, Pharmacology for Pharmacy Technicians. MAT-063, Elementary Algebra, may also be taken prior to entering the program.
4. Computer literacy as documented by high school or college coursework.
5. Must be a minimum of 18 years of age at the time of program completion.

Upon admission to the program, criminal background checks will be required. Drug checks may also be required by certain agencies prior to the practicum experience. Criminal background checks and drug checks are at student expense.

Required Courses

First Term (Fall Semester)

ADM-131	Office Calculators	1 s.h.
HSC-120	Medical Terminology I*	3 s.h.
HSC-150	Body Structure and Function	4 s.h.
MAT-063	Elementary Algebra +*	4 s.h.
PHR-105	Introduction to Pharmacy Technician*	3 s.h.
PHR-941	Pharmacy Technician Practicum I*	1 s.h.
		12-16 s.h.

+ This course must be taken if the student is unable to meet math requirements listed under Entrance Requirements.

Second Term (Spring Semester)

BUS-121	Business Communications	3 s.h.
	OR ENG-105 Composition I (3 s.h.)	
BUS-161	Human Relations	3 s.h.
HSC-121	Medical Terminology II	3 s.h.
PHR-120	Pharmacology for Pharmacy Technicians*	3 s.h.
PHR-942	Pharmacy Technician Practicum II*	1 s.h.
		13 s.h.

Third Term (Summer Semester)

PHR-125	Advanced Pharmacy Technician	3 s.h.
PHR-943	Pharmacy Technician Practicum III	2 s.h.
		5 s.h.

Total Hours 30-34 s.h.

*Courses that must be taken for a Certificate in Pharmacy Technician. See course descriptions for requirements related to admission to pharmacy specific courses.

Physical Therapist Assistant

The Physical Therapist Assistant Program is designed to prepare individuals to work under the supervision of a Physical Therapist in the delivery of physical therapy services. Responsibilities include: implementing treatment programs according to the Physical Therapist's plan of care, training patients in exercises and activities of daily living, administering modalities such as ultrasound, electrical stimulation, and other treatment procedures, and communicating with the Physical Therapist on the patient's progress.

The program is two academic years in length including one summer. Students must attain a *C* grade in all PTA courses, achieve a "pass" grade in all clinical assignments, and a *C-* grade in all support courses to progress through the program. Although the program has specific requirements regarding the program completion, in order to be eligible for graduation from the College, all students must achieve a minimum overall cumulative GPA of 2.00. Upon completion of the curriculum, the student is awarded an Associate in Applied Science Degree. In order for the graduate to practice physical therapy, a license is required in most states. The program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 111 North Fairfax Street, Alexandria, VA 22314, telephone: 703-706-3245, email: accreditation@apta.org, website: www.capteonline.org; and, therefore, graduates of the program are eligible to take the national licensure examination.

Entrance Requirements

The applicant must complete the application process through the health professions counselor located in the Student Development Office. Entrance requirements include the following criteria:

1. Have a high school diploma or its equivalent.
2. Meet two of the three following criteria:
   a. Graduated in the upper half of the high school class.
   b. Graduated from high school with a minimum of a 3.00 GPA.
   c. Achieved an ACT composite score of 20 or higher.

   Applicants who do not meet the above requirements or those with a poor academic history may meet entrance requirements by successfully completing approved college courses with a cumulative GPA of 2.00. This should be discussed with the health professions counselor.
3. Documented evidence of 12 hours of observation time in a physical therapy setting. When applicant applies to the program, a required form will need to be used to document these hours. This form is available through Student Services.

An applicant's file will not be reviewed until all application criteria have been submitted.

Prerequisites

The following courses must be completed with a grade of *C* or higher:

Mathematics:

Four semesters of high school/college preparatory math (e.g., Algebra I, Algebra II, Geometry)
OR
Two semesters of college math (e.g., MAT-063, Elementary Algebra, MAT-102, Intermediate Algebra)

Science:

Two semesters of high school/college preparatory biology
OR
One semester of college biology (e.g., BIO-102/103, Introductory Biology and lab)

Two semesters of high school/college preparatory chemistry or physics
OR
One semester of college chemistry (e.g., CHM-122, Introduction to General Chemistry) or physics (e.g., PHY-106, Survey of Physics)

After acceptance, a physical examination documenting current immunization and abilities to perform program requirements is needed. Students are also required to obtain CPR certification for the adult, child, and infant. CPR certification must be kept current while in the program. In addition, criminal background checks and adult/dependent abuse checks will also be required. Results of these checks will be used by contracted clinical facilities to determine clinical eligibility. Costs for requirements will be the responsibility of the student.

Students who withdraw from the program must make formal application for reentry and upon acceptance will be considered on a space-available basis. Readmission criteria is addressed in the PTA Student Handbook. A student may reenter the PTA program once. After being accepted into the program, a student may delay entrance into the program no more than two (2) years. A student will be required to reapply to the program after this period of time.

Further information regarding progression in the program and specific program policies is provided to the student in the PTA Program Student Handbook. Students are provided this handbook the first week of classes. Students are encouraged to refer to this handbook throughout the program.

Physical Therapist Assistant (Continued)

Required Courses/Suggested Schedule

First Year

First Term (Fall)

BIO-206*	Anatomy and Physiology I	4 s.h.
HSC-120*	Medical Terminology	3 s.h.
	OR PTA-100*, PTA Terminology (1 s.h.)++	
PSY-111*	Introduction to Psychology++	3 s.h.
PTA-101	Introduction to PTA	2 s.h.
PTA-110	Fundamentals for PTA	3 s.h.
00:000*	Humanities Elective++	3 s.h.
		16-18 s.h.

Second Term (Spring)

BIO-207*	Anatomy and Physiology II	4 s.h.
ENG-105*	Composition I	3 s.h.
	OR ENG-102* Composition & Speech I (4 s.h.)	
PTA-120*	Kinesiology	3 s.h.
PTA-141	Developmental Processes	3 s.h.
PTA-190	Physical Agents	4 s.h.
		17-18 s.h.

Third Term (Summer - 7 weeks)

PTA-150	Pathophysiology	3 s.h.
PTA-162	PTA Assessment Procedures	3 s.h.
PTA-500	PTA Clinic I (3 weeks)	2 s.h.
		8 s.h.

Second Year

Fourth Term (Fall)

ENG-106*	Composition II	3 s.h.
	OR ENG-103* Composition & Speech II (4 s.h.)	
PTA-210	Orthopedics	3 s.h.
PTA-231	Therapeutic Exercise for PTA	3 s.h.
PTA-241	Neurology for PTA	4 s.h.
PTA-250	PTA Career Essentials	2 s.h.
		15-16 s.h.

Fifth Term (Spring)

PTA-280	PTA Seminar	1 s.h.
PTA-501	PTA Clinic II (8 weeks)	7 s.h.
PTA-502	PTA Clinic III (6 weeks)	5 s.h.
		13 s.h.

Total Program Hours	69-73 s.h.

* Courses which may be taken prior to entering the program, but prerequisites may need to be taken. Note that Anatomy and Physiology must be taken within five years of beginning the program. Note that Kinesiology must be taken within three years of beginning the program. Students must earn a "C-" or higher in BIO-206, Anatomy and Physiology I, prior to taking Kinesiology.

++Once enrolled in the program, courses must be taken in the identified sequence with the exception of the following: Medical Terminology or PTA Terminology must be completed prior to Term III. (It is noted that during Term II, only Medical Terminology would be available.) Introduction to Psychology must be completed prior to Term IV. Humanities elective may be taken any time prior to Term V.

** This clinical course extends outside the standard weeks of the term. See individual course descriptions.

The student should be aware that clinicals necessitate travel to various hospitals and clinics and may necessitate housing expenses. Each individual clinical site may have specific requirements that vary (e.g., 10-hour days, background checks, drug testing, agency specific orientations, urinalysis tests). The student is responsible for all costs and must comply with clinical requirements in order to be provided with an affiliation.

Career Opportunities

Physical Therapist Assistants are employed at a variety of settings including but not limited to the following: hospitals, skilled nursing facilities, clinics, private practice clinics, rehabilitation centers, intermediate care facilities, residential facilities for children with disabilities, home health agencies, sports injury clinics, long-term care facilities, outpatient facilities, research centers, industrial settings, health maintenance organizations, academic institutions, and schools. Physical Therapist Assistants work with: prostheses (artificial limbs), orthoses (artificial supports); braces, canes, crutches, and walkers; wheelchairs; traction equipment, exercise equipment such as lifts, weights, and parallel bars; medical records.

Radiologic Technology

A Radiologic Technology Program prepares radiographers to take radiographs of all parts of the human body for the purpose of diagnosing medical problems. Radiographers position the patients, who either lie on a table, sit, or stand, so that the correct parts of the body can be radiographed. In addition, radiographers may take portable radiographs in areas of the hospital that include the emergency room, operating room, intensive care unit, and patient care units. Radiologic Technologists work with ionizing radiation and learn proper procedures to protect themselves and their patients from unnecessary radiation exposure. The radiographer must use sterile technique, maintain records, assist with special procedures, and administer opaque media via multiple routes, including intravenous routes. Transfer and positioning activities are integrated throughout the program. Radiographers must be reliable, have mechanical aptitude and possess good communication skills.

An Associate in Applied Science (A.A.S.) degree in Radiologic Technology will be granted for students who complete degree requirements. This degree will be granted exclusively to students enrolled in the Mercy Medical Center-North Iowa Radiologic Technology curriculum. The program is designed to be completed within the required two-year time period.

Entrance Requirements

The applicant must complete the application forms which can be found on the Mercy Medical Center--North Iowa website, www.mercynorthiowa.com/radiologictechnologyprogram, and the NIACC health professions counselor, located in the Student Development Office. Mercy's application deadline is December 15 each year.

IN ORDER TO APPLY, the following must be met:

1. All applicants MUST be United States citizens or permanent residents.
2. At least 18 years of age (according to NCRP regulations) by the start date of the program.
3. Graduation from an accredited high school or have passed a standard equivalent program.
4. Completion of the following classes with a minimum of a C is MANDATORY:
   a. Biology (1 full year high school or 1 semester college)
   b. Chemistry OR Physics (1 full year high school or 1 semester college).
5. Attendance at one of the information sessions held by Mercy.

PRIORITY CONSIDERATION will be given to applicants who meet or exceed the following:

1. A minimum cumulative GPA of 2.5 for high school.
2. A minimum cumulative GPA of 2.5 for any college course.
3. A minimum score of 18 on the ACT test.
4. Have taken the following math or science courses with a minimum grade of C in either high school (full year) or college:
   • Geometry
   • Anatomy/Physiology
   • Other math or science courses.
5. Health care experience.
6. Have completed the required three college-level courses: Medical Terminology I (not considered part of the required general education courses, but is required for the program), math, and communication courses (developmental courses cannot be used to meet this requirement) with a minimum grade of C or higher.
7. Have completed additional college-level general education courses.

Candidates for admission that meet minimum requirements will be granted an interview. For those individuals selected by Mercy, final acceptance is contingent upon successful completion of a physical exam, a drug screen, background check, and post-offer screen no sooner than 30 days prior to the start of Radiologic Technology classes at Mercy Medical Center--North Iowa. In addition, proof of CPR/BLS certification from either the American Heart Association's BLS: Healthcare Provider or the American Red Cross's Professional Rescuer prior to program start date must be provided.

There is no waiting list. Applicants who are not accepted and wish to be considered for the following year must re-apply. This includes applicants chosen as alternate candidates who did not start the program in that year.

PROGRAM COMPLETION: The American Registry of Radiologic Technologists requires radiologic technology graduates to have a minimum of an Associates Degree or higher prior to taking the national certification exam. The degree does not need to be in Radiation Sciences and can be completed prior to or during the x-ray program. College-level Math, Communications, and Medical Terminology courses must also be successfully completed if not part of the previous degree.

The NIACC A.A.S. degree in Radiologic Technology requires a total of 16 hours of college-level general education courses (developmental courses DO NOT qualify) and 3 hours of Medical Terminology. Students must maintain a minimum grade point average of 2.00 to satisfy NIACC degree requirements. It is recommended that you have as many as possible of the required 19 hours completed prior to beginning the Mercy x-ray program. Continuation in the Mercy program is dependent upon successful progression of the NIACC courses as listed on the next page. For applicants with significant non-NIACC college credits: even if previous courses transfer to NIACC, a minimum of 19 NIACC hours is required to fulfill the A.A.S. Radiologic Technology degree.

Radiologic Technology (Continued)

Required Courses/Suggested Schedule

First Year

First Term (Fall)

Clinical I (MMC-NI)*
Introduction to Radiologic Technology and Patient Care (MMC-NI)*
Radiation Protection (MMC-NI)*
Radiographic Anatomy and Positioning I (MMC-NI)*
Radiographic Anatomy and Positioning I Lab (MMC-NI)*
Radiographic Image Critique I (MMC-NI)*
ENG-102 Composition and Speech I (NIACC) ..... 4 s.h.
HSC-120 Medical Terminology (NIACC) ..... 3 s.h.

Second Term (Spring)

Clinical II (MMC-NI)*
Radiation Protection and Biology (MMC-NI)*
Radiographic Anatomy and Positioning IIA (MMC-NI)*
Radiographic Anatomy and Positioning IIA Lab (MMC-NI)*
Radiographic Exposure (MMC-NI)*
Radiographic Image Critique II (MMC-NI)*
MAT-110 Math for Liberal Arts (NIACC) ..... 3 s.h.
OR MAT-121, College Algebra (4 s.h.)
OR MAT-156, Introduction to Statistics (3 s.h.)

Third Term (Summer)

Clinical III (MMC-NI)*
Medical Ethics and Legal Concerns (MMC-NI)*
Radiographic Anatomy and Positioning IIB (MMC-NI)*
Radiographic Anatomy and Positioning IIB Lab (MMC-NI)*
Radiographic Physics (MMC-NI)*
Social Science/Natural Science/Humanities Elective(s) (NIACC) ..... 3-6 s.h.
May choose from the following but must total at least 9 s.h. prior to the start of the Sixth Term or with the approval of MMC-NI Radiologic Technology faculty:
BIO-102, Introductory Biology (3 s.h.)
BIO-206, Anatomy and Physiology I (4 s.h.)
CHM-122 Introduction to General Chemistry (4 s.h.)
PHI-105, Introduction to Ethics (3 s.h.)
PHY-106 Survey of Physics (4 s.h.)
PSY-111, Introduction to Psychology (3 s.h.)
PSY-121, Developmental Psychology (3 s.h.)
SOC-110, Introduction to Sociology (3 s.h.)

Second Year

Fourth Term (Fall)

Clinical IV (MMC-NI)*
Imaging Equipment and Quality Management (MMC-NI)*
Radiographic Image Processing (MMC-NI)*
Radiographic Anatomy and Positioning III (MMC-NI)*
Radiographic Anatomy and Positioning III Lab (MMC-NI)*
Social Science/Natural Science/Humanities Elective(s) (NIACC) ..... 3-6 s.h.
May choose from the following but must total at least 9 s.h. prior to the start of the Sixth Term or with the approval of MMC-NI Radiologic Technology faculty:
BIO-102, Introductory Biology (3 s.h.)
BIO-206, Anatomy and Physiology I (4 s.h.)
CHM-122 Introduction to General Chemistry (4 s.h.)
PHI-105, Introduction to Ethics (3 s.h.)
PHY-106 Survey of Physics (4 s.h.)
PSY-111, Introduction to Psychology (3 s.h.)
PSY-121, Developmental Psychology (3 s.h.)
SOC-110, Introduction to Sociology (3 s.h.)

*After completion of these courses, 40 credit hours will be transferred from Mercy Medical Center - North Iowa School of Radiologic Technology to NIACC towards completion of the A.A.S. Degree in Radiologic Technology.

Fifth Term (Spring)

RAD-574 Clinical V (MMC-NI) ..... 8 s.h.
RAD-744 Radiographic Pathology (MMC-NI) ..... 2 s.h.
RAD-764 Pharmacology for Radiographers (MMC-NI) ..... 1 s.h.
RAD-765 Radiographic Anatomy and Positioning IV (MMC-NI) ..... 2 s.h.
RAD-900 Registry Review (MMC-NI) ..... 3 s.h.
16 s.h.

All 19 s.h. of credit from NIACC must be completed prior to the start of the Sixth Term or student must have permission from MMC-NI Radiologic Technologist Instructors prior to the start of the Sixth Term.

Sixth Term (Summer)

RAD-576 Clinical VI (MMC-NI) ..... 5 s.h.
5 s.h.

Total Program Hours 80 s.h.

Career Opportunities

Radiologic Technologists work for:

- Hospitals and clinics
- Privately-owned facilities
- Physician's offices that provide radiological services

Wellness, Exercise Science, and Leisure Services

The Wellness, Exercise Science and Leisure Services program prepares students for direct employment or ongoing study in these fields. Graduates may find employment working with people of all ages with diverse backgrounds in such areas as health and fitness, municipal parks, commercial recreation, nonprofit settings, community agencies, tourism, and outdoor recreation. The program focuses on direct service programming as it relates to wellness, exercise science, and leisure activities for both the individual and groups.

Students interested in careers in Wellness, Exercise Science, and Leisure Services may select from the following options: 1) an A.A. degree with a Physical Fitness and Wellness Certificate; 2) an A.A.S. degree in Wellness, Exercise Science, and Leisure Services; 3) a Physical Fitness and Wellness Diploma; or 4) a Physical Fitness and Wellness Certificate.

A.A. Degree with Physical Fitness and Wellness Certificate

An A.A. degree option with a Wellness certificate is designed to be the first two years of a transfer program in a related field. The certificate provides background in personal health and wellness designed to strengthen a student's experience in the area.

Upon completion of the two-year curriculum with a grade point average of 2.00 (C), the student is awarded an Associate in Arts Degree with a Physical Fitness and Wellness Certificate.

General Education Core Requirements

BIO-151	Nutrition	3 s.h.
BIO-152	Health & Nutrition	3 s.h.
BIO-206	Anatomy & Physiology I	4 s.h.
	OR HSC-150, Body Structure & Function* (4 s.h.)	
ENG-102	Composition & Speech I	4 s.h.
ENG-103	Composition & Speech II	4 s.h.
MAT-156	Introduction to Statistics**	3 s.h.
PSY-121	Developmental Psychology	3 s.h.
PSY-223	Child and Adolescent Psychology	3 s.h.
	Business Elective(s)	3 s.h.
	Physical Education/Activities Electives	2-4 s.h.
	Humanities Elective(s)	8 s.h.
	Social Science Elective(s)	3 s.h.
	General Education Elective(s)	4-5 s.h.
	Additional Physical Fitness and Wellness Certificate Courses	13 s.h.
	Total Degree Hours	60-63 s.h.

* If completing HSC-150 instead of BIO-206, you will need to complete additional general education electives.

** May need to start with an appropriate level math class first.

General Education courses must total at least 40 semester hours to meet A.A. degree requirements.

Wellness, Exercise Science, and Leisure Services - A.A.S. Degree

The A.A.S. degree option is intended to provide students with the training to enter the job market in the field of Wellness, Exercise Science, and Leisure Services. Students may select an emphasis from the following areas: Coaching, Fitness/Wellness, or Business.

Upon completion of the two-year curriculum with a grade point average of 2.00 (C), the student is awarded an Associate in Applied Science Degree. For students choosing the Wellness, Exercise Science, and Leisure Services A.A.S. degree, Coaching Emphasis, requirements for the Coaching Authorization from the Iowa Department of Education will be met.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

ENG-102	Composition & Speech I	4 s.h.
PEH-111	Personal Wellness	3 s.h.
PEH-144	Human Movement Science	3 s.h.
PEH-161	Introduction to Physical Education	2 s.h.
PSY-121	Developmental Psychology	3 s.h.
	OR BIO-206, Anatomy & Physiology I (4 s.h.)	
	OR HSC-150, Body Structure & Function (4 s.h.)	
	Physical Education/Activities Elective	1 s.h.
		16-17 s.h.

Second Term (Spring Semester)

BUS-107	Business Careers	1 s.h.
ENG-103	Composition & Speech II	4 s.h.
PEH-140	First Aid	1 s.h.
PEH-221	Introduction to Leisure Services	3 s.h.
PEH-261	Physical Activity for Health and Fitness	3 s.h.
	Physical Education/Activities Elective	1 s.h.
	Recommended Elective(s)	3 s.h.
		16 s.h.

Second Year

Third Term (Fall Semester)

BIO-151	Nutrition	3 s.h.
PEC-127	Care and Prevention of Athletic Injuries	2 s.h.
PEH-908	WESLS Cooperative Education Internship	1 s.h.
	General Education Elective(s)	3 s.h.
	Emphasis Area Courses	5-8 s.h.
		14-17 s.h.

Fourth Term (Spring Semester)

BUS-161	Human Relations	3 s.h.
PSY-223	Child and Adolescent Psychology	3 s.h.
PEH-908	WESLS Cooperative Education Internship	1 s.h.
	Recommended Elective(s)	3 s.h.
	Emphasis Area Courses	5-6 s.h.
		15-16 s.h.
	Total Program Hours	61-66 s.h.

Coaching Emphasis Courses

MGT-220	Introduction to Sports Management	3 s.h.
MGT-221	Current Issues in Sport	3 s.h.
PEC-110	Coaching Ethics, Techniques and Theory	1 s.h.
PEC-161	Sports Officiating	3 s.h.
		10 s.h.

Wellness, Exercise Science, and Leisure Services (Continued)

Fitness/Wellness Emphasis Courses

MKT-110	Principles of Marketing	3 s.h.
PEA-146	Physical Fitness I	1 s.h.
PEA-147	Physical Fitness I Lab	1 s.h.
PEA-187	Weight Training I	1 s.h.
PET-135	Personal Trainer	3 s.h.
	Physical Education/Activities Courses	2 s.h.
		11 s.h.

Business Emphasis Courses

BUS-102	Introduction to Business	3 s.h.
MKT-110	Principles of Marketing	3 s.h.
	OR MGT-101, Principles of Management (3 s.h.)	
MGT-220	Introduction to Sport Management	3 s.h.
MGT-221	Current Issues in Sport	3 s.h.
		12 s.h.

Recommended Electives for Wellness, Exercise Science, and Leisure Services A.A.S. Degree:

BIO-207	Anatomy and Physiology II	4 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation and Opportunity Analysis	2 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
MAT-156	Introduction to Statistics	3 s.h.
MKT-140	Principles of Selling	3 s.h.
PEA-130	Downhill Skiing	1 s.h.
PEA-174	Tennis I	1 s.h.
PEA-190	Yoga/Stretching I	1 s.h.
PEA-191	Pilates	1 s.h.
PEA-287	Weight Training II	1 s.h.
PEC-115	Athletic Development and Human Growth	1 s.h.
PEC-122	Introduction to Anatomy and Physiology for Coaching	1 s.h.
PEH-180	Rape Education and Self Defense	2 s.h.
PEH-191	Sports Nutrition	3 s.h.
PET-110	Introduction to Athletic Training	2 s.h.
PTA-120	Kinesiology	3 s.h.
SOC-215	Prime for Life: Substance Abuse	1 s.h.

Physical Fitness and Wellness Diploma

The intent of the Physical Fitness and Wellness diploma is to provide a foundation for students interested in group fitness and/or becoming a personal trainer. National Certification is available through the American Council of Exercise (ACE).

Upon completion of the curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a Physical Fitness and Wellness Diploma.

Required Courses/Suggested Schedule

First Term (Fall Semester)

BUS-107	Business Careers	1 s.h.
BUS-161	Human Relations	3 s.h.
PEC-127	Care and Prevention of Athletic Injuries	2 s.h.
PEH-111	Personal Wellness	3 s.h.
PEH-140	First Aid	1 s.h.
PEH-144	Human Movement Science	3 s.h.
	OR BIO-206, Anatomy and Physiology I (4 s.h.)	
	OR HSC-150, Body Structure and Function (4 s.h.)	
	Physical Education/Activities Elective	1 s.h.
	Elective(s)	3 s.h.
		17-18 s.h.

Second Term (Spring Semester)

BIO-151	Nutrition	3 s.h.
	OR PEH-191, Sports Nutrition (3 s.h.)	
MKT-110	Principles of Marketing	3 s.h.
PEH-261	Physical Activity for Health and Fitness	3 s.h.
PET-135	Personal Trainer	3 s.h.
	Elective(s)	1-3 s.h.
		13-15 s.h.

Total Program Hours 30-33 s.h.

Recommended Electives:

BIO-151	Nutrition	3 s.h.
BIO-152	Health and Nutrition	3 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation and Opportunity Analysis	2 s.h.
PEA-107	Aerobic Circuit Training	1 s.h.
PEA-130	Downhill Skiing	1 s.h.
PEA-146	Physical Fitness I	1 s.h.
PEA-147	Physical Fitness I Lab	1 s.h.
PEA-174	Tennis I	1 s.h.
PEA-187	Weight Training I	1 s.h.
PEA-190	Yoga/Stretching I	1 s.h.
PEA-191	Pilates	1 s.h.
PEA-287	Weight Training II	1 s.h.
PEH-221	Introduction to Leisure Services	3 s.h.
PET-110	Introduction to Athletic Training	2 s.h.

Wellness, Exercise Science, and Leisure Services (Continued)

Physical Fitness and Wellness Certificate

The Physical Fitness and Wellness certificate is intended for individuals desiring an introduction to health and wellness. It may be taken in combination with the A.A. degree.

Upon completion of the curriculum with a grade point average of 2.00 (C), the student is awarded a Physical Fitness and Wellness Certificate.

Required Courses

BIO-151	Nutrition	3 s.h.
	OR PEH-191, Sports Nutrition (3 s.h.)	
BUS-107	Business Careers	1 s.h.
PEC-122	Introduction to Anatomy and Physiology for Coaching*	1 s.h.
PEC-127	Care and Prevention of Athletic Injuries	2 s.h.
PEH-111	Personal Wellness	3 s.h.
PEH-140	First Aid	1 s.h.
PEH-261	Physical Activity for Health and Fitness	3 s.h.
	Physical Education/Activities Elective(s)**	2 s.h.
	Total Hours	16 s.h.

* HSC-150, Body Structure & Function, or BIO-206, Anatomy & Physiology I, or PEH-144, Human Movement Science, may be substituted.

** Recommended: PEH-221, Introduction to Leisure Services

Coaching Authorization

A coach is a person who holds a coaching authorization or coaching endorsement from the Iowa Board of Educational Examiners, and who diagnoses, prescribes, evaluates, assists, or directs student learning of an interscholastic athletic endeavor at a practice session or on the field of competition. The coaching authorization class sequence is offered online throughout the year.

Upon completion of the curriculum, the student shall submit records of credit to:

Department of Practitioner Preparation and Licensure
Department of Education
Grimes State Office Building
Des Moines, IA 50319
Phone: 515-281-3245

For additional information, please see the NIACC website: http://www.niacc.edu/athletics/admin/coachingauth.html.

Required Courses

PEC-110	Coaching, Ethics, Techniques, and Theory	1 s.h.
PEC-115	Athletic Development and Human Growth	1 s.h.
PEC-122	Introduction to Anatomy and Physiology for Coaching	1 s.h.
PEC-127	Care and Prevention of Athletic Injuries	2 s.h.
	Total Hours	5 s.h.

Recommended:

PEC-161	Sports Officiating	3 s.h.

Industrial Division

Transfer Degree

Career Programs

Industrial Program Clusters

Construction Technology

- Building Trades/Carpentry Diploma

Precision Production Technology

- General Machinist Diploma
- Tool and Die Technology Degree
- Welding Diploma

Mechanical Technology

- Automotive Service Diploma
- Automotive Service Technology Degree
- Diesel Technology Degree
- Climate Control Mechanics Diploma
- Climate Control Technology Degree

Engineering Related Technology

- Industrial Systems Technology Degree
- Industrial Technology Diploma
- Industrial Technology Degree
- Wind Turbine Technology Diploma

INDUSTRIAL TECHNOLOGY

Kevin Muhlenbruch, Agriculture and Industrial Division Chair
(641) 422-4291
muhlekev@niacc.edu

CONSTRUCTION TECHNOLOGY
- Building Trades/Carpentry - page 82

MECHANICAL TECHNOLOGY
- Automotive Service Diploma - page 80
- Automotive Service Technology Degree - page 80
- Climate Control (HVAC) Mechanics Diploma - page 83
- Climate Control (HVAC) Technology Degree - page 83
- Diesel Technology Degree - page 81

PRECISION PRODUCTION TECHNOLOGY
- General Machinist Diploma - page 84
- Tool and Die Technology Degree - page 84
- Welding Diploma - page 87

ENGINEERING RELATED TECHNOLOGY
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- Industrial Technology Certificate - page 86
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- Industrial Technology Degree - page 86
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INDUSTRIAL DIVISION

University of Northern Iowa
NIACC's Industrial Division and the University of Northern Iowa's Department of Industrial Technology have teamed up to provide excellent transfer and articulation agreements for students wishing to pursue a four-year degree. These four-year programs include: Construction Management, Electrical and Information Engineering Technology, Graphic Communications, Technology Management, Technology Education, and Manufacturing Technology.

The transfer options include both the Associate in Arts (A.A.) and Applied Science (A.A.S.) Degrees from NIACC. Differences in liberal arts and technical courses with these degrees will affect the remaining four-year degree requirements at UNI.

The articulation agreement, sometimes referred to as a 2+2 agreement, has been developed for many of the technology-related A.A.S. programs at NIACC. The agreement provides details on transfer of A.A.S. credits into Technology Management as well as other majors in the Department of Industrial Technology at UNI.

For more details on these transfer options, please refer to the College Transfer Programs section of the NIACC catalog or contact our academic advisor.

Industrial Technology Endorsement

Students who show responsible attendance, use proper communication, dress appropriately, and show soft skill proficiency will be awarded an Industrial Certificate to verify to future employers that they not only have the technical skills but personal skills to be successful employees.

Automotive Service Technology

Automotive Service Technology is a 4 1/2 semester Associate in Applied Science (A.A.S.) Degree Program. The program is ASE/NATEF Master Certified. All eight instructional areas meet industry and educational standards as identified by Automotive Service Excellence and evaluated by the National Automotive Technicians Education Foundation:

- Engine Repair
- Automatic Transmission/Transaxle
- Manual Drive Train and Axles
- Suspension and Steering
- Brakes
- Electrical/Electronic Systems
- Heating and Air Conditioning
- Engine Performance

Students must achieve a minimum grade point average of 2.00 (C) in the core automotive courses in order to continue to the second year of the program. Upon completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Applied Science in Automotive Service Technology.

An Automotive Service diploma is granted to a student who has completed the first three terms of the automotive curriculum and SDV-135, Job Seeking Skills. A minimum cumulative grade point average of 2.00 (C) is required. Developmental courses are not used in calculating the cumulative grade point average for graduation.

Entrance Advising:
Due to the highly technical nature of the Automotive programs and NIACC's commitment to giving students the best possible opportunity for success, students will be scheduled for advisement sessions with counselors and program personnel. In these sessions, the student's career plans, previous background, transcriptions, test scores, life experiences, and motivation will aid in designing a positive educational experience.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

AUT-104	Introduction to Automotive Technology	3 s.h.
AUT-303	Automotive Manual Drive Train & Axles	3 s.h.
AUT-612	Automotive Electrical Systems I	3 s.h.
ELT-115	Electronic Concepts	3 s.h.
IND-190	Skills and Safety in Industry	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
		17 s.h.

Second Term (Spring Semester)

AUT-195	Internal Combustion Engine	2 s.h.
AUT-404	Automotive Suspension and Steering	4 s.h.
AUT-504	Automotive Brake Systems	4 s.h.
ELT-745	Maintenance Shop Operations	3 s.h.
ENG-701	Communications I	3 s.h.
		16 s.h.

Third Term (Summer)

AUT-204	Automotive Automatic Transmissions & Transaxles	4 s.h.
AUT-703	Automotive Heating & Air Conditioning	3 s.h.
		7 s.h.

Second Year

Fourth Term (Fall Semester)

AUT-164	Automotive Engine Repair	4 s.h.
AUT-657	Automotive Electrical Systems II	5 s.h.
AUT-840	Automotive Computerized Controls	3 s.h.
BUS-161	Human Relations	3 s.h.
		15 s.h.

Fifth Term (Spring Semester)

AUT-832	Automotive Fuel Delivery Systems	3 s.h.
AUT-858	Advanced Automotive Engine Performance	4 s.h.
AUT-865	Automotive Engine Performance Testing	5 s.h.
ENG-702	Communications II	3 s.h.
SDV-135	Job Seeking Skills	1 s.h.
		16 s.h.

	Total Program Hours	71 s.h.

Automotive Program Goal
Prepare individuals for employment in the automotive service industry by:

- Maintaining an environment that is conducive to learning.
- Offering curriculum that reflects current industry requirements.
- Delivering classroom instruction that encourages analytical thinking.
- Providing laboratory experience that utilizes technical and problem-solving skills.
- Promoting workmanship that meets or exceeds industry standards.

Career Opportunities

Technicians are employed at automotive dealerships and independent service/repair facilities as general (line) technicians or as specialty technicians.

Diesel Technology

Students who have completed the first three terms of the automotive curriculum have the option to continue on to the Diesel Technology program. The Diesel Technology program is designed to provide training in the diagnosis, repair, and maintenance of heavy-duty agricultural equipment, over-the-road diesel trucks, and other heavy-duty diesel systems. The Diesel Technology program will provide training in entry-level skills of mechanical, electrical and fuel systems, power trains, brake systems, air conditioning, welding and hydraulics.

Upon completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Applied Science in Diesel Technology.

Entrance Advising:
Due to the highly technical nature of the Automotive programs and NIACC's commitment to giving students the best possible opportunity for success, students will be scheduled for advisement sessions with counselors and program personnel. In these sessions, the student's career plans, previous background, transcriptions, test scores, life experiences, and motivation will aid in designing a positive educational experience.

Career Opportunities

Completion of this program prepares graduates for employment in various occupational areas:

- Construction companies
- Consumer product dealerships
- Engine machine shops
- Farm agricultural repair shops
- Heavy equipment shops
- Independent repair shops
- Truck stops

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

AUT-104	Introduction to Automotive Technology	3 s.h.
AUT-303	Automotive Manual Drive Train & Axles	3 s.h.
AUT-612	Automotive Electrical Systems I	3 s.h.
ELT-115	Electronic Concepts	3 s.h.
IND-190	Skills and Safety in Industry	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
		17 s.h.

Second Term (Spring Semester)

AUT-195	Internal Combustion Engines	2 s.h.
AUT-404	Automotive Suspension and Steering	4 s.h.
AUT-504	Automotive Brake Systems	4 s.h.
ELT-745	Maintenance Shop Operations	3 s.h.
ENG-701	Communications I	3 s.h.
		16 s.h.

Third Term (Summer)

AUT-204	Automotive Automatic Transmissions & Transaxles	4 s.h.
AUT-703	Automotive Heating & Air Conditioning	3 s.h.
		7 s.h.

Second Year

Fourth Term (Fall Semester)

BUS-161	Human Relations	3 s.h.
DSL-352	Introduction to Diesel Engines	2 s.h.
DSL-631	Air Systems and Brakes	1 s.h.
DSL-801	Truck and Trailer Service	1 s.h.
DSL-810	Truck and Diesel Lab I	10 s.h.
		17 s.h.

Fifth Term (Spring Semester)

DSL-402	Diesel Engine Electronics I	2 s.h.
DSL-591	Power Trains and Suspension	1 s.h.
DSL-820	Truck and Diesel Lab II	10 s.h.
ELT-790	Fluid Power	3 s.h.
ENG-702	Communications II	3 s.h.
		19 s.h.

Total Program Hours 76 s.h.

Building Trades

Building Trades is a diploma program designed for individuals interested in a career in residential, commercial, or industrial building construction. Residential construction involves the building or remodeling of houses, condominiums, or apartment complexes. These structures are primarily wood frame construction. Commercial construction involves the building of single-story office buildings, stores, or restaurants. These structures often use light gauge metal framing in addition to wood construction. Industrial construction includes the building of factories, hospitals, schools, or multistory office buildings. These structures may be constructed of concrete, masonry, structural steel, or a combination of materials.

Building Trades Program students learn and develop skills through a combination of classroom-structured units, manipulative lab projects, and mentored job experiences. Classroom units provide students with necessary information on safety, blueprint reading, and craft work processes. Manipulative projects provide students the opportunity to learn craft skills at their own pace in a mock job site setting. NIACC Building Trades students will have opportunities for nationally-recognized certifications including NCCER, OSHA, and other optional industry-related certifications. The Building Trades Lab is a state-of-the-art facility where students learn in an individualized, competency-based setting, mastering skills by constructing manipulative projects. Mentored job experiences provide students the opportunity to apply learned skills as well as develop new skills while working under the guiding supervision of skilled contractors on job sites around North Iowa.

Incoming students are eligible to compete for scholarships through the Tom and Linda Schaefer Endowment Fund, which provides twelve $1,000 scholarships each year for NIACC Building Trades students. Graduating students are eligible to compete for a $500 scholarship awarded each semester by the North Iowa Area Builders Exchange. Upon successful completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a diploma.

Courses are structured so that students enter the Building Trades Program in the Fall semester.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

BCA-100	Computer Literacy	1 s.h.
CON-110	Construction Drawing	1 s.h.
CON-121	Carpentry Fundamentals I	4 s.h.
CON-123	Carpentry Fundamentals II	4 s.h.
IND-190	Skills and Safety in Industry	1 s.h.
MAT-770	Applied Math I	2 s.h.
MAT-771	Applied Math II	2 s.h.
		15 s.h.

Second Term (Spring Semester)

CON-112	Blueprint Reading and Estimating	3 s.h.
CON-255	Carpentry I	4 s.h.
CON-256	Carpentry II	4 s.h.
ENG-701	Communications I	3 s.h.
SDV-135	Job Seeking Skills	1 s.h.
		15 s.h.

Third Term (Summer)

CON-117	Building Codes and Standards	2 s.h.
SDV-210	Cooperative Education Internship	5 s.h.
		7 s.h.

Total Program Hours 37 s.h

Other Elective Carpentry Courses:

CAD-216	Architectural CADD	2 s.h.
CON-305	Cabinetry and Millwork	3 s.h.
CON-315	Guitar Building	2 s.h.
CON-949	Special Topics in Carpentry	1 to 4 s.h.

Career Opportunities

Completion of this program prepares graduates to enter the construction industry as carpenters, with the basic skills to work in residential, commercial, or industrial construction. You will learn the skills necessary to perform work processes in:

- Concrete Formwork
- Framing
- Exterior Finish
- Interior Finish
- Interior Systems
- Cabinetry and Millwork

For specific information contact the Career and Internship Center or the NIACC Industrial Division.

Climate Control (HVAC) Technology

Climate Control (Residential/Commercial Heating and Air-Conditioning)
Today's Climate Control Technician installs, maintains, analyzes, and modifies heating and air-conditioning systems. The Climate Control curriculum provides opportunities to develop the skills necessary for entry into the HVAC (heating, ventilation, air-conditioning) industry.

The Climate Control curriculum allows the students to choose between completing a program in Climate Control (HVAC) Mechanics, which leads to a diploma with an emphasis in residential heating and air-conditioning or a program in Climate Control (HVAC) Technology, which leads to an Associate in Applied Science degree with an emphasis in commercial heating and air-conditioning. Both programs are designed around a common group of courses.

The Climate Control (HVAC) Mechanics diploma program is designed to provide graduates with the basic knowledge and skills necessary for installing and servicing residential heating and air-conditioning systems. Theory of operation, as well as installation and service techniques, for several types of residential heating and air-conditioning systems is covered. Upon successful completion of the first two terms of the Climate Control curriculum and SDV-135, Job Seeking Skills, with a grade point average of 2.00 (C) or higher, the student is awarded a diploma.

The Climate Control (HVAC) Technology Program prepares students for entry into the commercial and industrial heating, ventilation, and air-conditioning industry. Upon satisfactory completion of the A.A.S. degree program, the student will qualify for an HVAC Service Technician license through the State of Iowa.

Entrance Advising
Due to the highly technical nature of this program and NIACC's commitment to giving students the best possible opportunity for success, students will be scheduled for advisement sessions with counselors and program personnel. In these sessions, the student's career plans, previous background, transcripts, test scores, life experiences, and motivation will aid in designing a positive education experience.

Career Opportunities

Completion of the diploma program prepares graduates to enter the Climate Control (HVAC) Technology degree program or to enter the following occupations:

- Residential Heating/Air-Conditioning Service Mechanic
- Heating/Air-Conditioning Installer
- Heating/Air-Conditioning Parts Salesperson

Completion of the degree program prepares graduates to enter the following occupations:

- Commercial Heating/Air-Conditioning Controls Technician
- Commercial Heating/Air-Conditioning Service Technician
- Heating/Air-Conditioning Lab Technician
- Heating/Air-Conditioning Sales Engineer
- Heating/Air-Conditioning Parts Manager
- Manufacturer's Field Service Representative

For specific information contact the Career and Internship Center or the NIACC Industrial Division.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

ELT-115	Electronic Concepts	3 s.h.
ENG-701	Communications I	3 s.h.
HCR-115	Residential Heating Systems	4 s.h.
HCR-155	Troubleshooting Heating Systems	3 s.h.
IND-190	Skills and Safety in Industry	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
		18 s.h.

Second Term (Spring Semester)

HCR-205	Air-Conditioning Principles	2 s.h.
HCR-210	Residential Air-Conditioning Systems	4 s.h.
HCR-240	Troubleshooting Air-Conditioning Systems	3 s.h.
PHY-720	Career Physics	4 s.h.
		13 s.h.

Second Year

Third Term (Fall Semester)

BCA-215	Computer Business Applications OR BCA-101 Introduction to Computers and Information Systems (3 s.h.)	3 s.h.
HCR-150	Commercial Heating Systems	5 s.h.
HCR-510	Sheet Metal Fabrication	2 s.h.
HCR-705	Technical Graphics	2 s.h.
HCR-806	Controls I	3 s.h.
HCR-807	Controls II	3 s.h.
		18 s.h.

Fourth Term (Spring Semester)

BUS-161	Human Relations	3 s.h.
ENG-702	Communications II	3 s.h.
HCR-235	Commercial Air-Conditioning Systems	5 s.h.
HCR-923	Systems Design	3 s.h.
SDV-135	Job Seeking Skills	1 s.h.
SDV-210	Cooperative Education Internship	2 s.h.
		17 s.h.

Total Program Hours 66 s.h.

General Machinist

General Machinist is a two-semester diploma program designed to provide in-depth study and considerable hands-on skills in the machine processing of a variety of metals. This one-year program provides the foundation for the Associate in Applied Science Program, Tool & Die Technology.

Students become proficient in the operation of manual mills, lathes, grinders, drills, and saws as they complete increasingly complex projects while holding tight tolerances. Various pieces of precision measuring equipment (optical comparator, coordinate measuring machine, etc.) are used to check quality. Additional work in blueprint reading, heat-treating, and computer numerical controlled (CNC) machining is required to complete the General Machinist Program.

Upon satisfactory completion of this program with a grade point average of 2.00 (C) or higher, the student is awarded a NIACC diploma. Program graduates have the option to continue into the A.A.S. Tool and Die Technology Program or immediately begin employment in an area of machine shop or manufacturing facility producing a wide variety of machine parts.

Tool and Die Technology

Tool and Die Technology is a five-semester degree program which is a continuation of the General Machinist Diploma Program. The Tool and Die Technology Program builds upon the previous studies with an in-depth study of high-precision industrial dies and die components, progressive dies, and plastics industry molds. A portion of the program is devoted to producing computer-aided drawings (CAD) of molds and dies, and then using computer-aided manufacturing (CAM) software to generate computer numerical control (CNC) machine language. Students operate CNC machine tools to produce many of their second year projects.

Upon satisfactory completion of this program with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Applied Science Degree. Program graduates are prepared to work in the "tool room" of area manufacturers or to work for a specialty tool and die shop producing dies and molds for a large variety of production machines in our area.

Entrance Advising

Due to the highly technical nature of this program and NIACC's commitment to giving students the best possible opportunity for success, students are scheduled for advisement sessions with counselors and/or program personnel. In these sessions, the student's career plans, previous background, transcripts, test scores, life experiences, and motivation aid in designing a positive educational experience.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

BCA-119	Computer Orientation	1 s.h.
ENG-701	Communications I	3 s.h.
IND-190	Skills and Safety in Industry	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
MFG-120	Machine Trade Print Reading I	1 s.h.
MFG-245	Machine Theory and Operations I	9 s.h.
		19 s.h.

Second Term (Spring Semester)

MFG-130	Machine Trade Print Reading II	1 s.h.
MFG-248	Machine Theory and Operations II	7 s.h.
MFG-302	CNC Fundamentals	3 s.h.
PHY-720	Career Physics	4 s.h.
		15 s.h.

Second Year

Third Term (Summer)

MFG-108	Computer-Aided Drafting (CAD)	2 s.h.
MFG-110	3-D Modeling	2 s.h.
MFG-380	EDM Fundamentals	2 s.h.
MFG-423	Jig and Fixtures	5 s.h.
MFG-500	Statistical Process Control (SPC)	1 s.h.
		12 s.h.

Fourth Term (Fall Semester)

BUS-161	Human Relations	3 s.h.
MFG-320	Computer-Aided Manufacturing (CAM)	3 s.h.
MFG-408	Basic Die Making	8 s.h.
SDV-135	Job Seeking Skills	1 s.h.
WEL-335	Ag and Industry Welding	2 s.h.
		17 s.h.

Fifth Term (Spring Semester)

ENG-702	Communications II	3 s.h.
MFG-312	Advanced CNC	2 s.h.
MFG-459	Injection Mold Making	9 s.h.
MFG-460	Plastics Materials	1 s.h.
		15 s.h.

	Total Program Hours	78 s.h.

Career Opportunities

General Machinist
- Operate and set up CNC mills and lathes
- Maintenance work
- Operate and set up manual equipment

Tool and Die Technology
- Mold builder
- Operate/set up complex CNC equipment
- Tool maker
- Die maker
- CNC programmer
- Quality Control Inspector
- Gage maker
- Instrument maker
- CAD/CAM technician

Industrial Systems Technology

Industrial Systems Technology is an Associate in Applied Science Degree Program designed to prepare the graduate for immediate employment as electronic, electrical, and mechanical maintenance personnel in manufacturing settings.

Self-Paced Courses

Several courses in the Industrial Systems Technology Program are offered in an instructor-supervised/student-paced format. See course descriptions for details concerning specific course status. Much of the instruction in these courses is computer-based using software available only in the Industrial Systems Technology Labs on campus. Students enrolled in such courses should expect to spend 25-30 hours in the Industrial Systems Technology Lab for each semester hour of the course. For example, ELT-382, Electronic Circuit Analysis is a 3-semester-hour course. The student enrolled in that course should expect to spend 75-90 hours (5-6 hours per week) in the Industrial Systems Technology Lab to complete the course. While a suggested schedule appears on this page, the use of instructor-supervised/student-paced course work allows the student much more flexibility in scheduling.

College Transfer Option

Through an articulation agreement with the University of Northern Iowa, graduates of the Industrial Systems Technology Program may continue their education by transferring to baccalaureate programs in such industrial technology fields as manufacturing, electromechanical systems, engineering technology, or supervision and management. Help of a NIACC counselor or program instructor is advised.

Upon satisfactory completion of the first two terms of the Industrial Systems Technology curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a diploma in Wind Turbine Technology.

Upon satisfactory completion of the Industrial Systems Technology Program with a grade point average of 2.00 (C) or higher, the student is awarded an Associate in Applied Science.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

ELT-170	Introduction to PLC's	3 s.h.
ELT-190	Introduction to Tech Computing and CAD	3 s.h.
ELT-382	Electronic Circuit Analysis	3 s.h.
ELT-745	Maintenance Shop Operations	3 s.h.
IND-190	Skills and Safety in Industry	1 s.h.
MAT-770	Applied Math	2 s.h.
MAT-771	Applied Math II	2 s.h.
	OR MAT-121 College Algebra (4 s.h.)	
		17 s.h.

Second Term (Spring Semester)

BUS-161	Human Relations	3 s.h.
ELT-210	Motor Control Circuits	3 s.h.
ELT-333	Analog and Digital Electronics	4 s.h.
ELT-790	Fluid Power	3 s.h.
WTT-103	Introduction to Wind Energy	3 s.h.
		16 s.h.

Second Year

Third Term (Summer)

ELT-895	Industrial Systems Internship	2 s.h.
		2 s.h.

Fourth Term (Fall Semester)

ELT-124	Advanced PLCs and System Integration	3 s.h.
ELT-133	Electronic Motor Drives	2 s.h.
ELT-734	Industrial Instrumentation	4 s.h.
ENG-701	Communications I	3 s.h.
PHY-162	College Physics I	4 s.h.
	OR PHY-106 Survey of Physics (4 s.h.)	
	OR CHM-122 Introduction to General Chemistry (4 s.h.)	
		16 s.h.

Fifth Term (Spring Semester)

ELT-710	Computer Automated Manufacturing	3 s.h.
ELT-750	Facilities Maintenance	3 s.h.
ENG-702	Communications II	3 s.h.
PHY-172	College Physics II	4 s.h.
	OR PHY-106 Survey of Physics (4 s.h.)	
	OR CHM-122 Introduction to General Chemistry (4 s.h.)	
SDV-135	Job Seeking Skills	1 s.h.
		14 s.h.
	Total Program Hours	65 s.h.

Career Opportunities

Completion of this program prepares graduates to enter the following occupations:

- Electromechanical Technician
- Industrial Maintenance Technician
- Electronics Technician
- Industrial Process Control Technician
- Instrumentation Technician
- Control Systems Technician
- Computer Automated Process Control Technician

For specific information contact the Career and Internship Center or the NIACC Industrial Division.

Industrial Technology

The A.A.S. degree graduate in Industrial Technology provides a broad technical background in a variety of disciplines related to industry. Industrial technologists work with management teams, entry-level supervisors, and technicians in providing manufacturing process and production solutions to ensure the success of our industries. The broad-based programming further provides the student the mobility to move throughout a variety of industrial areas. Graduates of this program have the option of employment upon graduation or articulation of the program to a four-year institution.

Upon satisfactory completion of MAT-770, MFG-195, and eight semester hours of selected industrial electives with a grade point average of 2.00 (C) or higher, the student is awarded a certificate in Industrial Technology. The Industrial Technology certificate provides a basic technical background in a variety of disciplines related to industry. Industrial technologists work with production teams, entry-level foremen, and supervisors in manufacturing facilities. This certificate can apply toward a diploma or degree in Industrial Technology.

Upon completion of 26 semester hours of Industrial Technology credits and 4 semester hours of approved Math with a grade point average of 2.00 (C) or higher during the first year of the program, the student is awarded a NIACC diploma. To be awarded a diploma, students must successfully complete a 30-semester-hour program of study, to include English and Mathematics general education requirements.

Upon completion of the two-year curriculum with a grade point average of 2.00 (C), the student is awarded an Associate in Applied Science in Industrial Technology. Students who know they wish to pursue a four-year degree and want to meet general education requirements of transfer institutions should pursue the A.A. degree. This will necessitate a slightly different curriculum.

The schedule shown on this page is a suggested program of study. Students may choose to change the sequence of courses to suit their needs. Please consult with a NIACC Counselor to develop a program of study that works for you.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

ENG-102	Composition & Speech I	4 s.h.
	OR ENG-701 (3 s.h.) and ENG-702 (3 s.h.)	
IND-190	Skills and Safety in Industry	1 s.h.
MAT-121	College Algebra	4 s.h.
	OR MAT-770 (2 s.h.) and MAT-771 (2 s.h.)	
MFG-108	Computer-Aided Drafting	2 s.h.
WEL-335	Ag and Industry Welding	2 s.h.
		13-15 s.h.

Second Term (Spring Semester)

ELT-115	Electronic Concepts	3 s.h.
ELT-790	Fluid Power	3 s.h.
MFG-195	Manufacturing Processes I	2 s.h.
PHY-720	Career Physics	4 s.h.
	OR PHY-162 (4 s.h.)	
		12 s.h.

Second Year

Third Term (Fall Semester)

Industrial Technology Electives**		9 s.h.
Electives		9 s.h.
		18 s.h.

Fourth Term (Spring Semester)

Industrial Technology Electives**		9 s.h.
Electives		8 s.h.
		17 s.h.
	Total Program Hours	60-62 s.h.

** Industrial Technology Electives to be taken from existing programs in NIACC's Industrial Technology Division. Students must meet existing course prerequisites. Students may also elect a specialization by taking all electives from a single program. Specializations include:

- Industrial Systems Technology
- Tool & Die Technology
- Climate Control (HVAC) Technology
- Building Trades
- Automotive Technology

Students must have approval of program faculty for specializations.

Career Opportunities

The intent of this program is to provide a flexible framework targeted primarily to individuals interested in or already employed in the manufacturing field. Many individuals taking this course work are focusing their efforts toward employment in the area of Industrial Maintenance and Repair. Others pursue careers in direct manufacturing.

The program enables the individual to tailor a diploma and/or associate degree program based on his/her skill needs and the needs of the company.

Welding

Welding is a two-semester diploma program designed for individuals seeking skill development and certification in common welding procedures leading to employment in a variety of industries. The program is recognized as an Institutional Member of the American Welding Society and upon completion of all coursework, AWS Certification can be attained. The program's outlined competencies are achieved through a combination of classroom theory, welding demonstration, and practice. Primary emphasis is placed upon hands-on skill development in a state-of-the-art lab facility. Through completion of the program, students gain competency in arc, gas, and automated welding and cutting processes.

Upon satisfactory completion of the prescribed curriculum with a grade point average of 2.00 (C) or higher, the student is awarded a NIACC diploma.

Upon satisfactory completion of WEL-222 and WEL-223 with a grade point average of 2.00 (C) or higher, the student is awarded a certificate in Welding.

Career Opportunities

Completion of this program prepares graduates to enter the following occupations:

- Production Welder
- Maintenance Welder
- Robot Operator
- Building/Structural Welder
- Ag/Construction Equipment Repair Technician
- Fabricator

Industries that use welding:
- Agriculture
- Manufacturing
- Automotive
- Construction
- Mining
- Utilities

For specific information contact the Career and Internship Center or the NIACC Industrial Division.

Required Courses/Suggested Schedule

First Year

First Term (Fall Semester)

IND-190	Skills and Safety in Industry	1 s.h.
MAT-770	Applied Math I	2 s.h.
MAT-771	Applied Math II	2 s.h.
WEL-110	Welding Blueprint Reading	2 s.h.
WEL-138	Oxy-acetylene Welding and Cutting	2 s.h.
WEL-222	Arc Welding I	9 s.h.
		18 s.h.

Second Term (Spring Semester)

BCA-119	Computer Orientation	1 s.h.
ENG-701	Communications I	3 s.h.
SDV-135	Job Seeking Skills	1 s.h.
WEL-223	Arc Welding II	9 s.h.
WEL-240	Welding Fabrication/Certification	3 s.h.
WEL-250	Welding Automation	2 s.h.
		19 s.h.

Total Program Hours 37 s.h.

Other Elective Welding Courses:

WEL-108	Oxy-acetylene Welding and Cutting and Shielded Metal Arc Welding	2 s.h.
WEL-109	Gas Metal Arc Welding and Gas Tungsten Arc Welding	2 s.h.
WEL-335	Ag and Industry Welding	2 s.h.

Fire Science

PUBLIC SERVICE

Fire Science

Connie Glandon, Program Leader
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The NIACC Fire Science curriculum was developed with the assistance of the Mason City Fire Department as an articulation program. The curriculum is intended for those persons already employed by fire departments who wish to obtain further education for professional advancement, as well as for those who desire advanced study in fire science. Courses are provided and scheduled as needed and may not follow a traditional two-year cycle. Please consult an academic advisor prior to registration.

Upon successful completion of the program, the graduate is awarded an Associate in Arts Degree and a NIACC Fire Science Certificate.

REQUIRED COURSES

EMS-201	Emergency Medical Technician	7 s.h.
FIR-155	Fire Protection Technology	4 s.h.
FIR-184	Hazardous Material Technician	3 s.h.
FIR-210	Incident Command System	1 s.h.
FIR-231	Fire Behavior and Investigation	4 s.h.
FIR-281	Fire Instructor I	2 s.h.
		21 s.h.

GENERAL EDUCATION REQUIREMENTS

Communication	8 s.h.
Humanities	8 s.h.
Social Sciences	8 s.h.
Natural Science/Mathematics	8 s.h.
Distributed Requirement	8 s.h.
	40 s.h.

General Education courses must total at least 40 semester hours to meet A.A. Degree requirements. A minimum of 60 semester hours are needed for graduation.

Career Opportunities

Graduates may obtain immediate employment with fire departments and perform duties as required. They may also choose to transfer to a senior institution for further study.

For specific information contact the Career and Internship Center.

Fire Science courses are offered only on a need basis and are not regularly scheduled during the college year.

School Partnerships

ARTICULATION

POST SECONDARY ENROLLMENT OPTIONS

CAREER READINESS COUNCIL

CAREER LINK AND CAREER LINK ACADEMIES

SCHOOL PARTNERSHIPS

NIACC is currently developing cooperative programs with high schools in our service area to identify career program prerequisites, to reward students for previous learning experiences, to provide a challenging educational experience for each student, and to ensure a smoother transition for students into postsecondary degree programs.

Articulation

Articulation is a process whereby students can receive tuition-free college credits toward graduation for successfully completing certain high school career and technical courses identified to have college-level material. NIACC faculty members meet with high school teachers to carefully compare their course offerings and identify areas of content overlap. The result is a savings of time and financial resources for the student interested in a time-shortened degree or increased competence and employment potential for the student interested in an advanced skills degree. Contact your counselor to obtain a list of high school courses that articulate into NIACC Career programs.

Post Secondary Enrollment Options (PSEO)

The Post Secondary Enrollment Options Act provides high school juniors and seniors with the opportunity to take college courses prior to high school graduation. The Act has a dual purpose: 1) to provide a constant challenge for students by promoting rigorous educational pursuits; and 2) to provide a wider variety of options for students. Students earn high school and college credit for courses taken. Post secondary credits earned are transferable to other colleges and universities depending on degree requirements at that institution. Contact your high school counselor for further information on Post Secondary Enrollment Options.

Career Readiness Council

The Career Readiness Council—a group comprised of representatives from high schools, Workforce Development, business and industry, labor, the Area Education Agency, the Transition Advisory board, and NIACC—has established career education goals for Area 267 - Clear Lake Region:

- Develop and enhance shared programs.
- Support local districts in their comprehensive school improvement goals.
- Strengthen career counseling and career education programs.
- Foster business, industry, and professional connections for our students, teachers, and employers.
- Meet increased needs associated with diversity and globalization.

As a member of the Career Readiness Council, NIACC collaborates with the representatives to implement these broad-based career education goals.

Career Link Programs and Classes

Career Link programs and classes are educational partnerships between high schools and NIACC. Career Link focuses on providing students with skills needed to perform in today's workforce. A major component is an applied (hands-on) curriculum that recognizes the widely varying learning styles of students. It involves the creation of a carefully designed sequence of high school and college courses leading to an associate degree. Student career exploration and planning, along with a parental community awareness of workforce needs and employment opportunities, are vital components of a Career Link program.

Career Link programs include:

- Accounting
- Agriculture
- Automotive Service Technology
- Building Trades
- Climate Control (HVAC) Technology
- General Business
- Entrepreneurship
- Health Careers
- Hospitality and Food Service Management
- Industrial Technology
- Marketing and Sales
- Professional Administrative Services
- Sport Management
- Teacher Education
- Tool & Die Technology
- Welding

In addition to the on-campus programs, Career Link Academies are located across North Iowa. Students from surrounding high schools travel to the Career Link Academy where they complete up to 23 semester hours of college credit during their senior year.

NIACC has established Career Link Academies at the following sites:

Automotive Service Technology - NIACC Main Campus
Entrepreneurship - Garner-Hayfield High School
Health Careers - West Hancock High School and Hancock County Memorial Hospital
Industrial Technology - Rockwell

Many school districts offer NIACC classes taught at the high school during the regular school day. High school instructors, who meet NIACC teaching qualifications, teach the courses. NIACC textbooks and course outlines are utilized. The result is a savings of time and resources for the student.

For information about the Career Link programs and classes available at your high school, contact your high school counselor or contact the NIACC School Partnership Department at (641) 422-4175 or 1-888-466-4222, Ext. 4175. Website: www.niacc.edu/careerlink.

College Transfer Programs

This guide has been prepared for NIACC students transferring to the colleges and universities listed.

Curriculum is recommended for each of the major courses that can be taken at NIACC. Students should, however, check the requirements of their major with a NIACC counselor/advisor. Sample two-year plans are available on the Internet at www.niacc.edu.

Students are also encouraged to correspond with their transfer college to obtain a verification of their planned courses while at NIACC.

Course equivalency sheets between NIACC and transfer institutions are available from a NIACC counselor/advisor. Equivalency guides are also listed under Transfer Information on NIACC's website. Some equivalency guide links include the University of Northern Iowa, Iowa State University, and the University of Iowa.

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Accounting

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. studies:

- Principles of Microeconomics ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- College Algebra ..... 4 s.h.
- Business Law I and II ..... 6 s.h.
- Management Information Systems ..... 3 s.h.
- Principles of Management ..... 3 s.h.
- Principles of Accounting I and II ..... 6 s.h.
- Personal Income Tax ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Money and Banking ..... 3 s.h.
- Business Communications ..... 3 s.h.
- Intro to Statistics ..... 3 s.h.

Agriculture and Agricultural Related

The range of career opportunities and majors in agriculture is so great that it is impossible to list a suggested curriculum for each. The catalog for Iowa State University states: Requirements for any four-year curriculum are at least as extensive as those shown below.

- Composition & Speech I and II ..... 8 s.h.
- Mathematics, Chemistry, Computer Science, Physics, and Statistics ..... 13 s.h.
- Introductory Biology, Zoology, Botany, Microbiology, Genetics ..... 6 s.h.
- Economics, Government, Psychology, Sociology (Economics, Government required of most curriculums) ..... 6 s.h.
- Art, History, Literature, Music, Philosophy ..... 6 s.h.

Since there is a wide variation in the required courses for the various curricula in agriculture, it is the responsibility of each student, in consultation with his/her advisor or counselor, to determine the specific courses required for the particular curriculum or major in which the student is interested.

Iowa State University

NIACC and Iowa State University's Department of Agricultural Education and Studies have teamed up to design a unique program in agriculture. The first two years of the program can be taken at NIACC and the final two years are completed at Iowa State University. Students completing the NIACC program are awarded an Associate in Applied Science Degree in Agricultural Operations. Those continuing on to complete the two-year program at ISU will receive a Bachelor of Science Degree in Agricultural Studies. Note: Iowa State University College of Agriculture students must certify English proficiency by obtaining a *C* or better in written and verbal communication courses. Students completing the prescribed courses will fulfill the College of Agriculture's intensive requirements in ethics, problem solving, communication, and environment.

The following courses have been articulated with Iowa State University's College of Agriculture.

- Animal Science I ..... 3 s.h.
- Animal Science II ..... 3 s.h.
- Agricultural Computer ..... 3 s.h.
- Principles of Agronomy ..... 3 s.h.
- Principles of Crop Production ..... 3 s.h.
- Intro to Agricultural Business ..... 3 s.h.

Art

Career opportunities in the field of art range from studio artist, graphic designer, web designer, fashion designer and more. If you are interested in pursuing a four-year degree in art, it is suggested you take the following Art Foundation courses, plus the general education courses required for an Associate in Arts degree.

Art Foundation Courses:

- Art History I ..... 3 s.h.
- Art History II ..... 3 s.h.
- Drawing I ..... 3 s.h.
- Drawing II ..... 3 s.h.
- Two-Dimensional Design ..... 3 s.h.
- Three-Dimensional Design ..... 3 s.h.

Depending on your interests, you can pick from the following art courses to complement your foundation courses.

Additional Art Courses:

- Graphic Design I ..... 3 s.h.
- Graphic Design II ..... 3 s.h.
- Painting I ..... 3 s.h.
- Painting II ..... 3 s.h.
- Creative Photography ..... 3 s.h.
- Ceramics ..... 3 s.h.

Drake University

Drake offers majors in Art History, Drawing, Graphic Design, Painting, Printmaking, and Sculpture, and also offers a minor in art. Students wanting to teach art in elementary or secondary school may complete an art endorsement through the School of Education at Drake. Students interested in Drake's art programs should contact the Department of Art and Design early to plan for transfer and scholarship portfolio review.

- Composition & Speech I and II ..... 4 s.h.
- Speech ..... 2 s.h.
- History ..... 6 s.h.
- Life Science (must include lab) ..... 4 s.h.
- Physical Science (must include lab) ..... 4 s.h.
- Mathematics (College Algebra or higher) ..... 3-4 s.h.
- Values and Ethics ..... 3 s.h.
- International/Multicultural Awareness ..... 3 s.h.
- History of Art I and II ..... 8 s.h.
- Drawing I and II ..... 6 s.h.*
- Two-Dimensional Design ..... 3 s.h.*
- Three-Dimensional Design ..... 3 s.h.*
- Painting I and II ..... 6 s.h.*

* Credit for specific requirements for art majors may require portfolio validation in studio courses and proficiency validation in Art History courses. All art courses with a grade of *C* or better can count as art electives.

Many of the courses listed above also fulfill Drake curriculum requirements. For specific Drake curriculum (general education) information, students should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions,

1-800-44-DRAKE, ext. 3181. It is recommended that NIACC students planning for transfer to Drake save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

Simpson College

Courses which may be taken at North Iowa Area Community College to complete major requirements at Simpson College:

- Art History I ..... 4 s.h.
- Art History II ..... 4 s.h.
- Art for Elementary Education ..... 3 s.h.
- Drawing I ..... 3 s.h.
- Drawing II ..... 3 s.h.
- Ceramics ..... 3 s.h.
- Creative Photography ..... 3 s.h.
- Digital Photography ..... 3 s.h.
- Painting I ..... 3 s.h.
- Painting II ..... 3 s.h.
- Two-Dimensional Design ..... 3 s.h.
- Three-Dimensional Design ..... 3 s.h.
- Creative Photography II ..... 3 s.h.
- Graphic Design ..... 3 s.h.
- Graphic Design II ..... 3 s.h.

Upper Iowa University

RESIDENTIAL CAMPUS

Students should consider taking the following courses to meet requirements.

- Art History I and II ..... 8 s.h.
- Drawing I and II ..... 6 s.h.
- Ceramics or Painting I ..... 3 s.h.
- Two-Dimensional Design ..... 3 s.h.
- Three-Dimensional Design ..... 3 s.h.

Art Education

Upper Iowa University

RESIDENTIAL CAMPUS

Students should consider taking the following courses to meet requirements in the following majors.

- History of Art I and II ..... 8 s.h.
- Drawing I and II ..... 6 s.h.
- Ceramics ..... 3 s.h.
- Painting I and II ..... 6 s.h.

Athletic Trainer

Iowa State University

The Athletic Training Program prepares students for the NATA certification examination. Admission to this program is determined by GPA in foundation courses and clinical hours under a certified athletic trainer. The program is administered through the Department of Health and Human Performance. See course recommendations under Physical Education-Athletic Training.

Also available at the University of Iowa, the University of Northern Iowa, Minnesota State University - Mankato, and Upper Iowa University. (Need 1500 hours of supervised training.)

Simpson College

Courses that may be taken at North Iowa Area Community College to complete major requirements:

- Kinesiology ..... 4 s.h.
- Care & Prevention of Athletic Injuries ..... 2 s.h.

Other recommended courses:

- General Chemistry I ..... 5 s.h.
- Organic Chemistry I ..... 5 s.h.
- Nutrition or Health and Nutrition ..... 3 s.h.
- Introduction to Psychology ..... 3 s.h.
- Anatomy and Physiology I ..... 4 s.h.
- Anatomy and Physiology II ..... 4 s.h.

Biology

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. studies:

- College Algebra ..... 4 s.h.
- Environmental Science ..... 3 s.h.
- Microbiology ..... 4 s.h.
- General Chemistry I and II ..... 10 s.h.
- Anatomy and Physiology I and II ..... 8 s.h.
- Organic Chemistry I and II ..... 10 s.h.
- College Physics I and II or
- Classical Physics I and II ..... 8-10 s.h.
- Biology I and II ..... 8 s.h.

Upper Iowa University

RESIDENTIAL CAMPUS

Students should consider taking the following courses to meet requirements in the following majors.

- Biology I and II ..... 8 s.h.
- Microbiology ..... 4 s.h.
- College Chemistry I and II ..... 10 s.h.
- College Physics I and II or
- Organic Chemistry I and II ..... 8-10 s.h.

Biology and Environmental Science

Simpson College

Courses which may be taken at North Iowa Area Community College to complete major requirements at Simpson College:

- Biology I and II** ..... 8 s.h.
- Microbiology ..... 4 s.h.
- Nutrition OR Health and Nutrition* ..... *3 s.h.
- Anatomy and Physiology I and II ..... 8 s.h.
- General Chemistry I and II ..... 10 s.h.
- College Physics I and II OR
- Classical Physics I and II ..... 8-10 s.h.
- Environmental Science*** ..... 3 s.h.
- Introductory Biology ..... 3 s.h.
- Introductory Biology Lab ..... 1 s.h.
- Calculus I ..... 4 s.h.

* Nutrition and Health and Nutrition do not fulfill a requirement for Biology or Environmental Science

**Introductory Biology and Introductory Biology Lab combined equal Simpson's BIOL111.

***Environmental Science meets a requirement in the Environmental Science major, not in the Biology major.

Business

The first two years of a four-year program in business administration, accounting, business education, or any other curriculum in business administration will usually consist primarily of liberal arts. After completion of the first two years of a four-year program in business, the student applies for admission at the selected transfer institution. It is at this time that he/she is asked to indicate a chosen business major and is advised to meet requirements for the degree. The requirements of the various four-year institutions vary somewhat; hence, the student should check carefully the admission and curriculum requirements of the institution to which he/she plans to transfer.

The following courses are common to all business curricula at the colleges listed below:

- Composition & Speech I and II ..... 8 s.h.
- Principles of Macroeconomics & Principles of Microeconomics .... 6 s.h.
- Introduction to Computers and Information Systems ..... 3 s.h.
- Introduction to Statistics ..... 3 s.h.
- Principles of Accounting I and II ..... 6 s.h.
- Social Sciences ..... 3 s.h.
- Humanities ..... 8 s.h.
- College Mathematics ..... 3-4 s.h.

In addition, these colleges have the following specific requirements:

Buena Vista University (Mason City Campus)

ACCOUNTING
- Business Law I ..... 3 s.h.
- Finite Math ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Principles of Management ..... 3 s.h.

MANAGEMENT/ ENTREPRENEURSHIP
- Principles of Management ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Finite Math ..... 3 s.h.
- Human Resource Management ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Personal Finance ..... 3 s.h.

FINANCE AND BANKING
- Finite Math ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Principles of Management ..... 3 s.h.

MANAGEMENT INFORMATION SYSTEMS
- Finite Math ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Management Information Systems (recommended) ..... 3 s.h.
- Principles of Management ..... 3 s.h.

Drake University

BUSINESS

Accounting, Actuarial Science, Entrepreneurial Management, Finance, General Business, Information Systems, Insurance, International Business, Management, Marketing; all majors in the College of Business and Public Administration are offered as joint majors with Accounting.

Accounting and Actuarial Science major applicants must have a cumulative GPA of at least 2.50 for admission.

Courses that are recommended as part of the common business curricula:

- Principles of Microeconomics ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Accounting I ..... 3 s.h.
- Principles of Accounting II ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Calculus* ..... 3 s.h.
- Business Statistics ..... 3 s.h.

*Calculus I may be taken instead of Calculus. Students interested in Actuarial Science as a major need to take Calculus I, II, and III.

For specific general education requirements, business majors should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions 1-800-44-DRAKE, ext. 3181. It is recommended that NIACC students save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. studies:
- Business Law I ..... 3 s.h.
- Management Information Systems ..... 3 s.h.
- Principles of Management ..... 3 s.h.
- Principles of Accounting I and II ..... 6 s.h.
- Business Communications ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Microeconomics ..... 3 s.h.
- Introduction to Statistics ..... 3 s.h.

Iowa State University

ACCOUNTING, FINANCE, MANAGEMENT, MANAGEMENT INFORMATION SYSTEMS, MARKETING, PRODUCTION/OPERATIONS MANAGEMENT, TRANSPORTATION AND LOGISTICS

Students at Iowa State University begin in the College of Business as a Pre-Business student. Students will declare a major and enter the professional program once they have earned a 2.5 GPA (cumulative or foundation) and have completed 30 credits including the foundation courses. MIS requires a 2.75 GPA. The foundation courses include:
- Composition & Speech I and II ..... 6-8 s.h.
- Finite Math ..... 3 s.h.
- Principles of Accounting I ..... 3 s.h.

Introduction to Computers and Information Systems .....3 s.h.
Principles of Microeconomics .....3 s.h.
Business Statistics .....3 s.h.
IST Major Courses .....40-44 s.h.
Composition & Speech I and II .....8 s.h.
Principles of Accounting I and II .....6 s.h.
Principles of Microeconomics .....3 s.h.
Principles of Macroeconomics .....3 s.h.
Finite Math .....3 s.h.

Minnesota State University - Mankato

ACCOUNTING, FINANCE, MANAGEMENT, MARKETING, AND INTERNATIONAL BUSINESS

All majors in the MSU College of Business have the same core course requirements. Courses that are recommended as part of the common business core are:

Principles of Macroeconomics .....3 s.h.
Principles of Microeconomics .....3 s.h.
Principles of Accounting I .....3 s.h.
Principles of Accounting II .....3 s.h.
College Algebra .....4 s.h.
Business Statistics .....3 s.h.
Business Law I .....3 s.h.
Computer Business Applications .....3 s.h.
Management Information Systems I .....3 s.h.
World Language (for International Business - Intermediate Level) .....8 s.h.

The MSU College of Business also requires a 2.5 cumulative GPA for entrance into the major. Students transferring to MSU with a completed A.A. Degree generally meet the MSU general education requirements. However, additional lower division courses may be required for the major if not already complete.

Simpson College

Courses which may be taken at North Iowa Area Community College to complete major requirements at Simpson College.

MANAGEMENT ACCOUNTING & ECONOMICS

Introduction to Business OR
Principles of Management .....3 s.h.
Business Law I .....3 s.h.
Business Law II .....3 s.h.
Principles of Macroeconomics .....3 s.h.
Principles of Microeconomics .....3 s.h.
Introduction to Ethics .....3 s.h.
Introduction to Insurance .....3 s.h.
Business Statistics or Introduction to Statistics .....3 s.h.
Principles of Marketing .....3 s.h.
Principles of Accounting I .....3 s.h.
Principles of Accounting II .....6 s.h.
Human Resources Management .....3 s.h.
Business Internship .....3 s.h.

The University of Iowa (Min. 2.75 GPA)

Admission is competitive, based on cumulative GPA and combined grades in six prerequisite courses.* Students hoping to enter the College of Business may not have a grade lower than *C* on any individual prerequisite course.

It is recommended that students intending to transfer to the Tippie College of Business complete all of the prerequisite courses prior to matriculating. Doing this will allow you to enter the College immediately upon transferring to the University of Iowa and will increase the likelihood of timely graduation. Additionally, you will need junior standing (60 semester hours) and a 2.75 prerequisite GPA with no grade below C, and a 2.75 cumulative GPA. Accounting majors must have a 2.75 prerequisite GPA, a 3.0 cumulative GPA, and a 2.67 GPA in financial and managerial accounting.

ACCOUNTING, ECONOMICS, FINANCE, MANAGEMENT AND ORGANIZATIONS, MANAGEMENT SCIENCES, AND MARKETING

..... Prerequisite courses must be completed prior to admission to the College of Business:
*Calculus .....3 s.h.
*Principles of Accounting I and II .....6 s.h.
*Principles of Macroeconomics .....3 s.h.
*Principles of Microeconomics .....3 s.h.
Global and Cultural Studies .....3 s.h.
*Introduction to Statistics .....3 s.h.

Business core courses may be completed before or after admission to the College of Business:
Introduction to Computer and Information Systems .....3 s.h.
Business Law I .....3 s.h.
Principles of Management .....3 s.h.
Business Statistics .....3 s.h.

The University of Iowa College of Business will require second level proficiency in a single foreign language to graduate, unless the student has earned an A.A. degree.

University of Northern Iowa (Min. 2.50 GPA)

ACCOUNTING, FINANCE, MANAGEMENT, MARKETING, MANAGEMENT INFORMATION SYSTEMS, REAL ESTATE

Business Statistics .....3 s.h.

BUSINESS TEACHING MAJOR

Introduction to Teaching .....3 s.h.
AND Field Experience and Seminar .....1 s.h.
Developmental Psychology .....3 s.h.
Computer Business Applications .....3 s.h.
Business Statistics .....3 s.h.
Including Diverse Learners .....3 s.h.
Educational Technology and Design .....3 s.h.

Upper Iowa University

RESIDENTIAL CAMPUS

Students should consider taking the following courses to meet requirements in the following majors.

MARKETING MAJOR

Business Law I .....3 s.h.
Management Information Systems .....3 s.h.
Business Statistics .....3 s.h.
Principles of Marketing .....3 s.h.
Principles of Management .....3 s.h.
Principles of Advertising .....3 s.h.
Principles of Retailing .....3 s.h.

ACCOUNTING MAJOR
- Business Law I ..... 3 s.h.
- Management Information Systems ..... 3 s.h.
- Business Statistics ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Principles of Management ..... 3 s.h.

MANAGEMENT MAJOR
- Business Law I ..... 3 s.h.
- Management Information Systems ..... 3 s.h.
- Business Statistics ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Principles of Management ..... 3 s.h.
- Principles of Supervision ..... 3 s.h.
- Human Resources Management ..... 3 s.h.

MIS MAJOR
- Business Law I ..... 3 s.h.
- Management Information Systems ..... 3 s.h.
- Business Statistics ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Principles of Management ..... 3 s.h.

Waldorf College

Courses that may be taken at North Iowa Area Community College to complete major requirements. All courses in the major must be completed with a grade of *C-* or higher.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Microeconomics ..... 3 s.h.
- Principles of Accounting I ..... 3 s.h.
- Principles of Accounting II ..... 3 s.h.
- Introduction to Computers and Information Systems ..... 3 s.h.
- Finite Math ..... 3 s.h.
- Business Statistics ..... 3 s.h.
- Business Law I and II ..... 6 s.h.
- Business Communications ..... 3 s.h.
- Principles of Management ..... 3 s.h.

Wartburg College

ACCOUNTING, FINANCE
- One laboratory science ..... 4 s.h.
- Western Civilization ..... 4 s.h.
- Finite Math ..... 3 s.h.
- Introduction to Computers and Information Systems ..... 3 s.h.
- Business Statistics ..... 3 s.h.

MANAGEMENT, MARKETING
- One laboratory science ..... 4 s.h.
- Western Civilization ..... 4 s.h.
- Principles of Management ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Finite Math ..... 3 s.h.
- Introduction to Computers and Information Systems ..... 3 s.h.
- Business Statistics ..... 3 s.h.

INTERNATIONAL BUSINESS
- One laboratory science ..... 4 s.h.
- Western Civilization ..... 4 s.h.
- Spanish (through the intermediate level) ..... 8-16 s.h.
- Finite Math ..... 3 s.h.
- Introduction to Computers and Information Systems ..... 3 s.h.
- Business Statistics ..... 3 s.h.

Chiropractic

Palmer (Min. GPA 2.50 and 90 s.h.)

- Composition & Speech I and II ..... 6 s.h.
- College Chemistry I and II ..... 10 s.h.
- OR
- General Chemistry I and II ..... 10 s.h.
- Organic Chemistry I and II ..... 10 s.h.
- College Physics I and II ..... 8 s.h.
- Anatomy & Physiology I and II (recommended) OR
  - Biology I and II ..... 8 s.h.
- Humanities/Social Sciences ..... 15 s.h.
- Introduction to Psychology ..... 3 s.h.

Coaching

Since February 1, 1985, NIACC has been designated as an approved provider of the Coaching Authorization Training Program for State of Iowa licensure. The program consists of four courses: Coaching Ethics Techniques and Theory; Introduction to Anatomy and Physiology for Coaching; Athletic Development and Human Growth; and Care and Prevention of Athletic Injuries. This program is approved for teachers desiring to obtain the coaching endorsement, as well as others seeking the coaching authorization. Completion of the program enables the student to be licensed to coach any sport at the public school or community college level.

Iowa State University

A State of Iowa coaching endorsement can be earned through the Physical Education Licensure Program. A coaching minor is also available. The endorsement is administered through the Department of Health and Human Performance. See course recommendations for the coaching endorsement under Physical Education-Licensure.

Simpson College

A State of Iowa coaching endorsement can be earned through the Physical Education Licensure Program. The endorsement is administered through the Physical Education Department. See course recommendations for the coaching endorsement under Physical Education-Licensure.

Communications

Waldorf College

Courses that may be taken at North Iowa Area Community College to complete major requirements. All courses in the major must be completed with a grade of *C-* or higher.

- Introduction to Journalism
  - OR
- News Writing and Reporting ..... 3 s.h.

Computer Information Systems

Waldorf College

Courses that may be taken at North Iowa Area Community College to complete major requirements. All courses in the major must be completed with a grade of *C-* or higher.

Computer Business Applications
OR
Introduction to Computers and Information Systems ..... 3 s.h.
Management Information Systems I ..... 3 s.h.
IT Essentials ..... 4 s.h.
plus CISCO Networking ..... 4 s.h.
plus Database and SQL ..... 3 s.h.
plus Intro to Programming Logic with Language ..... 3 s.h.
plus Web Development I ..... 3 s.h.
Introduction to E-Commerce ..... 3 s.h.
Design Studio Applications ..... 3 s.h.
CISCO Networking ..... 4 s.h.
plus CISCO Routers ..... 4 s.h.
plus Network LANs and WANs ..... 5 s.h.
OR
Web Development I ..... 3 s.h.
plus Intro to Programming Logic with Language ..... 3 s.h.
plus Web Development II ..... 3 s.h.

Computer Science

Drake University

COMPUTER SCIENCE
Students may take the following courses in the major area at NIACC:
Calculus I and II ..... 8 s.h.

For specific Drake curriculum (general education) requirements, students should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions 1-800-44-DRAKE, ext. 3181. It is recommended that NIACC students save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. Studies:
Engineering Problems with FORTRAN ..... 3 s.h.
Calculus I ..... 4 s.h.
Finite Math ..... 3 s.h.
Introduction to Statistics ..... 3 s.h.

Iowa State University

COMPUTER SCIENCE
Courses which may be taken at North Iowa Area Community College to meet specific major requirements at Iowa State University:
Composition & Speech I and II ..... 8 s.h.
Calculus I and II ..... 8 s.h.
Classical Physics I and II ..... 10 s.h.
Complete additional courses to satisfy A.A. Degree requirements at North Iowa Area Community College.

Minnesota State University - Mankato

COMPUTER SCIENCE
Students interested in a straight Computer Science (CS) major should complete the requirements for the Bachelor of Science Degree in addition to the following courses at North Iowa Area Community College:
Composition & Speech I and II ..... 8 s.h.
Calculus I and II ..... 8 s.h.
General Chemistry I and II OR
Classical Physics I and II OR
Biology I and II ..... 8-10 s.h.

CIS/MIS
Courses which may be taken at NIACC to meet specific major requirements:
Composition & Speech I and II ..... 8 s.h.
Introduction to Statistics ..... 3 s.h.
Calculus I ..... 4 s.h.
Business Statistics ..... 3 s.h.

Students transferring to MSU with a completed A.A. Degree will likely have met the MSU general education requirements. However, additional lower division courses may be required for the major if not already complete.

If the student plans to complete a Business Administration and Computer Science Interdisciplinary (ICIS) major, he/she should complete the Business Administration Curriculum and fill in the electives with the above Computer Science courses. Computer Science (CS) majors should write to the Admissions Office and ask for a computer science brochure.

Simpson College

COMPUTER SCIENCE
Courses which may be taken at North Iowa Area Community College to complete major requirements at Simpson College:
Calculus I ..... 4 s.h.
Business Statistics or Introduction to Statistics ..... 3 s.h.
Java ..... 4 s.h.

University of Northern Iowa

COMPUTER SCIENCE
Courses which may be taken at North Iowa Area Community College to meet specific major requirements at University of Northern Iowa:

B.A. Degree: (select two)
Calculus I
Calculus II
Introduction to Statistics ..... 7-8 s.h.
B.S. Degree:
Calculus I and II ..... 8 s.h.
and
Introduction to Statistics ..... 3 s.h.

Complete additional courses to satisfy A.A. Degree requirements at North Iowa Area Community College.

COMPUTER INFORMATION SYSTEMS

Courses which may be taken at North Iowa Area Community College to meet specific major requirements at the University of Northern Iowa:

- Principles of Accounting I and II ..... 8 s.h.
- Select two of the following:
  - Calculus I
  - Calculus II
  - Introduction to Statistics ..... 7-8 s.h.

Complete additional courses to satisfy A.A. Degree requirements at North Iowa Area Community College.

Conservation

This major has a wide variety of preparation possibilities and should be discussed with your counselor. See Agriculture.

Conservation Management

Upper Iowa University

RESIDENTIAL CAMPUS

Conservation Management is designed for students seeking a career in conservation.

Courses which may be taken at North Iowa Area Community College to meet specific major requirements at Upper Iowa University:

- Biology I and II ..... 8 s.h.
- American National Government OR
  - American State and Local Government ..... 3 s.h.

Criminal Justice

Buena Vista University

Courses which may be taken at North Iowa Area Community College to meet specific major requirements at Buena Vista University:

- Introduction to Psychology ..... 3 s.h.
- Introduction to Sociology or Social Problems ..... 3 s.h.
- American Government ..... 3 s.h.
- Criminal Law ..... 3 s.h.
- Administration of Justice ..... 3 s.h.
- Criminal Investigation ..... 3 s.h.

Complete additional courses to satisfy A.A. Degree requirements at North Iowa Area Community College. A second major or minor is required for this degree.

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives

- Introduction to Psychology ..... 3 s.h.
- Introduction to Sociology ..... 3 s.h.
- Social Problems ..... 3 s.h.
- Computer Business Applications ..... 3 s.h.
- Administration of Justice ..... 3 s.h.
- American National Government ..... 3 s.h.
- Introduction to Statistics ..... 3 s.h.

Simpson College

Courses that may be taken at North Iowa Area Community College to complete major requirements:

MAJOR (Take these in addition to those listed with choice of concentration below):

- Business Statistics or Introduction to Statistics ..... 3 s.h.
- Introduction to Ethics ..... 3 s.h.

WITH JUSTICE CONCENTRATION:

- Criminal Law ..... 3 s.h.
- Social Problems ..... 3 s.h.
- Criminal Investigation ..... 3 s.h.

WITH ADMINISTRATION CONCENTRATION:

- Introduction to Accounting or
  - Principles of Accounting I ..... 3 s.h.
- Introduction to Business or
  - Principles of Management ..... 3 s.h.
- Managing Human Resources ..... 3 s.h.
- Criminal Investigation ..... 3 s.h.

WITH CORRECTIONS CONCENTRATION:

- Social Problems ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.

Criminology

Upper Iowa University

RESIDENTIAL CAMPUS

Courses which may be taken at North Iowa Area Community College to meet specific major requirements at Upper Iowa University:

- Introduction to Sociology ..... 3 s.h.
- Social Problems ..... 3 s.h.
- Criminal Law ..... 3 s.h.

Dentistry

The University of Iowa

Each applicant for the College of Dentistry at the University of Iowa must present three years of credit comprising not less than 90 semester hours of work. No more than 60 semester hours will be accepted from a two-year institution. Preference for admission is given to students who have completed a standard baccalaureate degree or who are pursuing a combined program in which they will earn the baccalaureate degree while completing their first year in dentistry. The academic work would include the courses listed below which are attainable at North Iowa Area Community College:

- Composition & Speech I and II ..... 8 s.h.
- Biology I and II ..... 8 s.h.
- College Physics I and II ..... 8 s.h.
- General Chemistry I and II ..... 10 s.h.
- Organic Chemistry I and II ..... 10 s.h.

General Education Electives: sufficient course work in social sciences, philosophy, history, foreign languages, business, accounting, and mathematics to provide a well-rounded educational background.

All students are required to take the Dental Admission Test (DAT) on or before August 1 of the year preceding the year they expect to matriculate in a dental school. Test application deadline typically is 30 to 45 days prior to the exam.

Applicants must submit a completed application form to the American Association of Dental Schools Application Service (AADSAS). The AADSAS forms are available from the University Office of Admissions or the College of Dentistry Office for Student Affairs. A computerized DAT is available throughout the year at designated Prometric Test Centers.

Applications are accepted beginning June 1 of the year prior to the year for which application is made. Completed applications must be on file at AADSAS by November 1. Applicants should apply as early as possible and should not delay until after the Dental Admission Test (DAT) is taken. Notifications of acceptance are sent beginning December 1.

Early Childhood Education

Buena Vista University

B.A. Elementary with Pre-Kindergarten, Kindergarten Endorsement

Buena Vista University will accept NIACC students with an Associate in Arts degree from North Iowa Area Community College with all the general education core requirements met. All conditions from the Transfer Articulation Agreement between NIACC and BVU signed January 27, 2009, apply.

1. Students must have maintained a minimum cumulative grade point average of 2.00 on all courses acceptable for transfer.

2. For acceptance into the Teacher Education Program, students must have: (a) a cumulative grade point average of 2.5; (b) the completion of the Praxis I exam with the minimum scores of 173 in Reading, 172 in Writing and 171 in Mathematics; (c) the completion of both PSY-281 Educational Psychology and PSY-223 Child and Adolescent Psychology with a minimum grade of C; and (d) other requirements as noted in the approved BVU education program.

3. The following courses should be successfully completed at NIACC for all elementary/Pre-K/K students to ensure transfer for an early childhood endorsement:

Child Health, Safety and Nutrition	3 s.h.
Early Childhood Curriculum II	3 s.h.
Home and School Relationships in Early Childhood	3 s.h.
Early Childhood Guidance	3 s.h.
Child and Adolescent Psychology AND Educational Psychology	6 s.h.
Child Growth and Development	3 s.h.
Including Diverse Learners	3 s.h.
Introduction to Teaching	3 s.h.
Field Experience and Seminar	1 s.h.
Educational Technology and Design	3 s.h.
Children's Literature	3 s.h.
Inquiry into Life Science (and Lab)	4 s.h.
Physical Science	4 s.h.
Math for Elementary Teachers I AND Math for Elementary Teachers II	8 s.h.

Additional courses that need to be taken at Buena Vista University for the Pre-Kindergarten/Kindergarten Endorsement:

EDUC 428 Student Teaching in Preschool
EDUC 429 Student Teaching in Kindergarten

University of Northern Iowa

B.A. Elementary Childhood Education

It is understood that University of Northern Iowa will accept NIACC students with an Associate in Arts degree from North Iowa Area Community College with all the general education core requirements met. All conditions from the Transfer Articulation Agreement between NIACC and UNI apply as per the April 18, 2008 Associate of Arts Articulation Agreement.

1. For acceptance in the Teacher Education Program, students must have: (a) a cumulative grade point average of 2.5; (b) the completion of the Praxis I exam with 170 minimum score on each of the three subtests (Reading, Writing, and Mathematics), AND a cumulative score of 522 to be accepted into the Teacher Education Program; and (c) the successful completion of the Application for Admission to Teacher Education to UNI's Teacher Education Program.

2. The Associate of Arts degree from NIACC should include the following courses successfully completed at NIACC for all early childhood education students to ensure completion of a B.A. at the University of Northern Iowa in 2 to 2 1/2 years:

Child Health, Safety and Nutrition	3 s.h.
Home and School Relationships in Early Childhood	3 s.h.
Child and Adolescent Psychology	3 s.h.
OR Child Growth and Development	3 s.h.
Educational Psychology	3 s.h.
Including Diverse Learners	3 s.h.
Classroom Assessment	2 s.h.
Introduction to Teaching AND Field Experience and Seminar	4 s.h.
Educational Technology and Design	3 s.h.
Art for Elementary Education	3 s.h.
Children's Literature	3 s.h.
Inquiry into Life Science (and Lab)	4 s.h.
Physical Science	4 s.h.
Math for Elementary Teachers I	4 s.h.

Upper Iowa University

Pre-Kindergarten - Grade 3

Humanities (8 credit hours) - register with a NIACC counselor.

Communications (8 credit hours) - register with a NIACC counselor.

Mathematics and Sciences (8 credit hours) - register with a NIACC counselor.

Social and Behavioral Sciences (8 credit hours)

Note: Take BCA-101 Introduction to Computers and Information Systems OR BCA-215 Computer Business Applications for Upper Iowa University computer requirement.

Note: Students must take one of the following MAT courses: MAT-121, MAT-140, MAT-156, MAT-161, MAT-165.

Note: Upper Iowa University has a requirement of one biological science course and one physical science course.

NIACC Courses:

- Child Health, Safety and Nutrition ..... 3 s.h.
- Home and School Relationships in Early Childhood ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.
  - OR Child and Adolescent Psychology ..... 3 s.h.
- Educational Psychology ..... 3 s.h.
- Including Diverse Learners ..... 3 s.h.
- Educational Technology and Design ..... 3 s.h.
- Children's Literature ..... 3 s.h.
- Introduction to Early Childhood Education ..... 3 s.h.
- Early Childhood Curriculum II ..... 3 s.h.
- Early Childhood Guidance ..... 3 s.h.

Education

Secondary Teacher Education — for specific information about teaching physical education, see Physical Education-Licensure.

There is no standardized curriculum in education. Each college or university has its own requirements which differ in varying degrees from other schools. Below are listed representative colleges to which most North Iowa Area Community College students transfer, together with a list of courses which may be obtained at North Iowa Area Community College to meet necessary requirements. There are some states that do not accept transfer education courses unless they are taken in that particular state.

Buena Vista University

ELEMENTARY EDUCATION

Completion of the A.A. degree with the following courses:

- Children's Literature ..... 3 s.h.
- U.S. History or Non U.S. History ..... 3 s.h.
- American Government ..... 3 s.h.
- Geography course ..... 3 s.h.
- Music Appreciation OR Art Appreciation OR
  - Introduction to Theater OR Art History ..... 3 s.h.
- *Physical Science OR Introduction to General Chemistry ..... 4 s.h.
- *Inquiry Into Life Science ..... 4 s.h.
- *Biology ..... 3 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Mathematics for Elementary Teachers I and II ..... 8 s.h.
- Literature course ..... 3 s.h.
- Introduction to Teaching ..... 3 s.h.
  - AND Field Experience and Seminar ..... 1 s.h.
- Educational Technology and Design ..... 3 s.h.
- Educational Psychology
  - AND Child and Adolescent Psychology ..... 6 s.h.

* Must include one lab.

1. Students seeking admission into the Teacher Education Program at Buena Vista University need a minimum GPA of 2.50. Students are also required to take the PRAXIS I (pre-professional skills test) and receive minimum scores of 171 (Math), 173 (Reading), and 172 (Writing). The PRAXIS may be taken before transferring to Buena Vista University.

2. All Incompletes must be completed before eligible to student teach.

3. Composition & Speech I and II (8 s.h.) waives public speaking requirement.

Endorsements available in Reading, Pre-K, Middle School and Instructional Strategist I. *(For specific curriculum for Pre-K, see Early Childhood Education section)*

SECONDARY EDUCATION

Completion of the A.A. Degree with the following courses:

- U.S. History OR American Government ..... 3 s.h.
- Music Appreciation OR Art Appreciation
  - OR Introduction to Theater OR Art History ..... 3 s.h.
- Physical Science OR Introduction to General Chemistry ..... 4 s.h.
- Biology OR Inquiry Into Life Science ..... 4 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Educational Psychology and Child and Adolescent Psychology ..... 3 s.h.
- Introduction to Teaching ..... 3 s.h.
  - AND Field Experience and Seminar ..... 1 s.h.
- Educational Technology and Design ..... 3 s.h.

1. Secondary Education requires major in content area.

2. Students seeking admission into the Teacher Education Program at Buena Vista University need a minimum GPA of 2.50. Students are also required to take the PRAXIS I (pre-professional skills test) and receive minimum scores of 171 (Math), 173 (Reading), and 172 (Writing). The PRAXIS may be taken before transferring to Buena Vista University.

3. All Incompletes must be completed prior to beginning student teaching.

4. Communications I and II (8 s.h.) waives public speaking course requirement.

Drake University

EDUCATION

Students planning to transfer into the School of Education at Drake University need a minimum cumulative GPA of 2.50 at 60 semester hours of credit. For admission into teacher education at Drake, students are also required to take the PPST (pre-professional skills test) and receive minimum scores of: Math - 169, Reading - 171, Writing - 171. The PPST may be taken prior to transfer or after arrival at Drake.

Both Elementary and Secondary Education majors complete the following courses:

- Composition & Speech I and II ..... 8 s.h.
- Mathematics for Elementary Teachers I and II
  - (elementary only) ..... 8 s.h.
- American History ..... 6 s.h.
- American Government ..... 3 s.h.
- Public Speaking ..... 2 s.h.
- Inquiry Into Life Science ..... 4 s.h.

Biology I (may take Biological Principles + Lab) ..... 4 s.h.
General Chemistry I ..... 5 s.h.
Physical Science + Lab ..... 4 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Classroom Assessment ..... 2 s.h.
Educational Technology and Design ..... 3 s.h.
Including Diverse Learners ..... 3 s.h.

It is advised that students interested in an education major decide on a teaching content area or area of endorsement and begin taking required courses at NIACC. Contact the Associate Dean in the School of Education (1-800-44-DRAKE ext. 2599) for course recommendations.

Many of the courses listed above also fulfill Drake curriculum requirements. For specific Drake curriculum (general education) information, students should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions, 1-800-44-DRAKE, ext. 3181. It is recommended that NIACC students planning for transfer to Drake save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

Grand View College

ELEMENTARY EDUCATION
Introduction to Psychology ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Developmental Psychology ..... 3 s.h.
Art Appreciation ..... 3 s.h.
Art in the Elementary School ..... 3 s.h.
Children's Literature ..... 3 s.h.
Mathematics for Elementary Teachers I and II ..... 8 s.h.
College Algebra ..... 4 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Classroom Assessment ..... 2 s.h.
Including Diverse Learners ..... 3 s.h.
Educational Technology and Design ..... 3 s.h.

ELEMENTARY/SECONDARY ART EDUCATION
Introduction to Psychology ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Developmental Psychology ..... 3 s.h.
College Algebra ..... 4 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Classroom Assessment ..... 2 s.h.
Including Diverse Learners ..... 3 s.h.
Art History I and II ..... 6 s.h.
Drawing ..... 3 s.h.
Ceramics ..... 3 s.h.
2-D Design ..... 3 s.h.
Graphic Design ..... 3 s.h.
Painting I and II ..... 6 s.h.
Digital Illustration ..... 3 s.h.

SECONDARY EDUCATION/BUSINESS ADMINISTRATION
Introduction to Psychology ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Developmental Psychology ..... 3 s.h.
Principles of Macroeconomics ..... 3 s.h.
Principles of Microeconomics ..... 3 s.h.
Business Law I and II ..... 6 s.h.
Management Information Systems ..... 3 s.h.
Principles of Accounting I and II ..... 6 s.h.
College Algebra ..... 4 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Classroom Assessment ..... 2 s.h.
Including Diverse Learners ..... 3 s.h.
Educational Technology and Design ..... 3 s.h.

Iowa State University

HIGH SCHOOL TEACHER EDUCATION (SECONDARY TEACHER EDUCATION)
Students entering ISU for secondary education licensure are admitted into the college that offers their teaching subject (e.g., math, English, chemistry, etc. to Liberal Arts and Sciences, Agricultural Education, to the College of Agriculture). The College of Liberal Arts and Sciences will honor the A.A. Degree as fulfilling the general education requirements of that college. Students should refer to that curriculum in this guide as well as the section in the ISU catalog titled "Teacher Education" and confer with the counselors at North Iowa Area Community College in preparing a schedule.

ELEMENTARY EDUCATION
The requirements for elementary education at Iowa State University are quite structured. The following list of courses will meet requirements for Iowa State University:
Composition & Speech I and II ..... 8 s.h.
Developmental Psychology ..... 3 s.h.
American Government ..... 3 s.h.
Additional Social Science ..... 3 s.h.
Anthropology, Economics, Geography, Psychology, Sociology, Humanities ..... 6 s.h.
Art, Foreign Language, History, Literature, Music, Philosophy, Theater, Physical Education (May include First Aid and Physical Safety) ..... 3 s.h.
Biological Science ..... 3 s.h.
Inquiry Into Life Science, Introductory Biology, Anatomy & Physiology
Physical Science ..... 4 s.h.
Physical Science, Principles of Physics, College Chemistry, College Physics
Mathematics for Elementary Teachers I and II ..... 8 s.h.
Additional Mathematics ..... 4 s.h.
College Algebra/Trigonometry, Precalculus, Calculus I
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Children's Literature ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Art in Elementary School ..... 3 s.h.
Classroom Assessment ..... 2 s.h.
Including Diverse Learners ..... 3 s.h.
Educational Technology and Design ..... 3 s.h.

Additional courses may fit into various areas of specialization. Contact an ISU advisor for details at 515-294-7021.

Students are required to complete a foreign language before graduation. This requirement can be met by completing two semesters of a single language in college or three semesters of a single language in high school.

All students seeking recommendation for a teaching license from ISU must be admitted to the Teacher Education Program. Eligibility for the program is obtained after completing at least 9 credits at ISU with a 2.50 GPA, a combined score of 522 on the PRAXIS I with no score less than 170, at least a *C* grade in Composition & Speech I and II, 10 hours of documented field observation, and good mental/physical health.

Minnesota State University - Mankato

SECONDARY EDUCATION (High School Teaching)

In general, students planning to teach in the secondary schools should follow a general liberal arts curriculum. Students should consult the MSU catalog for specific freshman-sophomore level courses required in their major field.

ELEMENTARY EDUCATION

The course requirements for elementary education at MSU are very structured. Students are encouraged to speak with an advisor in the MSU College of Education to plan their transfer into this program. The following list of courses at NIACC will satisfy some of the requirements for elementary education at Minnesota State University, Mankato:

- Composition & Speech I and II ..... 8 s.h.
- Math for Liberal Arts ..... 3 s.h.
- Mathematics for Elementary Teachers I and II ..... 8 s.h.
- Inquiry Into Life Science ..... 4 s.h.
- Introductory Biology & Lab ..... 4 s.h.
- Principles of Physics ..... 4 s.h.
- American History ..... 6 s.h.
- Children's Literature ..... 3 s.h.

A 2.75 cumulative grade point average is required for professional education. The Pre-Professional Skills Test (PPST) must be complete and on file at MSU before a student is allowed to take professional education courses. Students should contact the MSU College of Education Advising Center with questions.

Simpson College

EDUCATION

Students planning to transfer into the Teacher Education Program at Simpson will need a minimum cumulative GPA of 2.75 to be accepted for admission to the program. Students will be required to take the C-BASE basic skills test. It is advised that students select a content area and begin taking classes at NIACC if possible. You may contact the Director of Transfer Enrollment at Simpson (1-800-362-2454) for course recommendations.

Courses which may be taken at North Iowa Area Community College to complete major requirements at Simpson College:

EDUCATION

- Composition & Speech I and II ..... 8 s.h.
  - OR Composition I and II ..... 6 s.h.
- Introduction to Teaching ..... 3 s.h.
  - AND Field Experience and Seminar ..... 1 s.h.
- Developmental Psychology ..... 3 s.h.
- Including Diverse Learners ..... 3 s.h.
- Educational Technology and Design ..... 3 s.h.
- Educational Psychology ..... 3 s.h.

Elementary Only:

- Art in the Elementary School ..... 3 s.h.
- Math for Elementary Teachers I and II ..... 8 s.h.
- American National Government ..... 3 s.h.
- U.S. History to 1877 ..... 3 s.h.
  - OR U.S. History Since 1877 ..... 3 s.h.
- Western Civilization: Ancient to Early Modern ..... 4 s.h.
  - OR World Literature I ..... 3 s.h.
- Western Civilization: Early Modern to Present ..... 4 s.h.
  - OR World Literature II ..... 3 s.h.
- Children's Literature ..... 3 s.h.

One of the following:

- Inquiry Into Life Science ..... 4 s.h.
- Introductory Biology and Lab ..... 3 s.h.
- Environmental Science ..... 3 s.h.
- Biology I ..... 4 s.h.
- Biology II ..... 4 s.h.

AND

One of the following:

- Principles of Physics ..... 4 s.h.
- College Chemistry I ..... 5 s.h.
- General Chemistry I or II ..... 5 s.h.
- Physical Science ..... 3 s.h.
- College Physics I ..... 4 s.h.
- Classical Physics I ..... 5 s.h.

The University of Iowa

EDUCATION

Students planning to transfer into the College of Education at the University of Iowa need a minimum of a 2.70 cumulative GPA and at least 40 semester hours of credit. Admission is highly competitive and is based on an achievement profile which includes: GPA; PRAXIS I (minimum 522 composite, with no sub score lower than 170). In addition, students should have completed an approved 10-hour volunteer practicum.

Education majors fulfill the same General Education Program Requirements (GERs) as students in the College of Liberal Arts and Sciences. Therefore, NIACC students may use the A.A. Degree to automatically fulfill all GERs, with the exception of foreign language. Foreign language may be taken in high school or at NIACC to meet these requirements. State licensure requires one college-level math course.

ELEMENTARY AND SECONDARY EDUCATION

NIACC students should complete:

- Introduction to Teaching ..... 3 s.h.
  - AND Field Experience and Seminar ..... 1 s.h.
- Educational Psychology ..... 3 s.h.

ADDITIONAL SECONDARY EDUCATION REQUIREMENTS

In addition to the general education requirements explained above, students interested in teaching at the secondary level should consult their NIACC counselor in selecting courses approved for use toward their teaching major.

APPLICATION DEADLINES:

Fall Semester - March 15

Spring Semester - October 15

University of Northern Iowa

All education majors should take the Pre-Professional Skills Test (PPST) during their sophomore year and have the scores reported to UNI. Education majors should maintain a minimum 2.5 grade point average.

ELEMENTARY EDUCATION

Elementary Education (K-6) should consider:

- Art in the Elementary School ..... 3 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Children's Literature ..... 3 s.h.
- Mathematics for Elementary Teachers I and II ..... 8 s.h.
- Biology and Physical Science ..... 8 s.h.
- One course in Life Science and one in Physical Science (at least one must have a lab, if A.A. is not earned)

Child and Adolescent Psychology (not required) ..... 3 s.h.
Developmental Psychology ..... 3 s.h.
OR Child Growth and Development ..... 3 s.h.
OR Child and Adolescent Psychology ..... 3 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Educational Technology and Design ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Classroom Assessment ..... 2 s.h.
Including Diverse Learners ..... 2 s.h.

EARLY CHILDHOOD EDUCATION
*(For specific curriculum, see **Early Childhood Education** section)*

TECHNOLOGY EDUCATION AND TRAINING
Integrated Technology Education majors should consider:
Composition & Speech I and II ..... 8 s.h.
College Physics I ..... 4 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Developmental Psychology ..... 3 s.h.
OR Child Growth and Development ..... 3 s.h.
OR Child and Adolescent Psychology ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Including Diverse Learners ..... 2 s.h.
Educational Assessment ..... 2 s.h.

SECONDARY EDUCATION
Education majors with an interest in teaching at the secondary level should consider:
Educational Technology and Design ..... 3 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Developmental Psychology ..... 3 s.h.
OR Child Growth and Development ..... 3 s.h.
OR Child and Adolescent Psychology ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Classroom Assessment ..... 2 s.h.
Including Diverse Learners ..... 2 s.h.

Available course work in major and/or minor.

Students who plan to receive an Iowa Teacher's license must complete a life and physical science course.

Upper Iowa University

Students planning to transfer into the Teacher Education Program at Upper Iowa University may fulfill the following general education requirements:
Arts and Humanities ..... 6 s.h.
Communication ..... 9 s.h.
(Composition I, Composition II, and Speech)
Mathematics ..... 3 s.h.
(Math for Liberal Arts)
Computer Skills ..... 3 s.h.
(Introduction to Computers and Information Systems)
Natural Science ..... 6 s.h.
(Inquiry Into Life Science or Biology - 3 s.h. and Physical Science - 3 s.h.)
Social Science ..... 6 s.h.
(History, Political Science, Economics or Sociology - 3 s.h. and Psychology - 3 s.h.)

Courses which may be taken at NIACC to complete major requirements at Upper Iowa University:

EDUCATION
Developmental Psychology ..... 3 s.h.
Educational Psychology ..... 3 s.h.
Educational Technology and Design ..... 3 s.h.
Including Diverse Learners ..... 3 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.

Elementary Education majors may also take:
Children's Literature ..... 3 s.h.

Prekindergarten-Grade 3 majors:
*(For specific curriculum, see **Early Childhood Education** section)*

Waldorf College

Students planning to transfer into the Teacher Education Program need a minimum cumulative GPA of 2.50, need at least 12 semester hours of Professional Education and Content Core courses completed, need to have taken the PRAXIS I exam with scores of 171 (320 Computer) in Reading, 171 (318 Computer) in Writing, 169 (314 Computer) in Mathematics, and need good physical/mental health.

All courses in the major plus Composition & Speech I and II, the mathematics course, and the two science courses must be completed with a grade of *C-* or higher.

The following courses may be taken at North Iowa Area Community College to complete major requirements.

U.S. History course (Elementary Education only) ..... 3 s.h.
*Physical Science course ..... 4 s.h.
*Inquiry Into Life Science course ..... 4 s.h.
OR *Biological Science course ..... 4 s.h.
Public Speaking ..... 2 s.h.
Developmental Psychology ..... 3 s.h.
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
Including Diverse Learners ..... 3 s.h.
Educational Technology and Design ..... 3 s.h.
Children's Literature (Elementary Education only) ..... 3 s.h.
Educational Psychology ..... 3 s.h.

* Only Elementary Education needs two sciences.

Students could also complete course work for the following concentrations for Elementary Education:

SCIENCE CONCENTRATION
Physical Science course ..... 4 s.h.
Biological Science course ..... 4 s.h.
One Additional Lab Science ..... 4 s.h.

MATHEMATICS CONCENTRATION
Intermediate Algebra ..... 4 s.h.
College Algebra ..... 4 s.h.
Calculus I ..... 4 s.h.

SPANISH CONCENTRATION
Complete at least 12 credits from the following:
Elementary Spanish I and II ..... 8 s.h.
Intermediate Spanish I and II ..... 6 s.h.
Advanced Spanish I and II ..... 6 s.h.

THEATRE CONCENTRATION
Introduction to Theatre, TV, Film ..... 3 s.h.
An additional course and practicums to be completed at Waldorf College.

COACHING AUTHORIZATION/ENDORSEMENT
- Care and Prevention of Athletic Injuries ..... 2 s.h.
- Coaching Ethics Techniques and Theory ..... 1 s.h.
- Introduction to Anatomy and Physiology for Coaching ..... 1 s.h.
- Athletic Development and Human Growth ..... 1 s.h.

Wartburg College

Acceptance into the Teacher Education and Student Teaching Programs. Transfer students must complete one term at Wartburg to establish their GPA before applying for acceptance into the above programs.

A 2.5 overall GPA is required in course work taken at Wartburg College.

ELEMENTARY EDUCATION
- Introduction to Teaching ..... 3 s.h.
- AND Field Experience and Seminar ..... 1 s.h.
- Educational Technology and Design ..... 3 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Children's Literature ..... 3 s.h.
- Introductory Biology AND ..... 3 s.h.
- Introductory Biology Laboratory ..... 1 s.h.
- OR Inquiry Into Life Science ..... 4 s.h.
- Introduction to Psychology ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.
- Public Speaking ..... 2 s.h.

SECONDARY EDUCATION
- Introduction to Teaching ..... 3 s.h.
- AND Field Experience and Seminar ..... 1 s.h.
- Educational Technology and Design ..... 3 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Introduction to Psychology ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.

Secondary education majors must also meet the specific departmental requirements in their teaching major at Wartburg College.

Other Colleges and Universities

The student who plans to transfer to a college or university other than those listed above should confer with a counselor at North Iowa Area Community College in order that a satisfactory program may be arranged.

Engineering

Iowa State University

The first year program is much the same for all professional curricula of the College of Engineering, and thus a student may transfer from one department to another within the college without undue loss of time. The group of courses is called the Basic Program. There are some differences; hence, the student who desires to complete work in minimum time will find it desirable to select a major department as soon as possible.

Students who are not adequately prepared may have to take additional math courses, such as College Algebra, Trigonometry, and Precalculus.

Courses which may be taken at North Iowa Area Community College to meet the requirements of the Basic Program for Professional Engineering Curricula at Iowa State University include the following:
- Calculus I and II ..... 8 s.h.
- Composition & Speech I and II ..... 8 s.h.
- General Chemistry I ..... 5 s.h.
- Engineering Problems with FORTRAN ..... 3 s.h.
- Classical Physics I ..... 5 s.h.
- Orientation to Engineering ..... 0 s.h.
- Library (included when completing Composition & Speech I and II)

Other NIACC courses which satisfy requirements for some engineering disciplines at Iowa State University:
- Engineering Graphics and Design ..... 3 s.h.
- Statics for Engineering ..... 3 s.h.
- Mechanics of Materials ..... 3 s.h.
- General Chemistry II ..... 5 s.h.
- Classical Physics II ..... 5 s.h.
- Calculus III ..... 4 s.h.
- Differential Equations with Laplace Transforms ..... 3 s.h.
- Organic Chemistry I and II ..... 5-10 s.h.

Prior to enrolling in the professional courses (200-level and above) offered by the ISU College of Engineering, students must (1) complete the basic program with a grade point average of 2.00 or better in the basic program courses, and (2) have a cumulative grade point average of 2.00 or better.

There are a few exceptions to the above requirements and a few additional required courses for some areas of engineering. See your counselor or engineering instructor or ISU catalog for details.

The University of Iowa

Approximately one third of the course requirements in each engineering program are common to all engineering majors. These common course requirements constitute a Core Program. Students take most of the course in the core program during the first and second years.

Courses which may be taken at North Iowa Area Community College to meet the requirements of the Core Program for the University of Iowa Engineering Curricula include the following:
- Calculus I, II, and III ..... 12 s.h.
- Differential Equations with Laplace Transforms ..... 3 s.h.
- Composition & Speech I and II ..... 8 s.h.
- General Chemistry I ..... 5 s.h.
- Classical Physics I ..... 5 s.h.
- Engineering Problems with FORTRAN ..... 3 s.h.
- Engineering Graphics and Design ..... 3 s.h.
- Statics for Engineering ..... 3 s.h.

Other NIACC courses which satisfy requirements for some engineering disciplines at the University of Iowa:
- General Chemistry II ..... 5 s.h.
- Classical Physics II ..... 5 s.h.
- Organic Chemistry I and II ..... 10 s.h.
- Orientation to Engineering ..... 0 s.h.
- Mechanics of Materials ..... 3 s.h.

To transfer to the College of Engineering, students must have demonstrated success in math, science, and engineering courses, ideally earning all As and Bs with no grade lower than a C in these foundation subjects.

Transfer students must have completed Calculus I and either (1) General Chemistry I, or (2) Classical Physics I (the first semester of chemistry designed for majors, or the first semester of calculus-based physics). Overall grade point average also is considered in transfer applications.

Minnesota State University - Mankato

Engineering curricula offered at Minnesota State University - Mankato are Electrical Engineering and Mechanical Engineering, Civil Engineering, and Computer Engineering.

Courses which may be taken at North Iowa Area Community College to meet the requirements of the basic program common to all professional engineering curricula include the following:

- Composition I ..... 3 s.h.
- Calculus I, II, and III ..... 12 s.h.
- Engineering Graphics and Design ..... 3 s.h.
- Statics for Engineering ..... 3 s.h.
- General Chemistry ..... 5 s.h.
- Classical Physics ..... 10 s.h.

Recommended Humanities and Social Science Electives (consult catalog).

Also required for Electrical Engineering and Mechanical Engineering:

- Differential Equations with Laplace Transforms ..... 3 s.h.
- Principles of Macroeconomics or Principles of Microeconomics ... 3 s.h.
- Engineering Graphics and Design ..... 3 s.h.
- Engineering Problems with FORTRAN ..... 3 s.h.
- Orientation to Engineering ..... 0 s.h.
- Mechanics of Materials ..... 3 s.h.

English

Waldorf College

The following courses may be taken at North Iowa Area Community College to complete major requirements. All courses in the major must be completed with a grade of *C-* or higher.

- Creative Writing ..... 3 s.h.
- World Literature I or II ..... 3 s.h.
- One semester of foreign language ..... 3-4 s.h.
- Introduction to Philosophy ..... 3 s.h.
- Art History I or II ..... 3 s.h.

Environmental Science/Environmental Policy

Drake University

An interdisciplinary program, this major is housed in the College of Arts & Sciences. This degree is roughly 60 percent natural science and 40 percent social science and humanities. It is designed to prepare students for opportunities in several environmental fields. These include environmental analysis, in which biological, chemical, and physical tests are used to assess pollution or environmental impact; environmental management, which concerns the understanding, communication, and administration of environmental policy; and environmental conservation for work with conservation organizations or as a naturalist. Field experiences will be an important part of the program.

Students planning for this major should include the following NIACC course work:

- Biology I ..... 4 s.h.
- General Chemistry I and II ..... 10 s.h.
- Organic Chemistry ..... 5 s.h.
- College Physics ..... 4 s.h.
- Information and Technological Literacy ..... 3 s.h.
- Introduction to Statistics ..... 3 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Introduction to Ethics ..... 3 s.h.
- History ..... 6 s.h.
- Fine Arts Appreciation ..... 3 s.h.
- International & Multicultural Understanding ..... 3 s.h.
- Social Problems ..... 3 s.h.
- Principles of Microeconomics ..... 3 s.h.

Many of the courses listed above also fulfill Drake curriculum requirements. For specific Drake curriculum (general education) information, students should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions, 1-800-44-DRAKE, Ext. 3181. It is recommended that NIACC students planning for transfer to Drake save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

Exercise Science

Iowa State University

This program prepares students for careers in fitness and wellness fields. Graduates are hired as exercise specialists in corporations, private health clubs, hospitals (cardiac rehabilitation) and other agencies which provide fitness/wellness activities. The program is administered through the Department of Health and Human Performance. See course recommendations listed under Physical Education-Exercise Science.

Graphic Arts

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. studies:

- Encounters in Humanities ..... 2 s.h.
- Art Appreciation ..... 3 s.h.
- Art in the Elementary School ..... 3 s.h.
- Art History I and II ..... 6 s.h.
- Drawing ..... 3 s.h.
- Ceramics ..... 3 s.h.
- Graphic Design ..... 3 s.h.
- Painting I and II ..... 6 s.h.
- Principles of Illustration ..... 3 s.h.
- Two-Dimensional Design ..... 3 s.h.
- Three-Dimensional Design ..... 3 s.h.

History

Waldorf College

Courses that may be taken at North Iowa Area Community College to complete major requirements. All courses in the major must be completed with a grade of *C-* or higher.

ALL HISTORY MAJORS
- U.S. History to 1877 ..... 3 s.h.
- U.S. History Since 1877 ..... 3 s.h.
- American National Government ..... 3 s.h.
- Two semesters of foreign language ..... 6-8 s.h.
- Introduction to Philosophy ..... 3 s.h.
- Art History I or II ..... 3 s.h.

TRADITIONAL HISTORY MAJOR
- Western Civilization: Ancient to Early Modern ..... 4 s.h.
- Western Civilization: Early Modern to Present ..... 4 s.h.

HISTORY - POLITICAL SCIENCE MAJOR
- Principles of Macroeconomics ..... 3 s.h.
- Western Civilization: Ancient to Early Modern ..... 4 s.h.
- Western Civilization: Early Modern to Present ..... 4 s.h.

HISTORY - PRE-LAW MAJOR
- Principles of Accounting I ..... 4 s.h.
- Western Civilization: Ancient to Early Modern or Western Civilization: Early Modern to Present ..... 4 s.h.

Home Economics

University of Northern Iowa

INTERIOR DESIGN
- Introduction to Computers and Information Systems ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Microeconomics ..... 3 s.h.
- Principles of Accounting I ..... 3 s.h.

TEXTILES AND APPAREL
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Accounting I ..... 3 s.h.
- Principles of Marketing - Elective ..... 3 s.h.

Iowa State University

FAMILY AND CONSUMER SCIENCES EDUCATION

The following courses, taken at North Iowa Area Community College, will meet requirements for the first two years at Iowa State University for family and consumer sciences education. Other specific programs in the College of Family and Consumer Sciences may be worked out with a counselor at North Iowa Area Community College.
- Composition & Speech I and II ..... 8 s.h.
- Western Civilization I and II ..... 8 s.h.
- Psychology ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.
- Introduction to Sociology ..... 3 s.h.
- Economics ..... 3 s.h.
- Inorganic Chemistry ..... 10 s.h.
- Organic Chemistry ..... 4 s.h.
- Introductory Biology ..... 4 s.h.
- Introduction to Education ..... 3 s.h.
- Art Appreciation ..... 3 s.h.
- Physical Education ..... 2 s.h.
- Nutrition ..... 3 s.h.
- American History ..... 3 s.h.
- American Government ..... 3 s.h.
- Educational Psychology ..... 3 s.h.

Iowa State University and North Iowa Area Community College have a number of planned transfer agreements in the area of home economics. For more information, contact a NIACC counselor.

Humanities

Waldorf College

This major also includes a 24-semester-hour minor requirement. Students may begin taking course work in the minor (contact the Registrar's office at Waldorf College for this information). Students could also complete the following courses required for the major. All courses in the major must be completed with a grade of *C-* or higher.
- One semester of foreign language ..... 3-4 s.h.
- Introduction to Philosophy ..... 3 s.h.
- Art History I or II ..... 3 s.h.

Human Services

Buena Vista University

Complete courses to satisfy A.A. Degree requirements at North Iowa Area Community College.

A second major or minor is recommended for this degree. The following courses will apply to a business minor.
- Principles of Accounting I ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Principles of Management ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Finite Math ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. studies:
- Introduction to Psychology ..... 3 s.h.
- Introduction to Sociology ..... 3 s.h.
- Social Problems ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.
- Introduction to Human Services ..... 3 s.h.

Upper Iowa University

RESIDENTIAL CAMPUS

Students should consider taking the following courses to meet requirements in the following majors. Completion of the A.A. Degree at NIACC will meet the general education requirements.
- Introduction to Psychology OR Introduction to Sociology ..... 3 s.h.
- Marriage and Family ..... 3 s.h.
- Introduction to Human Services ..... 3 s.h.
- State and Local Government ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.

Industrial Technology

University of Northern Iowa

The Department of Industrial Technology at the University of Northern Iowa has the following programs for students to pursue a four-year degree: Construction Management, Electrical and Information Engineering Technology, Graphic Communications, Technology Management, Technology Education and Training,

and Manufacturing Technology with three options - Metal Casting, Automation and Production, and Design.

There are several ways to transfer to the University of Northern Iowa in the Department of Industrial Technology. First, there is the Associate in Arts Degree (A.A.). With an A.A. Degree, a student will primarily focus on the major courses at UNI and will have few liberal arts courses remaining. Another option is to have an Associate in Applied Science Degree (A.A.S.). With an A.A.S. Degree, a student will have taken some of his/her technical courses and will still need to continue major courses and liberal art courses at UNI.

Articulation agreements, sometimes referred to as 2+2 agreements, have been developed for many of the technology-related A.A.S. programs at NIACC. These agreements provide details on transfer of NIACC credit into a program at UNI. Almost all technology-related A.A.S. programs at NIACC are articulated with the Technology Management major at UNI, but there are agreements for other majors in the Department of Industrial Technology as well.

For specific information on the way NIACC general education courses transfer to UNI, see the transfer equivalency sheet at: http://www.uni.edu/admiss/web/transfer/equiv/index.html. It is recommended that students planning to transfer to UNI visit with the UNI Office of Admissions and the Department of Industrial Technology.

If you have any questions about any of the Industrial Technology programs at the University of Northern Iowa, please contact our department at (319) 273-2562 or visit the website at www.uni.edu/indtech.

CONSTRUCTION MANAGEMENT

The Bachelor of Science Degree in Construction Management demands students possess a strong understanding of math and science, business, architecture, engineering, liberal arts, and construction science along with interrelationships between these disciplines. All of these areas of study coupled with summer work experience in the construction industry, prepare graduates for entry-level management positions in the construction industry.

Transferable NIACC Courses:

ACC-121	Principles of Accounting I
BCA-101	Introduction to Computers and Information Systems
PHY-162	College Physics I
CHM-151	College Chemistry I
CHM-166	General Chemistry I
MAT-140	Finite Math
MAT-210	Calculus I
BUS-185	Business Law I (elective)
MAT-156	Introduction to Statistics
ECN-120	Principles of Macroeconomics*
ECN-130	Principles of Microeconomics*

*Please note that two NIACC courses of 6 s.h., i.e. ECN-120 Principles of Macroeconomics (3 s.h.) and ECN-130 Principles of Microeconomics (3 s.h.), will be transferred just to satisfy one UNI course of 3 s.h.

ELECTRICAL AND INFORMATIONAL ENGINEERING TECHNOLOGY (EIET)

The EIET program is a four-year undergraduate program leading to a Bachelor of Science Degree in electrical and information engineering technology. The major prepares students for application-oriented engineering technology careers in conventional and renewable electrical power, analog/digital electronics, microcomputer, instrumentation, telecommunications, signal processing, and networking areas; also covered are mechanical, hydraulic, and pneumatic system controls. Students from Information Systems Technology and Industrial Systems Technology at NIACC may have a specific interest in the UNI EIET program.

Transferable NIACC Courses:

MAT-128	Precalculus
MAT-156	Introduction to Statistics*
MAT-210	Calculus I*
MAT-216	Calculus II*
PHY-162	College Physics I (4 s.h.)
PHY-172	College Physics II (4 s.h.)
PHY-212	Classical Physics I*
PHY-222	Classical Physics II
ELT-115	Electronic Concepts
ELT-124	Advanced PLCs and Systems Integration
ELT-133	Electric Motor Drives
ELT-170	Introduction to PLC's
ELT-190	Introduction to Tech Computing & CAD
ELT-210	Motor Control Circuits
ELT-333	Analog and Digital Electronics
ELT-382	Electronic Circuit Analysis
ELT-710	Computer Automated Manufacturing
ELT-734	Industrial Instrumentation
ELT-790	Fluid Power
NET-213	CISCO Networking
NET-223	CISCO Routers
NET-233	CISCO Switches
NET-243	CISCO Wide Area Network (WAN)

*Course also meets UNI Liberal Arts Core requirements.

TECHNOLOGY EDUCATION - TEACHING

This Bachelor of Arts Degree prepares you to teach Technology Education or Industrial Technology at the secondary level (junior high and senior high) in Iowa. Both the A.A. and the technology-related associate level programs at NIACC have good transferability into this major. For elective courses in the associate program, consider the teaching courses below, which fulfill course requirements at UNI. A C- or higher is needed for courses to transfer to UNI in the teaching program.

Transferable NIACC Courses:

EDU-216	Introduction to Teaching
PSY-121	Developmental Psychology
PSY-281	Educational Psychology
EDU-242	Classroom Assessment
EDU-246	Including Diverse Learners

TECHNOLOGY EDUCATION - TRAINING

The Technology Training Option prepares you to go into a Human Resource Development position in a business or industry that is focused on technology. In this capacity you will be involved in providing training and development for persons in the organization.

MANUFACTURING TECHNOLOGY

The Bachelor of Science in Manufacturing provides theoretical and hands-on experience in the field of manufacturing to prepare management-oriented technical professionals for careers in manufacturing. There are three emphasis areas: Automation and Production, Design, and Metal Casting.

Transferable NIACC Courses:

CHM-116 General Chemistry I
CHM-151 College Chemistry I
PHY-162 College Physics I
PHY-172 College Physics II
MAT-156 Introduction to Statistics
MAT-210 Calculus I

TECHNOLOGY MANAGEMENT

The Bachelor of Arts Degree in Technology Management provides a broad background in technology as well as the management associated with harnessing the human, material, and information resources necessary for organizations to be successful. This is an excellent background for a wide variety of positions in business and industry.

Almost all technology-related associate level programs at NIACC are articulated with this major. See the transfer advisor at NIACC for the articulation agreement related to each major.

Information Systems Technology/MIS

Buena Vista University

MIS

Completion of IST program at NIACC with the following courses: 40-44 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Principles of Accounting I and II ..... 6 s.h.
- Principles of Management ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Finite Math ..... 3 s.h.
- Principles of Marketing ..... 3 s.h.
- Business Statistics ..... 3 s.h.
- Management Information Systems (recommended) ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Microeconomics ..... 3 s.h.

Drake University

INFORMATION SYSTEMS
- Principles of Microeconomics ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Accounting I ..... 3 s.h.
- Principles of Accounting II ..... 3 s.h.
- Business Law I ..... 3 s.h.
- Calculus* ..... 3 s.h.
- Business Statistics ..... 3 s.h.

* Calculus I may be taken instead of Calculus.

In addition, students may take the following courses in the major area at NIACC:
- Computer Business Applications OR Introduction to Computers and Information Systems ..... 3 s.h.
- Management Information Systems I ..... 3 s.h.

For specific Drake curriculum (general education) information, students should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions, 1-800-44-DRAKE, Ext. 3181. It is recommended that NIACC students planning for transfer to Drake save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

Iowa State University

IST Major Courses ..... 40-44 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Principles of Accounting I and II ..... 6 s.h.
- Principles of Microeconomics ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Finite Math ..... 3 s.h.

Simpson College

COMPUTER INFORMATION SYSTEMS

Courses that may be taken at North Iowa Area Community College to complete major requirements at Simpson College:
- Business Statistics or Introduction to Statistics ..... 3 s.h.
- Calculus I ..... 8 s.h.
- Introduction to Business or Principles of Management ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.

- Principles of Microeconomics ..... 3 s.h.
- Principles of Accounting I ..... 3 s.h.
- Principles of Accounting II ..... 3 s.h.

University of Northern Iowa

IST Major Courses ..... 40-44 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Western Civilization I or II ..... 4 s.h.
- Encounters in Humanities ..... 2 s.h.
- Introduction to Statistics ..... 3 s.h.
- Social Science Elective(s) (see advisor) ..... 3 s.h.
- Finite Math ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Accounting I or II, Business Statistics, Principles of Microeconomics, or Intro to Computers and Information Systems ..... 3 s.h.
- Physical Education ..... 2 s.h.

Upper Iowa University

IST Major Courses ..... 40-44 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Introduction to Ethics ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Principles of Microeconomics ..... 3 s.h.
- Management Information Systems ..... 3 s.h.
- Introduction to Statistics ..... 3 s.h.

*Discussions are currently underway to articulate the IST program with other colleges and universities in Iowa and Minnesota. Contact an advisor or counselor for updated information on IST program articulation.

Journalism

Drake University

JOURNALISM AND MASS COMMUNICATION

Advertising (Management or Creative Track), Public Relations, Electronic Media (Broadcast News, Radio-Television), News-Internet, Magazines.

A student wishing to enter the School of Journalism and Mass Communication at Drake University must have a cumulative GPA of 2.25. Courses which may be taken at NIACC are listed below:

Composition I	3 s.h.
Speech	2 s.h.
History	6 s.h.
Fine Arts Appreciation	3 s.h.
Life and Physical Sciences (must include lab)	8 s.h.
Mathematics	3-4 s.h.
Introduction to Ethics	3 s.h.
International/Multicultural Awareness	3 s.h.
Introduction to Journalism	3 s.h.
News Writing and Reporting	3 s.h.
Principles of Advertising (advertising majors)	3 s.h.

Many of the courses listed above also fulfill Drake curriculum requirements. For specific Drake curriculum (general education) information, students should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions, 1-800-44-DRAKE, Ext. 3181. It is recommended that NIACC students planning for transfer to Drake save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

Iowa State University

All majors in general journalism and science journalism must meet the requirements of the College of Liberal Arts and Sciences. In addition, Principles of Advertising (3 s.h.), Introduction to Journalism (3 s.h.), Introduction to Statistics (3 s.h.), and Newswriting and Reporting (3 s.h.) should be considered.

Simpson College

Courses that may be taken at North Iowa Area Community College to complete major requirements:

Composition & Speech I and II	8 s.h.
Newswriting and Reporting	3 s.h.

See advisor for a separate list of general education requirements.

The University of Iowa

All majors in the School of Journalism and Mass Communication at the University of Iowa must meet the general education requirements of the College of Liberal Arts and Sciences (see curriculum under Liberal Arts). The following courses are recommended for an Associate in Arts Degree:

Principles of Economics	6 s.h.
Psychology	3 s.h.
Foreign Language (fourth level)	0-16 s.h.
Government	3 s.h.
Introduction to Sociology	3 s.h.
Introduction to Journalism	3 s.h.
Newswriting and Reporting	3 s.h.

Admission to the major is competitive. Applicants must have taken or be taking two prerequisite foundation courses, the rhetoric courses, and have completed a minimum of 45 s.h. Contact the School of Journalism for application and deadline information.

Law

Drake University

Applicants to accredited colleges of law must have earned a baccalaureate degree. Drakes offers law programs of study which are adaptable to the requirements of any designated major, as well as an interdisciplinary major in Law, Politics & Society.

Students may want to include the following courses in their NIACC program of study:

Composition & Speech I and II	8 s.h.
Speech	2 s.h.
History	6 s.h.
College Algebra OR Calculus I	4 s.h.
Foreign Language	0-16 s.h.
International/Multicultural Awareness	3 s.h.
Fine Arts	3 s.h.
Principles of Economics	6 s.h.
Introduction to Ethics	3 s.h.
American Government	3 s.h.
Introduction to Sociology	3 s.h.
Psychology	3 s.h.
Physical Sciences (must include lab)	8 s.h.

Many of the courses held above also fulfill Drake curriculum requirements. For specific Drake curriculum (general education) requirements, prospective students should access the Drake curriculum website at www.educ.drake.edu/dc or contact the Office of Admissions, 1-800-44-DRAKE, Ext. 3181. It is recommended that NIACC students planning for transfer to Drake save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

The University of Iowa

An applicant for admission to the College of Law at the University of Iowa must have completed a baccalaureate degree prior to admission. The baccalaureate degree may be received in any major. Recommended courses which the student may take at North Iowa Area Community College toward this degree are:

Composition & Speech I and II	8 s.h.
Western Civilization	8 s.h.
Foreign Language (fourth level)	0-16 s.h.
Introduction to Sociology and Social Problems	6 s.h.
World Literature	6 s.h.
Mathematics	3-5 s.h.
Science	4-5 s.h.
Principles of Accounting I and II	6 s.h.
Psychology	6 s.h.
Economics	6 s.h.
American Government	6 s.h.
Introduction to Ethics	3 s.h.

Students may complete additional courses to satisfy A.A. Degree requirements at North Iowa Area Community College.

Liberal Arts

Associate in Arts — purpose of the degree includes:

1. Provide a degree goal for students who choose to follow a course of study which is specifically designed for transfer to a baccalaureate degree program.

2. Provide the essential general education, grade, and semester hour requirements for upper division status at most senior colleges and universities.

Requirements for the degree are provided on page 5 of the catalog.

Marketing

Simpson College

Courses that may be taken at North Iowa Area Community College to complete major requirements:

Principles of Microeconomics	3 s.h.
Business Statistics or Introduction to Statistics	3 s.h.
Principles of Accounting I and II	6 s.h.
Introduction to Business OR	
Principles of Management	3 s.h.
Business Law I and II	6 s.h.
Principles of Marketing	3 s.h.
Principles of Advertising	3 s.h.
Principles of Selling	3 s.h.

Medical Technology (Clinical Lab Science)

To qualify for training at a school for medical technologists approved by the American Medical Association, a student must have at least three years of college work which includes the successful completion of at least 94 semester hours of work. Courses for Medical Technology (Clinical Lab Science) which may be obtained at North Iowa Area Community College are listed below:

Composition & Speech I and II	8 s.h.
General Chemistry	10 s.h.
Organic Chemistry	8 s.h.
Biology I and II	8 s.h.
Microbiology	4 s.h.
Anatomy and Physiology	8 s.h.
College Mathematics (including Statistics) and Precalculus	7 s.h.
Foreign Language	8 s.h.
Survey of Physics (recommended)	4 s.h.
Social Science Elective(s)	8 s.h.

Electives, as for any professional career, should include broad general education in English, social sciences, arts, and humanities. Advanced mathematics and typing will also be helpful.

Students wishing to qualify for the bachelor's degree will need to meet the core or general education requirements of the college or university to which they plan to transfer and should, therefore, consult with the counselors at North Iowa Area Community College to determine these additional requirements.

Those interested in attending the University of Iowa should see a North Iowa Area Community College counselor for specific information.

Mortuary Science

Any person desiring to enter the funeral directing profession shall be required to appear before a member of the Board of Mortuary Science Examiners for a personal interview and registration, prior to entering a College of Mortuary Science, approved by the Iowa State Board of Mortuary Science Examiners.

Recommended courses:

a. Communication. Eight semester hours shall consist of English, Speech, or Writing Communications.

b. Natural Sciences. Nine semester hours shall consist of Chemistry, Biology I and II, Anatomy and Physiology, Histology, and Microbiology.

c. Social Sciences. Nine semester hours shall consist of Psychology or Sociology.

d. Business/Economics. Nine semester hours shall consist of Business Management, Accounting, Business Law, Computer Sciences, or Economics.

e. Philosophy/Humanities. Nine semester hours shall consist of Philosophy, Religion, Art, or Music.

f. Electives. Nineteen semester hours shall consist of student's choice.

For more information contact: Board of Mortuary Science, Iowa Department of Public Health, 321 East 12th Street, Lucas State Office Building, Des Moines, IA 50319-0075.

Music

The following courses may be taken at North Iowa Area Community College to meet the requirements for a degree in music or music education:

Literature	6 s.h.
Foreign Language	0-8 s.h.
Composition & Speech I and II	8 s.h.
Music Theory I, II, III, and IV	12 s.h.
Aural Skills I, II, III and IV	8 s.h.
Applied Music	4-8 s.h.
Choir and/or Band	4-8 s.h.
Western Civilization	8 s.h.
Math/Science	8 s.h.
American Government	3 s.h.
Introduction to Sociology	3 s.h.
Developmental Psychology	3 s.h.
Introduction to Teaching	3 s.h.

Students planning to major in music should consult with counselors and personnel in the Department of Music in preparing schedules of classes. The student should also correspond with the head of the Department of Music of the college to which he/she will transfer to obtain a verification of his/her complete program at North Iowa Area Community College.

Simpson College

Courses which may be taken at NIACC to complete major requirements at Simpson College:

Music Appreciation	3 s.h.
Music Theory I	3 s.h.
Music Theory II	3 s.h.
Music Theory III	3 s.h.
Music Theory IV	3 s.h.
Aural Skills I	2 s.h.
Aural Skills II	2 s.h.
Aural Skills III	2 s.h.
Aural Skills IV	2 s.h.
Applied Music Piano	1-2 s.h.
Applied Music Voice	1-2 s.h.
Applied Music Instrumental	1-2 s.h.
Concert Chorus	1-4 s.h.
Band	1-4 s.h.
Jazz Band	1-4 s.h.

Waldorf College

Prior to initial registration, all transfer students must make an appointment with the music department to determine the number of music credits and other requirements for the major that will be accepted for transfer. These courses include:

Music Theory I	3 s.h.
Music Theory II	3 s.h.
Music Theory III	3 s.h.
Music Theory IV	3 s.h.
Aural Skills I	2 s.h.
Aural Skills II	2 s.h.
Aural Skills III	2 s.h.
Aural Skills IV	2 s.h.

Other courses that may be taken at North Iowa Area Community College to complete major requirements:

One semester of foreign language	3-4 s.h.
Introduction to Philosophy	3 s.h.
Art History I or II	3 s.h.

Students pursuing the Arts Management Track could also complete Introduction to Computers and Information Systems (3 s.h.) or Computer Business Applications (3 s.h.).

Nursing

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements. The following courses are recommended as electives or general education within one's A.A. studies:

Introduction to Psychology	3 s.h.
Introduction to Sociology	3 s.h.
Developmental Psychology	3 s.h.
Biology I	4 s.h.
Microbiology	4 s.h.
Nutrition	3 s.h.
Introduction to Statistics	3 s.h.
College Algebra	4 s.h.
Anatomy and Physiology I and II	8 s.h.

The University of Iowa

BACHELOR OF SCIENCE IN NURSING (BSN) DEGREE
RN TO BSN PROGRESSION PROGRAM

This program is designed for associate degree registered nurses who are ready to expand their professional potential by earning the BSN degree. The University of Iowa College of Nursing offers its RN-BSN Progression program in collaboration with NIACC. Prerequisite course work can be completed locally or with NIACC online courses in preparation for the online RN-BSN Nursing major.

The associate degree nurse is assumed to have competence in microbiology, anatomy, physiology, nutrition, introductory psychology and sociology, life-span human development and behavior, communication skills, world language, and computer skills, as well as basic nursing competence. Prospective students can be assured that they have earned at least half of the 128 semester hours required for the BSN upon graduation from the NIACC ADN program.

Please visit the College of Nursing website at www.nursing.uiowa.edu for information on how to get your transcripts evaluated. Minimum GPA is 3.0. Please visit the following website to initiate transcript evaluation: http://www.nursing.uiowa.edu/academic-programs/rn-bsn or contact the area coordinator, Pat Nelson, at 641-430-1224.

BACHELOR OF SCIENCE IN NURSING (BSN) DEGREE
(at Iowa City)

Prospective students are strongly encouraged to seek early advising with the University of Iowa College of Nursing. The baccalaureate degree nursing student should take the following courses at NIACC:

Composition & Speech I and II	8 s.h.
Survey of Physics or Physical Science*	4 s.h.
Introduction to General Chemistry or College Chemistry*	4 s.h.
Biology	4 s.h.
Psychology	3 s.h.
Anatomy and Physiology I and II	8 s.h.
Microbiology	4 s.h.
Humanities, Fine Arts, Philosophy**	6 s.h.
Western Civilization	4 s.h.
Introduction to Statistics**	3 s.h.
Developmental Psychology	3 s.h.
Cultural Anthropology or Cultural Diversity**	3 s.h.
Foreign Language*	0-8 s.h.

*Math, physics, chemistry, and foreign language requirement depend on high school preparation.

**Some course work may be completed after matriculation at the University of Iowa if student is unable to complete as prenursing.

Admission to the undergraduate Bachelor of Science in Nursing program is competitive. For more information, visit the website at www.nursing.uiowa.edu.

Occupational Therapy

St. Ambrose University

The following courses may be taken at NIACC. Full-time students will take these courses over a three-semester period, after which they will need to transfer to St. Ambrose.

Introductory Biology and Lab	4 s.h.
Introduction to General Chemistry OR Survey of Physics and Lab	4 s.h.

Composition I ..... 3 s.h.
Public Speaking ..... 2 s.h.
Introduction to Psychology ..... 3 s.h.
Developmental Psychology ..... 3 s.h.
Abnormal Psychology ..... 3 s.h.
Literature ..... 3 s.h.
Philosophy ..... 3 s.h.
Art, Music, Theater ..... 6 s.h.
American History ..... 3 s.h.
Medical Terminology ..... 1 s.h.
Anatomy and Physiology ..... 8 s.h.
Introduction to Sociology ..... 3 s.h.
Introduction to Computer/Information Systems ..... 3 s.h.
Introduction to Statistics ..... 3 s.h.
Introduction to Ethics ..... 3 s.h.

Students wishing to enter the Master of Occupational Therapy program at St. Ambrose University must complete the requirements listed below.

1. Complete the prerequisite course work prior to beginning the MOT program.
2. Have a minimum "computed" grade point average of 2.8 (on a 4.0 scale) at the time of application and enrollment in the professional program.
3. Submit three letters of reference on the official forms available in the application packet. These references should be from persons familiar with the applicant's qualities related to becoming an occupational therapist.
4. Provide documentation of 50 hours of OT volunteer experience completed in at least two different OT settings. This documentation should be submitted with the application, should be on official letterhead, and should be signed by a registered OT, or the applicant may submit documentation of employment in an occupational therapy setting.
5. Complete an on-campus interview.
6. Applications are accepted throughout the year for the following fall until the class is filled.
7. If students plan to complete their baccalaureate degree while enrolled in the MOT program, applicants should have completed all but six of the general education requirements by the time of acceptance into the program. They will also need to complete all the major requirements for their baccalaureate degree prior to enrolling in the third year of the MOT program. Students may need to enroll in a summer and interim session to complete this course of study in five years.

Optometry

The following courses are recommended for a student interested in optometry:

Composition & Speech I and II ..... 8 s.h.
Biology I and II ..... 8 s.h.
Physics ..... 8 s.h.
Inorganic Chemistry ..... 10 s.h.
Psychology ..... 3 s.h.
Humanities Elective(s) ..... 6 s.h.
Social Science Elective(s) ..... 3 s.h.
Organic Chemistry ..... 4-10 s.h.
Microbiology ..... 4 s.h.
Anatomy and Physiology I and II ..... 8 s.h.
Calculus I ..... 4 s.h.
Plus electives to total 60 s.h.

There are additional requirements which vary with each optometry school or college.

Pharmacy

Drake University

COLLEGE OF PHARMACY AND HEALTH SCIENCES

Drake University offers admission to transfer applicants into the College of Pharmacy and Health Sciences at the professional program (PharmD) level, and admission is only granted for the Fall semester. Admission is not offered to transfer applicants at the pre-professional level.

Students who have completed approximately 60 semester hours of academic credit in general education course work (including public speaking and two semesters of English writing), plus courses in calculus, general biology, microbiology, two semesters of organic chemistry (with lab), statistics and computing by the start of the fall semester generally will be considered for admission to the professional program. Detailed information on prerequisites and admission criteria is provided at www.pharmacy.drake.edu.

The Drake College of Pharmacy and Health Sciences suggests the following curriculum at NIACC.

Composition I ..... 3 s.h.
Speech ..... 2 s.h.
*General Chemistry I and II ..... 10 s.h.
*Organic Chemistry I and II ..... 10 s.h.
*Biology I and II ..... 8 s.h.
*Microbiology ..... 4 s.h.
*Calculus I ..... 4 s.h.
*Introduction to Statistics ..... 3 s.h.
*Introduction to Computers and Information Systems ..... 3 s.h.

*Required for entry into the professional program.

For specific Drake curriculum (general education) requirements, students should access the Drake curriculum website at http://www.drake.edu/dc/ or contact the Office of Admissions, 1-800-44-DRAKE, Ext. 3181. It is recommended that NIACC students planning for transfer to Drake save their NIACC course syllabi for in-depth review for Drake curriculum outcomes fulfillment upon transfer.

The University of Iowa

The University of Iowa College of Pharmacy accepts approximately 108 students each year to the Doctor of Pharmacy (Pharm.D.) Program. Admission to this professional program is competitive and is based on academic performance, community service and volunteer work, and commitment to the profession of pharmacy.

Application deadline:
All application material must be received by the application deadline (normally the first week in January for fall entry into the College of Pharmacy).

Procedures:
PharmCAS - Pharmacy College Application Service is used by The University of Iowa to process applications electronically.

1. Candidates apply online via PharmCAS at http://www.pharmcas.org in the fall semester prior to the year in which they are seeking admission.

2. A supplemental application and supplemental application fee of $100 must be submitted by the January application deadline.

3. A minimum cumulative GPA of 2.5 is required to apply. Before entry into the Pharm. D. program, satisfactory completion of all pre-professional course work and at least 12 semester hours (s.h.) of general education electives are required. A maximum of one prerequisite course and one general education course required to complete 12 s.h. may be completed in the summer before entry into the College of Pharmacy.

   NOTE: A total of 20 s.h. of general education elective courses are required for graduation. Students are strongly encouraged to complete all 20 s.h. of general education electives before entering the first pharmacy year.

4. Part of the PharmCAS application is a personal essay, approximately one page in length, addressing why you selected Pharmacy as a career and how the Doctor of Pharmacy degree relates to your immediate and long-term professional goals. You should explain why you want to be a pharmacist, and support this information with autobiographical details including pharmacy, health care, work or volunteer experiences, related extracurricular activities, leadership roles, or any other important information.

5. The Pharmacy College Admission Test (PCAT), www.pcatweb.info, is required. Scores must be sent to PharmCAS, their code number is 104. We will not accept scores sent directly to the University of Iowa. The PCAT must be taken no later than October prior to the application deadline. The test must be completed prior to the January application deadline. Scores from the January PCAT will NOT be accepted for Fall admission. Preregistration for the exam is required, please follow dates listed on the PCAT website. The College of Pharmacy accepts PCAT scores a maximum of 2 years old.

6. Two letters of reference are required. They should be processed through the PharmCAS application service. Electronic submission is preferred.

7. Personal interviews will be required. Candidates will be contacted by the college if selected for an interview.

Admission to The University of Iowa College of Pharmacy is competitive. Completion of these requirements does NOT guarantee admission.

A student may attend North Iowa Area Community College for two years of pre-pharmacy.

Courses which should be taken at North Iowa Area Community College are:

Biology I and II	8 s.h.
Composition & Speech I and II	8 s.h.
General Chemistry I and II	10 s.h.
Calculus I	4 s.h.
*Survey of Physics	4 s.h.
Organic Chemistry I and II	10 s.h.
Anatomy & Physiology I and II	8 s.h.
Microbiology	4 s.h.
Principles of Microeconomics	3 s.h.
Introduction to Statistics	3 s.h.
**General Education Elective(s)	12 s.h.

*Physics required for students who haven't taken a full year during high school.

**A minimum of 12 s.h. of general education electives required for admission. Total of 20 s.h. required for graduation. It is best to complete all 20 s.h. before starting the Pharmacy program. Recommended electives include Computer Science and an Ethics course.

Physical Education

The following courses may be taken at North Iowa Area Community College to meet the requirements for a degree in physical education:

Composition & Speech I and II	8 s.h.
Sports Officiating: Fall and Winter Sports; Sports Officiating: Spring and Summer Sports	4 s.h.
Introduction to Physical Education	2 s.h.
Anatomy and Physiology I and II	8 s.h.
First Aid	1 s.h.
Introduction to Teaching	3 s.h.
AND Field Experience and Seminar	1 s.h.
Developmental Psychology	3 s.h.
Psychology	3 s.h.
American History or American Government	3 s.h.
Care and Prevention of Athletic Injuries	2 s.h.
Educational Technology and Design	3 s.h.
Health and Nutrition	3 s.h.
Humanities Elective(s)	8 s.h.
Educational Psychology	3 s.h.

Students planning to major in physical education should consult with counselors and personnel in the Department of Physical Education of the college to which he/she will transfer in preparing schedules of classes. The student should also correspond with the head of the Department of Physical Education to obtain a verification of his/her complete program at North Iowa Area Community College.

Iowa State University

The following courses at NIACC will meet the requirements for Exercise and Sport Science programs at Iowa State University administered by the Department of Health and Human Performance. Please see a NIACC counselor for clarification or call an academic advisor at Iowa State University: 515-294-2029.

GENERAL EDUCATION

Anatomy and Physiology	4 s.h.
Introduction to Computers and Information Systems (non-teacher ed only)	3 s.h.

Finite Math ..... 3 s.h.
Introduction to Psychology ..... 3 s.h.
Introduction to Sociology ..... 3 s.h.
Composition & Speech I and II ..... 8 s.h.

TEACHER LICENSURE
Introduction to Teaching ..... 3 s.h.
AND Field Experience and Seminar ..... 1 s.h.
First Aid ..... 1 s.h.
Developmental Psychology ..... 3 s.h.
Nutrition ..... 3 s.h.
Educational Psychology ..... 3 s.h.

EXERCISE SCIENCE
Survey of Physics OR College Physics I ..... 4 s.h.
College Chemistry I ..... 5 s.h.
Nutrition ..... 3 s.h.

ATHLETIC TRAINING
Survey of Physics OR College Physics I ..... 4 s.h.
College Chemistry I ..... 5 s.h.
Nutrition ..... 3 s.h.

Simpson College

Courses which may be taken at NIACC to meet major requirements at Simpson College:
Intro to Physical Education ..... 2 s.h.
Care & Prevention of Athletic Injuries ..... 2 s.h.
First Aid ..... 1 s.h.
Kinesiology ..... 3 s.h.
Sports Officiating: Fall and Winter Sports; Sports Officiating: Spring and Summer Sports ..... 4 s.h.
Biology I ..... 4 s.h.
Anatomy and Physiology ..... 8 s.h.

Upper Iowa University

RESIDENTIAL CAMPUS
Students should consider taking the following courses to meet requirements in the following majors.

FITNESS MAJOR
Anatomy and Physiology I ..... 4 s.h.
Kinesiology ..... 3 s.h.
Physical Fitness I ..... 1 s.h.
Physical Fitness Lab ..... 1 s.h.
Principles of Management ..... 3 s.h.
Nutrition ..... 3 s.h.

SPORTS SCIENCE MAJOR
College Chemistry I ..... 5 s.h.
College Chemistry II ..... 5 s.h.
Nutrition ..... 3 s.h.
Anatomy and Physiology I ..... 4 s.h.
Kinesiology ..... 3 s.h.
College Physics I ..... 4 s.h.
Organic Chemistry I ..... 5 s.h.
Introduction to Statistics ..... 3 s.h.

ATHLETIC TRAINING
Nutrition ..... 3 s.h.
Kinesiology ..... 3 s.h.
Introduction to Psychology ..... 3 s.h.

Physical Science

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. studies:
Biology I and II ..... 8 s.h.
General Chemistry I and II ..... 10 s.h.
Organic Chemistry I and II ..... 10 s.h.
College Physics I and II or
Classical Physics I and II ..... 8-10 s.h.
Computer Business Applications ..... 3 s.h.
Differential Equations with Laplace ..... 3 s.h.
Engineering Problems with FORTRAN ..... 3 s.h.
or
Engineering Graphics and Design ..... 3 s.h.

Physical Therapy

The University of Iowa

Physical Therapy programs are highly selective (36 students admitted each year) and require completion of a bachelor's degree for admission. Courses which should be taken at North Iowa Area Community College are:
Composition & Speech I and II ..... 8 s.h.
Biology I and II ..... 8 s.h.
Chemistry ..... 10 s.h.
Physics ..... 8 s.h.
Psychology ..... 3 s.h.
Developmental Psychology ..... 3 s.h.
Precalculus ..... 4 s.h.
Foreign Language ..... 0-16 s.h.
Anatomy and Physiology I and II ..... 8 s.h.
Introduction to Statistics ..... 3 s.h.

General education courses to complete the Associate in Arts Degree. Work experience in a physical therapy setting is very important as an admissions criterion.

Physician

The University of Iowa

Prior to entrance into medical school, each applicant must have received the baccalaureate degree. The Medical College Admissions Test (MCAT) will need to be taken. Courses which should be taken at North Iowa Area Community College are:
Composition & Speech I and II ..... 8 s.h.
General Chemistry I and II ..... 10 s.h.
Organic Chemistry I and II ..... 10 s.h.
Precalculus ..... 4 s.h.
Physics ..... 8 s.h.
Foreign Language ..... 0-16 s.h.
Biology I and II ..... 8 s.h.
Psychology ..... 3 s.h.
Developmental Psychology ..... 3 s.h.

General education to complete Associate in Arts Degree.

Physician Assistant

The University of Iowa

Physician Assistant programs are highly selective (25 students admitted each year) and require completion of a bachelor's degree for admission.

Composition & Speech I and II	8 s.h.
General Chemistry I and II	10 s.h.
Organic Chemistry	10 s.h.
Biology I and II	8 s.h.
Precalculus	4 s.h.
Physics (recommended)	8 s.h.
Foreign Language	0-16 s.h.
Foreign Civilization & Culture (recommended)	3 s.h.
Introduction to Statistics	3 s.h.

General education electives to complete Associate in Arts Degree.

In the selection process of physician assistant candidates, work experience in a health care setting is very important as an admissions criterion.

This is a graduate program at Iowa and is highly competitive. See your counselor for more information.

Physics - Applied

University of Northern Iowa

The B.S. in Applied Physics at the University of Northern Iowa provides a strong preparation for work in a variety of applied fields. Examples are manufacturing industries, engineering firms, medical facilities, and government laboratories. It also offers a good background for graduate study in some applied science or engineering programs. Students acquire a broad-based foundation in physics along with skills for analyzing and solving a variety of practical problems. Contact the UNI Physics Department at 319-273-2420 or learn more at www.physics.uni.edu.

Applied Physics/Engineering: Students may pursue a dual-degree major leading to a B.S. Applied Physics Degree from UNI and a B.S. Engineering Degree from Iowa State University or the University of Iowa (see Engineering).

Courses that may be taken at North Iowa Area Community College to complete major requirements in the B.S. Applied Physics program at UNI are as follows:

EGT-129	Statics for Engineering	3 s.h.
EGT-119	Mechanics of Materials	3 s.h.
MAT-210	Calculus I	4 s.h.
MAT-216	Calculus II	4 s.h.
MAT-219	Calculus III	4 s.h.
MAT-226	Differential Equations with Laplace Transforms	3 s.h.
CHM-166	General Chemistry I	5 s.h.
CHM-176	General Chemistry II	5 s.h.
PHY-212	Classical Physics I	5 s.h.
PHY-222	Classical Physics II	5 s.h.

Students may complete additional courses to satisfy A.S. Degree requirements at North Iowa Area Community College.

Political Science

Simpson College

Courses that may be taken at North Iowa Area Community College to complete major requirements:

American National Government	3 s.h.
American State and Local Government	3 s.h.
International Relations	3 s.h.

Psychology

Introduction to Psychology	3 s.h.
Child and Adolescent Psychology	3 s.h.

Students should correspond with the college or university of their choice to determine if that college requires science and/or foreign language.

Buena Vista University

Courses which may be taken at North Iowa Area Community College to meet specific major requirements at Buena Vista University:

Introduction to Psychology	3 s.h.
Child and Adolescent Psychology (as an elective)	3 s.h.
or	
Developmental Psychology	3 s.h.
Abnormal Psychology	3 s.h.

Complete additional courses to satisfy A.A. Degree requirements at North Iowa Area Community College.

A second major or minor is required for this degree.

Simpson College

Courses which may be taken at North Iowa Area Community College to meet major requirements at Simpson College:

Business Statistics or Introduction to Statistics	3 s.h.
Introduction to Psychology	3 s.h.
Composition & Speech I and II	8 s.h.
OR Composition I and II	6 s.h.

Complete additional courses to satisfy A.A. Degree.

Upper Iowa University

RESIDENTIAL CAMPUS

Students should consider taking the following courses to meet requirements in the following majors.

Introduction to Psychology	3 s.h.
Introduction to Human Services	3 s.h.
Child and Adolescent Psychology	3 s.h.
Developmental Psychology	3 s.h.
Introduction to Statistics	3 s.h.

Public Relations

This major has a wide variety of preparation possibilities and should be discussed with your counselor.

Radiology
(Four-Year Degree)

The requirements may be met by selecting courses from the list outlined below. These courses are offered at North Iowa Area Community College.

- Biology I and II ..... 8 s.h.
- Anatomy and Physiology I and II ..... 8 s.h.
- Composition & Speech I and II ..... 8 s.h.
- Western Civilization ..... 8 s.h.
- College Algebra ..... 4 s.h.
- Trigonometry and Analytic Geometry ..... 3 s.h.
- Philosophy ..... 3 s.h.
- College Physics I and II ..... 8 s.h.
- Chemistry ..... 8 s.h.
- Social Science Elective(s) ..... 6 s.h.

Recreation

A recreation major may have several different areas of emphasis. The following courses should be taken at NIACC:

- Composition & Speech I and II ..... 8 s.h.
- Sports Officiating: Fall and Winter Sports; Sports Officiating: Spring and Summer Sports ..... 4 s.h.
- Introduction to Physical Education ..... 2 s.h.
- Psychology ..... 3 s.h.
- Developmental Psychology ..... 3 s.h.
- Art Appreciation ..... 3 s.h.
- Introduction to Teaching ..... 3 s.h.
- Health and Nutrition ..... 3 s.h.
- First Aid ..... 1 s.h.
- Care and Prevention of Athletic Injuries ..... 2 s.h.
- Educational Technology and Design ..... 3 s.h.

Social Work

General education includes the following courses:

- Composition & Speech I and II ..... 8 s.h.
- Introduction to Sociology ..... 3 s.h.
- Social Problems ..... 3 s.h.
- Marriage and Family ..... 3 s.h.
- Psychology ..... 3 s.h.
- Natural Science/Mathematics Elective(s) ..... 8 s.h.
- Humanities Elective(s) ..... 6 s.h.
- Developmental Psychology ..... 3 s.h.
- Principles of Macroeconomics ..... 3 s.h.
- Public Speaking ..... 2 s.h.
- American History ..... 6 s.h.

Students should correspond with the college or university of their choice to determine if that college requires science and/or foreign language. Students should also be certain their math background is sufficient for a statistical course.

Wartburg College

- Composition & Speech I and II ..... 8 s.h.
- Introduction to Psychology ..... 3 s.h.
- Introduction to Sociology ..... 3 s.h.
- Principles of Macroeconomics or Principles of Microeconomics ..... 3 s.h.
- American National Government ..... 3 s.h.
- Western Civilization ..... 4-8 s.h.
- Introductory Biology & Lab ..... 4 s.h.
- Intermediate Algebra (or higher math) ..... 3-4 s.h.
- Humanities ..... 3-6 s.h.

Sports Administration

Simpson College

North Iowa Area Community College has a 2+2 articulation agreement with Simpson College that allows students completing the Associate in Science (Business) degree in Sport Management to transfer up to 64 semester hours of credit toward a Bachelor of Arts degree in Sports Administration. Students interested in this major should consult with their NIACC counselor and follow the transfer plan that is part of the articulation agreement.

Theatre

- Composition & Speech I and II ..... 8 s.h.
- Introduction to Theatre, Television, and Film ..... 3 s.h.
- Introduction to Acting ..... 3 s.h.
- Public Speaking ..... 2 s.h.
- Poetry and Drama ..... 3 s.h.
- Short Story and Novel ..... 3 s.h.
- World Literature I and II ..... 6 s.h.
- Oral Interpretation ..... 3 s.h.

Simpson College

Courses which may be taken at North Iowa Area Community College to complete major requirements at Simpson College:

- Oral Interpretation ..... 3 s.h.
- Introduction to Theatre, TV, and Film ..... 3 s.h.
- Introduction to Acting ..... 3 s.h.

Also required for Theatre Arts with Education program:

- Public Speaking ..... 2 s.h.
- Group Discussion ..... 2 s.h.
- Newswriting & Reporting ..... 3 s.h.

Waldorf College

Courses that may be taken at North Iowa Area Community College to complete major requirements. All courses taken in the major must be completed with a grade of *C-* or higher.

- Introduction to Theatre, TV, and Film ..... 3 s.h.
- Introduction to Acting ..... 3 s.h.
- Introduction to Philosophy ..... 3 s.h.
- Art History I or II ..... 3 s.h.

Veterinary Medicine

Iowa State University
(GPA is a competitive factor for admission.)

Applicants for admission to the College of Veterinary Medicine must have attended a regionally accredited college or university, have completed 40 semester credits prior to the deadline for filing an application for admission, and have completed 60 semester credits prior to the end of the spring term in which the applicant seeks to be admitted.

Credits earned must include the following:

- Composition & Speech I and II*....8 s.h.
- General Chemistry I and II.... 10 s.h.
- Organic Chemistry I and II ....10 s.h.
- College Physics I and II....8 s.h.
- Biology I and II....8 s.h.
- Anatomy and Physiology ....4 s.h.
- Humanities and/or Social Sciences....9 s.h.

* Must take both courses for 4 semester hour credits to meet the Public Speaking requirement.

Visual Arts

Grand View College

Completion of the A.A. Degree at NIACC will meet most general education requirements; the following courses are recommended as electives or general education within one's A.A. studies:

- Art History I and II....6 s.h.
- Drawing I and II....6 s.h.
- Two-Dimensional Design ....3 s.h.
- Three-Dimensional Design ....3 s.h.
- Encounters in Humanities....2 s.h.
- Art Appreciation....3 s.h.
- Ceramics ....3 s.h.
- Graphic Design I and II....6 s.h.
- Painting I and II....6 s.h.

Wellness

Waldorf College

Courses that may be taken at North Iowa Area Community College to complete major requirements. All courses taken in the major must be completed with a grade of *C-* or higher.

- Nutrition....3 s.h.
- Anatomy and Physiology I ....4 s.h.
- Anatomy and Physiology II ....4 s.h.
- General Chemistry I....4 s.h.
- Developmental Psychology....3 s.h.
- Introduction to Psychology....3 s.h.
- Principles of Macroeconomics....3 s.h.
- Principles of Accounting I....3 s.h.
- First Aid....1 s.h.
- Health and Nutrition....3 s.h.
- Care and Prevention of Athletic Injuries ....2 s.h.
- Kinesiology....3 s.h.

Students could also complete additional course work for:

SCIENCE/RESEARCH TRACK

- General Chemistry II....4 s.h.
- Biology I....4 s.h.
- Biology II ....4 s.h.

CHILDREN'S WELLNESS TRACK

- Including Diverse Learners....3 s.h.
- Educational Media ....3 s.h.

Online Courses Leading to an Associate Degree

See the listing below and contact the Registrar at 1(888) 466-4222, Ext. 4205, or (641) 422-4205.

DEGREE REQUIREMENT	SEMESTER HOURS
Communication	8 s.h.
Composition and Speech I (ENG-102)	*4 s.h.*
Composition I (ENG-105)	*3 s.h.*
Composition II (ENG-106)	*3 s.h.*
Public Speaking (SPC-111)	*2 s.h.*
Humanities	8 s.h.
Art History I (ART-203)	*3 s.h.*
Art History II (ART-204)	*3 s.h.*
U.S. History to 1877 (HIS-151)	*3 s.h.*
U.S. History Since 1877 (HIS-152)	*3 s.h.*
Short Story/Novel (LIT-160)	*3 s.h.*
Poetry/Drama (LIT-170)	*3 s.h.*
Natural Science/Mathematics	8 s.h.
Introductory Biology (BIO-102)	*3 s.h.*
Nutrition (BIO-151)	*3 s.h.*
Health and Nutrition (BIO-152)	*3 s.h.*
Introduction to General Chemistry (CHM-122)	*4 s.h.*
Math for Liberal Arts (MAT-110)	*3 s.h.*
Trigonometry and Analytic Geometry (MAT-134)	*3 s.h.*
Introduction to Statistics (MAT-156)	*3 s.h.*
Calculus (MAT-165)	*3 s.h.*
Social Science	8 s.h.
Personal Finance (ECN-115)	*3 s.h.*
*Principles of Macroeconomics (ECN-120)**	*3 s.h.*
*Principles of Microeconomics (ECN-130)**	*3 s.h.*
American National Government (POL-111)	*3 s.h.*
International Relations (POL-121)	*3 s.h.*
*Introduction to Psychology (PSY-111)**	*3 s.h.*
*Developmental Psychology (PSY-121)**	*3 s.h.*
Child and Adolescent Psychology (PSY-223)	*3 s.h.*
Introduction to Sociology (SOC-110)	*3 s.h.*
Marriage and Family (SOC-120)	*3 s.h.*
Distributed Requirement Choose from courses above (under Communication, Humanities, Natural Science/Mathematics, and Social Sciences)	8 s.h.
Electives	
Introduction to Accounting (ACC-111)	*3 s.h.*
Principles of Accounting I (ACC-121)	*3 s.h.*
Principles of Accounting II (ACC-122)	*3 s.h.*
Payroll Accounting (ACC-161)	*3 s.h.*
*Introduction to Keyboarding (ADM-105)**	*1 s.h.*
*Keyboarding Skill Development (ADM-108)**	*1 s.h.*
Office Calculators (ADM-131)	*1 s.h.*
Cultural Anthropology (ANT-105)	*3 s.h.*
*Computer Literacy (BCA-100)**	*1 s.h.*
Introduction to Computers and Information Systems (BCA-101)	*3 s.h.*

DEGREE REQUIREMENT	
Management Information Systems (BCA-103)	*3 s.h.*
*Basic Word Processing (BCA-129)**	*2 s.h.*
Comprehensive Spreadsheets (BCA-152)	*3 s.h.*
*Microsoft Access (BCA-163)**	*1 s.h.*
*Personal Information Management (BCA-170)**	*2 s.h.*
*Basic Presentation Software (BCA-174)**	*1 s.h.*
Introduction to Microsoft Publisher (BCA-182	*1 s.h.*
Beginning Web Page Development (BCA-185)	*3 s.h.*
Computer Business Applications (BCA-215)	*3 s.h.*
Project Management Software (BCA-259)	*2 s.h.*
Learn to Buy and Sell on e-Bay (BCA-270)	*1 s.h.*
Introduction to QuickBooks (BCA-280)	*1 s.h.*
*Search Engine Optimization (BCA-729)**	*1 s.h.*
*JavaScript Programming for the Web (BCA-775)**	*1 s.h.*
*AJAX Basics (BCA-778)**	*1 s.h.*
Introduction to Business (BUS-102)	*3 s.h.*
Business Communications (BUS-121)	*3 s.h.*
Introduction to Entrepreneurship (BUS-130)	*3 s.h.*
The Successful Entrepreneur (BUS-134)	*2 s.h.*
Creativity, Innovation and Opportunity Analysis (BUS-136)	*2 s.h.*
Introduction to E-Commerce (BUS-151)	*3 s.h.*
*Internet Law, Copyright and Computer Ethics (BUS-159)**	*1 s.h.*
Human Relations (BUS-161)	*3 s.h.*
Business Law I (BUS-185)	*3 s.h.*
Business Law II (BUS-186)	*3 s.h.*
*Introduction to Insurance (BUS-260)**	*3 s.h.*
*Property and Casualty Insurance (BUS-266)**	*3 s.h.*
*Life, Health, and Disability Insurance (BUS-267)**	*3 s.h.*
Introduction to Programming (CIS-119)	*4 s.h.*
Introduction to Programming Logic with Language (CIS-125)	*3 s.h.*
Java (CIS-172)	*4 s.h.*
Web Development I (CIS-210)	*3 s.h.*
*Web Development II (CIS-232)**	*1 s.h.*
*Bot Programming/Game and Application Automation (CIS-620)**	*1 s.h.*
Building Codes and Standards (CON-117)	*2 s.h.*
Introduction to Criminal Justice (CRJ-100)	*3 s.h.*
Police and Society (CRJ-111)	*3 s.h.*
Criminal Law (CRJ-130)	*3 s.h.*
Criminal Investigation (CRJ-141)	*3 s.h.*
Evidence (CRJ-230)	*3 s.h.*
Introduction to Early Childhood Education (ECE-103)	*3 s.h.*
Home and School Relationships in Early Childhood (ECE-131)	*3 s.h.*
Child Health, Safety, and Nutrition (ECE-133)	*3 s.h.*
Early Childhood Curriculum II (ECE-159)	*3 s.h.*
Child Growth and Development (ECE-170)	*3 s.h.*
Early Childhood Guidance (ECE-243)	*3 s.h.*
Introduction to Economics (ECN-110)	*3 s.h.*
Introduction to PLC's (ELT-170)	*3 s.h.*

DEGREE REQUIREMENT	SEMESTER HOURS
Facilities Maintenance (ELT-750)	*3 s.h.*
Elements of Writing (ENG-015)	*4 s.h.*
*Principles of Banking (FIN-101)**	*3 s.h.*
Analysis and Valuation of Stocks (FIN-210)	*1 s.h.*
Stocks, Bonds, and Investing (FIN-214)	*1 s.h.*
Visual Communication (GRA-108)	*3 s.h.*
Electronic Portfolio (GRA-299)	*3 s.h.*
*Dreamweaver Basics (GRA-761)**	*1 s.h.*
*Flash Basics (GRA-762)**	*1 s.h.*
*Fireworks Basics (GRA-763)**	*1 s.h.*
*Illustrator Basics (GRA-764)**	*1 s.h.*
*InDesign Basics (GRA-765)**	*1 s.h.*
*Photoshop Basics (GRA-766)**	*1 s.h.*
Customer Service (HCM-239)	*2 s.h.*
Human Resources Management and Supervising (HCM-325)	*2 s.h.*
American Indian History (HIS-254)	*3 s.h.*
Basic Medical Insurance and Coding (HIT-210)	*2 s.h.*
Medical Transcription II (HIT-631)	*3 s.h.*
Medical Transcription III (HIT-632)	*3 s.h.*
Medical Terminology I (HSC-120)	*3 s.h.*
Medical Terminology II (HSC-121)	*3 s.h.*
Laboratory Tests (HSC-155)	*2 s.h.*
Principles of Management (MGT-101)	*3 s.h.*
Principles of Supervision (MGT-130)	*3 s.h.*
Principles of Marketing (MKT-110)	*3 s.h.*
Principles of Selling (MKT-140)	*3 s.h.*
Music Appreciation (MUS-100)	*3 s.h.*
CISCO Networking (NET-213)	*4 s.h.*
Information Data Assurance (NET-613)	*3 s.h.*
Fundamental Project Management (NET-743)	*4 s.h.*
Physical Fitness I (PEA-146)	*1 s.h.*
Coaching Ethics, Techniques and Theory (PEC-110)	*1 s.h.*
Athletic Development and Human Growth (PEC-115)	*1 s.h.*
Introduction to Anatomy and Physiology for Coaching (PEC-122)	*1 s.h.*
Sports Officiating (PEC-161)	*3 s.h.*
Introduction to Ethics (PHI-105)	*3 s.h.*
PTA Terminology (PTA-100)	*1 s.h.*
Speed Reading (RDG-161)	*1 s.h.*
Job Seeking Skills (SDV-135)	*1 s.h.*
Career Decision Making (SDV-160)	*2 s.h.*
Listen to Your Heart and Success Will Follow (SDV-177)	*1 s.h.*
College Essentials (SDV-199)	*1 s.h.*

* Open enrollment courses. All others start and end on the regular semester dates.

GENERAL EDUCATION AND OTHER TRANSFER COURSES

North Iowa Area Community College considers education to be the foundation of a democratic society. At the core of the educational experience is general education, an ongoing endeavor that engages students in acquiring the knowledge and tools necessary to understand their environment and contribute to their communities.

Each of NIACC's degree programs provides varying levels of general education skill development through their distribution requirements:

To earn an Associate in Arts degree, a student must complete a minimum of 8 semester hours (s.h.) of credit in each of the communication, humanities, social science, and natural science/ mathematics distribution categories listed below plus an additional 8 s.h. of credit selected from any of the aforementioned categories for a total minimum of 40 s.h. of general education credit within the degree program. Within the natural science/mathematics category, a student must select at least one mathematics and one science course.

To earn an Associate in Science degree, a student must complete a minimum general education core of 40 s.h. distributed in the following fashion: communication (8 s.h.); humanities and/or social science (8 s.h.); natural science/mathematics (20 s.h.); and distributed requirement (4 s.h.). Within the natural science/mathematics category, a student must select at least one mathematics and one science course.

To earn an Associate in Science (Business) degree, a student must complete a minimum general education core of 20 s.h. distributed in the following fashion: communication (8 s.h.); humanities and/or social science (9 s.h.); and natural science/mathematics (3 s.h.).

Listed as follows are the general education courses for the Associate in Arts, Associate in Science, and Associate in Science (Business) degrees.

COMMUNICATION

ENGLISH COMPOSITION

ENG-102	Composition & Speech I	4 s.h.
ENG-103	Composition & Speech II	4 s.h.
ENG-105	Composition I	3 s.h.
ENG-106	Composition II	3 s.h.

SPEECH

SPC-111	Public Speaking	2 s.h.
SPC-131	Group Communication	2 s.h.

HUMANITIES

ART

ART-101	Art Appreciation	3 s.h.
ART-102	Art for Elementary Education	3 s.h.
ART-115	Graphic Design	3 s.h.
ART-120	Two-Dimensional Design	3 s.h.
ART-123	Three-Dimensional Design	3 s.h.
ART-133	Drawing	3 s.h.
ART-134	Drawing II	3 s.h.
ART-173	Ceramics	3 s.h.
ART-187	Creative Photography	3 s.h.
ART-188	Creative Photography II	3 s.h.
ART-203	Art History I	3 s.h.
ART-204	Art History II	3 s.h.

DRAMA

DRA-119	Introduction to Theatre-TV-Film	3 s.h.

FOREIGN LANGUAGE

FLS-141	Elementary Spanish I	4 s.h.
FLS-142	Elementary Spanish II	4 s.h.
FLS-241	Intermediate Spanish I	4 s.h.
FLS-242	Intermediate Spanish II	4 s.h.
FLS-261	Advanced Spanish I	3 s.h.
FLS-262	Advanced Spanish II	3 s.h.

HISTORY

HIS-112	Western Civilization: Ancient to Early Modern	4 s.h.
HIS-113	Western Civilization: Early Modern to Present	4 s.h.
HIS-151	U.S. History to 1877	3 s.h.
HIS-152	U.S. History since 1877	3 s.h.

HUMANITIES

HUM-115	Encounters in Humanities	2 s.h.

JOURNALISM

JOU-115	Introduction to Journalism	3 s.h.
JOU-121	News Writing & Reporting	3 s.h.

LITERATURE

DRA-145	Oral Interpretation	3 s.h.
EDU-235	Children's Literature	3 s.h.
LIT-101	Introduction to Literature	3 s.h.
LIT-130	African American Literature	3 s.h.
LIT-131	Native American Literature	3 s.h.
LIT-132	Women of Color	3 s.h.
LIT-150	World Literature I	3 s.h.
LIT-151	World Literature II	3 s.h.
LIT-160	Short Story/Novel	3 s.h.
LIT-170	Poetry/Drama	3 s.h.
LIT-230	Law Enforcement in Contemporary Literature	3 s.h.

MUSIC

MUA-120	Applied Piano	1 s.h.
MUA-130	Applied Voice	1-2 s.h.
MUA-131	Applied Voice II	1-2 s.h.
MUA-132	Applied Voice III	1-2 s.h.
MUA-184	Applied Saxophone I	1-2 s.h.
MUA-186	Applied Flute I	1-2 s.h.
MUA-187	Applied Oboe I	1-2 s.h.
MUA-188	Applied Clarinet I	1-2 s.h.
MUA-189	Applied Bassoon I	1-2 s.h.
MUA-191	Applied Trumpet I	1-2 s.h.
MUA-192	Applied French Horn I	1-2 s.h.
MUA-193	Applied Trombone I	1-2 s.h.
MUA-194	Applied Euphonium I	1-2 s.h.
MUA-195	Applied Tuba I	1-2 s.h.
MUA-196	Applied Percussion I	1-2 s.h.
MUA-197	Applied Drum Set I	1-2 s.h.
MUA-198	Applied Guitar I	1-2 s.h.
MUA-286	Applied Flute II	1-2 s.h.
MUA-287	Applied Oboe II	1-2 s.h.
MUA-288	Applied Clarinet II	1-2 s.h.

MUA-289	Applied Bassoon II	1-2 s.h.
MUA-290	Applied Saxophone II	1-2 s.h.
MUA-291	Applied Trumpet II	1-2 s.h.
MUA-292	Applied French Horn II	1-2 s.h.
MUA-293	Applied Trombone II	1-2 s.h.
MUA-294	Applied Euphonium II	1-2 s.h.
MUA-295	Applied Tuba II	1-2 s.h.
MUA-296	Applied Percussion II	1-2 s.h.
MUA-297	Applied Drum Set II	1-2 s.h.
MUA-298	Applied Guitar II	1-2 s.h.
MUA-299	Applied Piano II	1-2 s.h.
MUS-100	Music Appreciation	3 s.h.
MUS-120	Music Theory I	3 s.h.
MUS-121	Music Theory II	3 s.h.
MUS-130	Aural Skills I	2 s.h.
MUS-131	Aural Skills II	2 s.h.
MUS-132	Aural Skills III	2 s.h.
MUS-133	Aural Skills IV	2 s.h.
MUS-140	Concert Choir	1 s.h.
MUS-141	Concert Choir II	1 s.h.
MUS-142	Concert Choir III	1 s.h.
MUS-144	Orchestra	1 s.h.
MUS-145	Concert Band	1 s.h.
MUS-150	Chamber Ensemble	1 s.h.
MUS-152	Voice Ensemble (NIACC Singers)	1 s.h.
MUS-174	North Iowa Choral Society	1 s.h.
MUS-179	Jazz Band	1 s.h.
MUS-212	American Musical Heritage	3 s.h.
MUS-220	Music Theory III	3 s.h.
MUS-221	Music Theory IV	3 s.h.
MUS-244	Orchestra II	1 s.h.
MUS-245	Concert Band II	1 s.h.
MUS-252	Vocal Ensemble II - NIACC Singers	1 s.h.
MUS-274	North Iowa Choral Society II	1 s.h.
MUS-279	Jazz Band II	1 s.h.
MUS-344	Orchestra III	1 s.h.
MUS-345	Concert Band III	1 s.h.
MUS-379	Jazz Band III	1 s.h.

PHILOSOPHY/ETHICS

PHI-101	Introduction to Philosophy	3 s.h.
PHI-105	Introduction to Ethics	3 s.h.

NATURAL SCIENCE/MATHEMATICS

BIOLOGICAL SCIENCES

BIO-102	Introductory Biology	3 s.h.
BIO-103	Introductory Biology Lab	1 s.h.
BIO-123	Inquiry into Life Science	4 s.h.
BIO-151	Nutrition	3 s.h.
BIO-152	Health and Nutrition	3 s.h.
BIO-186	Microbiology	4 s.h.
BIO-196	Introduction to Bio-Technology	4 s.h.
BIO-202	Biology I	4 s.h.
BIO-203	Biology II	4 s.h.
BIO-206	Anatomy & Physiology I	4 s.h.
BIO-207	Anatomy & Physiology II	4 s.h.
ENV-110	Environmental Science	3 s.h.

PHYSICAL SCIENCES

CHM-122	Introduction to General Chemistry	4 s.h.
CHM-132	Introduction to Organic and Biochemistry	4 s.h.
CHM-151	College Chemistry I	4 s.h.
CHM-152	College Chemistry II	4 s.h.
CHM-166	General Chemistry I	5 s.h.
CHM-176	General Chemistry II	5 s.h.
CHM-263	Organic Chemistry I	5 s.h.
CHM-273	Organic Chemistry II	5 s.h.
PHS-125	Physical Science	4 s.h.
PHY-106	Survey of Physics	4 s.h.
PHY-162	College Physics I	4 s.h.
PHY-172	College Physics II	4 s.h.
PHY-212	Classical Physics I	5 s.h.
PHY-222	Classical Physics II	5 s.h.

MATH

MAT-110	Math for Liberal Arts	3 s.h.
MAT-121	College Algebra	4 s.h.
MAT-128	Precalculus	4 s.h.
MAT-134	Trigonometry & Analytic Geometry	3 s.h.
MAT-140	Finite Math	3 s.h.
MAT-153	Math for Elementary Teachers I	4 s.h.
MAT-154	Math for Elementary Teachers II	4 s.h.
MAT-156	Introduction to Statistics	3 s.h.
MAT-161	Business Statistics	3 s.h.
MAT-165	Calculus	3 s.h.
MAT-210	Calculus I	4 s.h.
MAT-216	Calculus II	4 s.h.
MAT-219	Calculus III	4 s.h.
MAT-226	Differential Equations with Laplace Transforms	3 s.h.

SOCIAL SCIENCES

ECONOMICS

ECN-115	Personal Finance	3 s.h.
ECN-120	Principles of Macroeconomics	3 s.h.
ECN-130	Principles of Microeconomics	3 s.h.

GEOGRAPHY

GEO-124	Regional Geography of the Nonwestern World	3 s.h.
GEO-125	Regional Geography of the Developed World	3 s.h.
GEO-131	Physical Geography	3 s.h.

GOVERNMENT/POLITICAL SCIENCE

POL-111	American National Government	3 s.h.
POL-112	American State and Local Government	3 s.h.
POL-121	International Relations	3 s.h.

PSYCHOLOGY

PSY-102	Human and Work Relations	3 s.h.
PSY-111	Introduction to Psychology	3 s.h.
PSY-121	Developmental Psychology	3 s.h.
PSY-211	Psychology of Adjustment	3 s.h.
PSY-223	Child and Adolescent Psychology	3 s.h.
PSY-241	Abnormal Psychology	3 s.h.
PSY-281	Educational Psychology	3 s.h.

SOCIOLOGY

SOC-110	Introduction to Sociology	3 s.h.
SOC-115	Social Problems	3 s.h.
SOC-120	Marriage & Family	3 s.h.

BUSINESS ELECTIVES

ACCOUNTING

ACC-121	Principles of Accounting I	3 s.h.
ACC-122	Principles of Accounting II	3 s.h.

COMPUTER TECHNOLOGY

BCA-101	Introduction to Computers and Information Systems	3 s.h.
BCA-103	Management Information Systems	3 s.h.
BUS-151	Introduction to E-Commerce	3 s.h.
CFR-110	Ethics and the Information Age	3 s.h.
CIS-125	Introduction to Programming Logic with Language	3 s.h.
CIS-172	Java	4 s.h.
CIS-332	Database and SQL	3 s.h.
GRA-108	Visual Communication	3 s.h.
GRA-123	Principles of Illustration	3 s.h.
NET-133	IT Essentials II	4 s.h.
NET-136	Operating Systems II	3 s.h.
NET-149	Business Network Management	3 s.h.
NET-201	Network LANs & WANs	5 s.h.
NET-233	CISCO Switches	4 s.h.
NET-243	CISCO Wide Area Network (WAN)	4 s.h.
NET-304	Windows Workstation Operating Systems	4 s.h.
NET-314	Windows Server	4 s.h.
NET-324	Windows Network Management	4 s.h.
NET-635	Ethical Hacking	3 s.h.
NET-743	Fundamental Project Management	4 s.h.
NET-782	Computer Users Support	3 s.h.

ED-to-GO COURSES

(limited to 3 s.h. maximum of these courses)

FIN-210	Analysis and Valuation of Stocks	1 s.h.
FIN-214	Stocks, Bonds, and Investing: Oh My!	1 s.h.

INTERNSHIPS

BUS-225	Business Internships	1-5 s.h.

MANAGEMENT

BUS-102	Introduction to Business	3 s.h.
BUS-161	Human Relations	3 s.h.
BUS-185	Business Law I	3 s.h.
BUS-186	Business Law II	3 s.h.
BUS-260	Introduction to Insurance	3 s.h.
BUS-266	Property/Casualty Insurance	3 s.h.
BUS-267	Life, Health & Disability Insurance	3 s.h.
ECN-110	Introduction to Economics	3 s.h.
FIN-101	Principles of Banking	3 s.h.
MGT-101	Principles of Management	3 s.h.
MGT-130	Principles of Supervision	3 s.h.
MGT-170	Human Resources Management	3 s.h.
MGT-220	Introduction to Sport Management	3 s.h.
MGT-221	Current Issues in Sport	3 s.h.

MARKETING

MKT-110	Principles of Marketing	3 s.h.
MKT-140	Principles of Selling	3 s.h.
MKT-150	Principles of Advertising	3 s.h.

OTHER ELECTIVES

CAREER/ACADEMIC SUCCESS

RDG-125	College Reading Strategies	3 s.h.
SDV-111	Success Seminar	1 s.h.
SDV-113	Strategies for Academic Success	2 s.h.
SDV-120	Individualized Educational Planning & Assessment	1 s.h.
SDV-135	Job Seeking Skills	1 s.h.
SDV-144	Introduction to STEM Careers	1 s.h.
SDV-160	Career Decision Making	2 s.h.
SDV-199	College Essentials	1 s.h.

COACHING ENDORSEMENT

PEC-110	Coaching Ethics Techniques and Theory	1 s.h.
PEC-115	Athletic Development and Human Growth	1 s.h.
PEC-122	Introduction to Anatomy & Physiology for Coaching	1 s.h.
PEC-127	Care & Prevention of Athletic Injuries	2 s.h.
PEC-161	Sports Officiating	3 s.h.

COOPERATIVE EDUCATION INTERNSHIPS

SDV-210	Cooperative Education Internship	1-5 s.h.

CRIMINAL JUSTICE

CRJ-100	Introduction to Criminal Justice	3 s.h.
CRJ-105	Intermediate Criminal Investigation	3 s.h.
CRJ-111	Police and Society	3 s.h.
CRJ-130	Criminal Law	3 s.h.
CRJ-141	Criminal Investigation	3 s.h.
CRJ-227	Employment Strategies for Criminal Justice	1 s.h.
CRJ-230	Evidence	3 s.h.

ED-to-GO COURSES

(limited to 3 s.h. maximum of these courses)

RDG-161	Speed Reading	1 s.h.
SDV-177	Listen to Your Heart and Success Will Follow	1 s.h.

EDUCATION

ECE-103	Introduction to Early Childhood Education	3 s.h.
ECE-131	Home & School Relationships in Early Childhood	3 s.h.
ECE-133	Child Health, Safety and Nutrition	3 s.h.
ECE-159	Early Childhood Curriculum II	3 s.h.
ECE-170	Child Growth and Development	3 s.h.
ECE-243	Early Childhood Guidance	3 s.h.
EDU-216	Introduction to Teaching	3 s.h.
EDU-219	Field Experience and Seminar	1 s.h.
EDU-242	Classroom Assessment	2 s.h.
EDU-246	Including Diverse Learners	3 s.h.
EDU-250	Educational Technology and Design	3 s.h.
EDU-290	Education Capstone Seminar	1 s.h.

ENGINEERING

EGR-100	Engineering Orientation	1 s.h.
EGT-119	Mechanics of Materials	3 s.h.
EGT-129	Statics for Engineering	3 s.h.
EGT-181	Engineering Problems with FORTRAN	3 s.h.
EGT-192	Engineering Graphics & Design	3 s.h.

FIRE SCIENCE

FIR-155	Fire Protection Technology	4 s.h.
FIR-184	Hazardous Material Technician	3 s.h.
FIR-210	Incident Command System	1 s.h.
FIR-231	Fire Behavior & Investigation	4 s.h.
FIR-281	Fire Instructor I	2 s.h.

INTERCOLLEGIATE ATHLETICS

PEV-115	Varsity Baseball	1 s.h.
PEV-120	Varsity Basketball	1 s.h.
PEV-130	Varsity Cross Country	1 s.h.
PEV-133	Varsity Track & Field	1 s.h.
PEV-140	Varsity Golf	1 s.h.
PEV-150	Varsity Soccer	1 s.h.
PEV-160	Varsity Softball	1 s.h.
PEV-170	Varsity Volleyball	1 s.h.
PEV-180	Varsity Wrestling	1 s.h.
PEV-215	Varsity Baseball II	1 s.h.
PEV-220	Varsity Basketball II	1 s.h.
PEV-230	Varsity Cross Country II	1 s.h.
PEV-233	Varsity Track & Field II	1 s.h.
PEV-240	Varsity Golf II	1 s.h.
PEV-250	Varsity Soccer II	1 s.h.
PEV-260	Varsity Softball II	1 s.h.
PEV-270	Varsity Volleyball II	1 s.h.
PEV-280	Varsity Wrestling II	1 s.h.

PHYSICAL EDUCATION/ACTIVITIES

PEA-100	Aerobics/Tae-Bo I	1 s.h.
PEA-107	Aerobic Circuit Training	1 s.h.
PEA-130	Downhill Skiing	1 s.h.
PEA-146	Physical Fitness I	1 s.h.
PEA-147	Physical Fitness I Lab	1 s.h.
PEA-174	Tennis I	1 s.h.
PEA-187	Weight Training I	1 s.h.
PEA-190	Yoga/Stretching I	1 s.h.
PEA-287	Weight Training II	1 s.h.
PEH-111	Personal Wellness	3 s.h.
PEH-140	First Aid	1 s.h.
PEH-144	Human Movement Science	3 s.h.
PEH-161	Introduction to Physical Education	2 s.h.
PEH-180	Rape Education and Self Defense	2 s.h.
PEH-191	Sports Nutrition	3 s.h.
PEH-221	Introduction to Leisure Services	3 s.h.
PEH-261	Physical Activity for Health and Fitness	3 s.h.
PEH-908	Cooperative Education Internship	1-3 s.h.
PET-110	Introduction to Athletic Training	2 s.h.
PET-135	Personal Trainer	3 s.h.

STUDENT SENATE/LOGOS

JOU-145	Logos	1 s.h.
SDV-195	Student Senate	1 s.h.

OTHER ELECTIVES

AGS-109	Animal Science I	3 s.h.
AGS-110	Animal Science I Lab	1 s.h.
AGS-209	Animal Science II	3 s.h.
AGS-210	Animal Science II Lab	1 s.h.
ANT-105	Cultural Anthropology	3 s.h.
ART-116	Graphic Design II	3 s.h.
ART-131	Digital Publication Design	3 s.h.
ART-143	Painting I	3 s.h.
ART-144	Painting II	3 s.h.
BIO-922	Field Studies in Biology	1-4 s.h.
EDU-236	Young Adult Literature	3 s.h.
ENG-221	Creative Writing	3 s.h.
HIS-254	American Indian History	3 s.h.
HIS-257	African American History	3 s.h.
HSV-152	Introduction to Counseling	3 s.h.
HSV-153	Professional Ethics	3 s.h.
HUM-139	British Life and Culture	3 s.h.
MAT-102	Intermediate Algebra	4 s.h.
MAT-103	Combined Algebra	5 s.h.
MLT-101	Introduction to Laboratory Science	2 s.h.
MLT-120	Urinalysis	3 s.h.
MUS-105	Introduction to Music Theory	2 s.h.
SDV-287	Phi Theta Kappa Leadership Development Studies	2 s.h.
SOC-150	Introduction to Human Services	3 s.h.
SOC-215	Prime for Life: Substance Abuse	1 s.h.
SOC-881	Social Responsibility and Community Service	2 s.h.

NOTE: ALL SPECIAL TOPICS COURSES, UNLESS OTHERWISE INDICATED, ARE ELECTIVE COURSES.

BUSINESS CAREER TECHNICAL

NOTE: UP TO 16 SEMESTER HOURS OF CAREER COURSES CAN BE USED AS ELECTIVE CREDIT. SEE COURSE DESCRIPTIONS FOR A COMPLETE LIST OF CAREER COURSES.

ACC-111	Introduction to Accounting	3 s.h.
ACC-161	Payroll Accounting	3 s.h.
ACC-135	Personal Income Tax	3 s.h.
ACC-311	Computer Accounting	3 s.h.
ADM-105	Introduction to Keyboarding	1 s.h.
ADM-108	Keyboarding Skill Development	1 s.h.
ADM-123	Document Formatting	3 s.h.
ADM-131	Office Calculators	1 s.h.
ADM-145	Advanced Desktop	3 s.h.
ADM-162	Office Procedures	3 s.h.
ADM-185	Legal Terminology and Transcription	2 s.h.
ADM-215	Medical Office Procedures	3 s.h.
BCA-100	Computer Literacy	1 s.h.
BCA-129	Basic Word Processing	2 s.h.
BCA-136	Advanced Word Processing	3 s.h.
BCA-152	Comprehensive Spreadsheets	3 s.h.
BCA-163	Microsoft Access	1 s.h.
BCA-170	Personal Information Management	2 s.h.
BCA-174	Basic Presentation Software	1 s.h.
BCA-184	Comprehensive Webpage Design Software	3 s.h.
BCA-185	Beginning Web Page Development	3 s.h.
BCA-215	Computer Business Applications	3 s.h.
BCA-259	Project Management Software	2 s.h.
BCA-601	Create a Website	1 s.h.
BCA-602	Microsoft Excel	1 s.h.
BCA-603	Microsoft Access for the Workplace	1 s.h.
BCA-729	Search Engine Optimization	1 s.h.
BCA-775	JavaScript Programming for the Web	1 s.h.
BCA-778	AJAX Basics	1 s.h.
BUS-107	Business Careers	1 s.h.
BUS-121	Business Communications	3 s.h.
BUS-122	Emerging Business Practices and Technologies	3 s.h.
BUS-130	Introduction to Entrepreneurship	3 s.h.
BUS-134	The Successful Entrepreneur	2 s.h.
BUS-136	Creativity, Innovation and Opportunity Analysis	2 s.h.
BUS-142	Planning the Entrepreneurial Venture	3 s.h.
BUS-159	Internet Law, Copyright and Computer Ethics	1 s.h.
BUS-255	60-Hour Real Estate Prelicense	3 s.h.
BUS-298	Seminar in Entrepreneurship	3 s.h.
CFR-100	Computer Forensics I	3 s.h.
CFR-150	Computer Forensics II	3 s.h.
CIS-119	Introduction to Programming	4 s.h.
CIS-155	Introduction to Video Game Testing	3 s.h.
CIS-156	Testing Concepts	4 s.h.
CIS-210	Web Development I	3 s.h.
CIS-232	Web Development II	1 s.h.
CIS-246	Intermediate Testing Concepts	4 s.h.
CIS-275	Advanced Testing Concepts	2 s.h.

CIS-620	Bot Programming/Game Applic Automation in Windows	1 s.h.
GRA-140	Digital Imaging	3 s.h.
GRA-151	Web Design	3 s.h.
GRA-158	Web Multimedia	3 s.h.
GRA-166	Web Animation	3 s.h.
GRA-173	Typography	3 s.h.
GRA-194	Design Studio Applications	3 s.h.
GRA-299	Electronic Portfolio	3 s.h.
GRA-761	Dreamweaver Basics	1 s.h.
GRA-762	Flash Basics	1 s.h.
GRA-763	Fireworks Basics	1 s.h.
GRA-764	Illustrator Basics	1 s.h.
GRA-765	InDesign Basics	1 s.h.
GRA-766	Photoshop Basics	1 s.h.
HCM-103	ServSafe Food Safety	1 s.h.
HCM-135	Food Production	4 s.h.
HCM-205	Dinner and Front of the House	3 s.h.
HCM-232	Culinary Nutrition	2 s.h.
HCM-236	Culinary Arts and Book of Yields	2 s.h.
HCM-239	Customer Service	2 s.h.
HCM-283	Controlling Food Service Costs	2 s.h.
HCM-325	Human Resources Management and Supervision	2 s.h.
HCM-607	Hospitality and Restaurant Management	2 s.h.
HIT-210	Basic Medical Insurance/Coding	2 s.h.
HIT-246	Coding I (ICD-9)	3 s.h.
HIT-247	Coding II (CPT)	3 s.h.
HIT-630	Medical Transcription I	3 s.h.
HIT-631	Medical Transcription II	3 s.h.
HIT-632	Medical Transcription III	3 s.h.
HSC-120	Medical Terminology I	3 s.h.
HSC-121	Medical Terminology II	3 s.h.
HSC-144	Basic Pharmacology	2 s.h.
HSC-155	Laboratory Tests	2 s.h.
MKT-160	Principles of Retailing	3 s.h.
MKT-170	Retail Buying	3 s.h.
NET-112	Home/Office Computer Management	3 s.h.
NET-113	IT Essentials I	4 s.h.
NET-117	Home/Office Network Management	3 s.h.
NET-133	IT Essentials II	4 s.h.
NET-213	CISCO Networking	4 s.h.
NET-215	CISCO Network Security	4 s.h.
NET-223	CISCO Routers	4 s.h.
NET-261	Virtualization/Cloud Operations	3 s.h.
NET-262	Hardening the Infrastructure	4 s.h.
NET-290	Information Technology Specialist Capstone	5 s.h.
NET-295	Information Assurance and Security Capstone	5 s.h.
NET-304	Windows Workstation Operating Systems	4 s.h.
NET-314	Windows Server	4 s.h.
NET-324	Windows Network Management	4 s.h.
NET-613	Information Data Assurance	3 s.h.
NET-635	Ethical Hacking	3 s.h.
NET-743	Fundamental Project Management	4 s.h.
NET-782	Computer Users Support	3 s.h.

ED-to-GO COURSES

(limited to 3 s.h. maximum of these courses)

BCA-182	Introduction to Microsoft Publisher	1 s.h.
BCA-270	Learn to Buy and Sell on eBay	1 s.h.
BCA-280	Introduction to Quickbooks	1 s.h.

DEVELOPMENTAL

(Does not count toward Associate Degree)

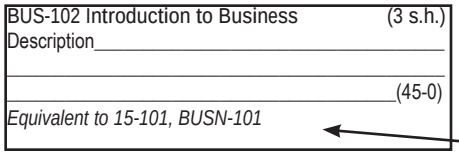
ENG-014	Mastery Writing	1-4 s.h.
ENG-015	Elements of Writing	4 s.h.
ENG-046	Communication Through Reading and Writing Enrichment	4 s.h.
ENG-047	Communication Through Reading and Writing II, Enrich.	4 s.h.
ENG-068	Developmental Writing	1 s.h.
MAT-030	Enrich Math I	2 s.h.
MAT-031	Enrich Math II	2 s.h.
MAT-044	Mastery Math	1-6 s.h.
MAT-053	Pre-Algebra	4 s.h.
MAT-063	Elementary Algebra	4 s.h.
MAT-088	Math for Liberal Arts Supplement	1 s.h.
MAT-089	Survey of Mathematics	3 s.h.
RDG-015	Power Reading	2 s.h.
SDV-065	Personal Management	3 s.h.
SDV-066	Career Decisions	3 s.h.
SDV-068	Skills for Job Seekers	3 s.h.

PLEASE CHECK WITH A COUNSELOR TO VERIFY YOUR DEGREE REQUIREMENTS!

NOT ALL COURSES ARE OFFERED EVERY SEMESTER.

COURSE CATALOG NUMBERING SYSTEM

The three-letter prefix stands for the discipline or department of study.
Three numbers:
000-099 = Developmental Courses
100-899 = College Transfer and Career/ Technical Courses
900-999 = Special Topics** and OJT



ACC	Accounting	HCR	Heating and Air Conditioning
ADM	Administrative Assistant	HIS	History
ADN	Associate Degree Nursing	HIT	Health Information Technology
AGA	Agriculture - Agronomy	HSC	Health Sciences
AGB	Agriculture - Farm Management	HSV	Human Services
AGE	Agriculture - Equine	HUM	Humanities
AGM	Agriculture - Mechanics	IND	Industrial Technology
AGP	Agriculture - Precision Agriculture	JOU	Journalism
AGS	Agriculture - Animal Science	LIT	Literature
ANT	Anthropology	MAP	Medical Assistant
ART	Art	MAS	Masonry
AUT	Automotive Technology	MAT	Mathematics
BCA	Business Computer Application	MFG	Manufacturing
BIO	Biology	MGT	Management
BMA	Building Maintenance	MKT	Marketing
BUS	Business	MLT	Medical Lab Tech
CAD	Computer-Aided Drafting	MUA	Music - Applied
CFR	Computer Forensics	MUS	General Music
CHM	Chemistry	NET	Computer Networking
CIS	Computer Programming	PEA	Physical Education Activities
CON	Construction	PEC	Coaching Officiating
CRJ	Criminal Justice	PEH	General Physical Education and Health
DRA	Film and Theatre	PET	Physical Education Training
DSL	Diesel	PEV	Intercollegiate Physical Education
ECE	Early Childhood Education	PHI	Philosophy
ECN	Economics	PHR	Pharmacy Technician
EDU	Education	PHS	Physical Science
EGR	Engineering	PHY	Physics
EGT	Engineering Technology	PNN	Practical Nursing
ELT	Electronics	POL	Political Science
EMS	Emergency Medical Services	PSY	Psychology
ENG	English Composition	PTA	Physical Therapist Assistant
ENV	Environmental Science	RAD	Radiologic Technology
FIN	Finance	RDG	Reading
FIR	Fire Science	SDV	Student Development
FLS	Foreign Language - Spanish	SOC	Sociology
GEO	Geography	SPC	Speech
GRA	Graphic Communications	WEL	Welding
HCM	Hospitality, Culinary & Management	WTT	Wind Energy & Turbine Technician

**XXX-949A-C Special Topics 1-3 s.h.

Special Topics courses are offered in each discipline. Students may submit a proposal for a special project to an instructor. With the instructor's approval and the consent of the Division Chair and the Vice President for Academic and Student Affairs, credit may be given upon satisfactory completion of the project. Course may be repeatable for credit. (15 to 45-0) *Equivalent to XXXX-900A-C.* NOTE: All Special Topics courses, unless otherwise indicated, are elective credit.

Course Descriptions--

ACC-111 Introduction to Accounting (3 s.h.)
Prerequisite: None. This course provides the student with a basic understanding of the accounting cycle and basic accounting rules along with the process of collecting and using financial information in a business. (45-0) *Equivalent to 15-109, ACCT-101.*

ACC-121 Principles of Accounting I (3 s.h.)
A financial accounting course: analyzing transactions, matching principle, adjusting and closing entries, financial statements, receivables, inventories, fixed assets and intangible assets, current liabilities, corporations (capital stock transactions, dividends, income and taxes, stockholder's equity, investment in stocks), bonds payable, investment in bonds. (45-0) *Equivalent to 15-150, ACCT-120.*

ACC-122 Principles of Accounting II (3 s.h.)
Prerequisite: ACC-121, Principles of Accounting I, or equivalent. A managerial accounting course that covers Statement of Cash Flows, financial statement analysis, job order and process cost systems, cost behavior, budgeting, standard costing, differential analysis and product pricing, capital investment analysis, activity-based costing, and just-in-time manufacturing. Emphasis is on management's use of accounting information. (45-0) *Equivalent to 15-151, ACCT-121.*

ACC-135 Personal Income Tax (3 s.h.)
Prerequisite: None. Personal Income Tax is a course that introduces the student to the fundamentals of federal income tax regulations. Students engage in an in-depth study of the preparation of the individual income tax return. Emphasis is placed on the preparation of federal returns for individuals. The course is designed to help the student develop a broad understanding of the tax laws as they relate to the individual. Course content includes the examination of regulations pertaining to general tax return preparation and filing federal income tax returns for the individual. Students will prepare a variety of tax forms and schedules, including the calculation of deductions and credits. Annual tax law changes are also examined. (45-0)

ACC-161 Payroll Accounting (3 s.h.)
Prerequisite: ACC-111, Introduction to Accounting or ACC-121, Principles of Accounting I with a grade of C or higher. A study of basic business taxes. Emphasis on payroll taxes including social security taxes, income taxes, and unemployment taxes; completion of quarterly and annual reports and a payroll simulation project. (45-0) *Equivalent to 15-155, ACCT-105.*

ACC-311 Computer Accounting (3 s.h.)
Prerequisite: ACC-111, Introduction to Accounting or ACC-121, Principles of Accounting I with a grade of C or higher. Designed to provide students with realistic experience with automated accounting consisting of five systems: general ledger, accounts payable, accounts receivable, depreciation, and payroll. Students will simulate taking an accounting position in a company already using a computerized accounting system. (45-0) *Equivalent to 15-160, ACCT-106.*

ADM-105 Introduction to Keyboarding (1 s.h.)
Prerequisite: None. This course covers the development of keyboarding techniques using the touch method on the computer keyboard to learn/review the alphabetic keys. The keyboarding goal is a minimum rate of 20 words a minute with 3 or fewer errors on a two-minute timing. Students with little or no keyboarding skill would begin at this level. This course has been designated as a pass/no pass course. Also Open Entry. (0-30) *Equivalent to BUSN-102, 15-112.*

ADM-108 Keyboarding Skill Development (1 s.h.)
This course covers the development of keyboarding techniques using the touch method on the computer keyboard to learn/review the alphabetic, numeric, and symbol keys. The keyboarding goal is a minimum rate of 30 words a minute with 3 or fewer errors on a three-minute timing. This course has been designated as a pass/no pass course. Also Open Entry. (0-30) *Equivalent to 15-113, BUSN-103.*

ADM-123 Document Formatting (3 s.h.)
Prerequisite: Keyboarding skill of 30 wam (words a minute) with 3 or fewer errors on a 3-minute timed writing is recommended. This course covers the continued development of speed and accuracy on the alphabetic, numeric, and symbol keys. Students develop skills in formatting, producing, and proofreading the following documents: memos, letters, envelopes, tables, reports, and other miscellaneous business documents. (30-30) *Equivalent to 15-107, OFFC-701.*

ADM-131 Office Calculators (1 s.h.)
Study of the 10-key, electronic calculator following current trends in office technology. Course emphasizes use of the touch method, explains common calculator features, and practices mathematical skills necessary in business calculations. This course has been designated as a pass/no pass course. (5-20) *Equivalent to 15-110, OFFC-702.*

ADM-145 Advanced Desktop (3 s.h.)
Prerequisite: BCA-101, Introduction to Computers and Information Systems. Advanced topics in desktop computer applications will be studied in this course. Students will also examine integrated software packages such as Microsoft Office Professional in this class. They will utilize integrated software to solve several business problems presented to them allowing them to gain an understanding of integrated software, as well as other desktop applications, through hands-on experience. The course will be project-based, providing the student with a collaborative environment. (30-30) *Equivalent to 15-176, COMP-206.*

ADM-162 Office Procedures (3 s.h.)
Prerequisite: BCA-129, Basic Word Processing; and BUS-121, Business Communications. Office procedures and techniques necessary to perform general office duties. Includes using a word processor, developing transcription skills, using the Internet to access information, filing, handling telephone services, discussing professionalism, applying grammar rules, and taking care of general office administration. Students are expected to spend time outside of class working in the computer lab. (45-0) *Equivalent to 15-218, OFFC-830.*

ADM-185 Legal Terminology and Transcription (2 s.h.)
Prerequisite: BCA-129, Basic Word Processing; and BUS-121, Business Communications. This course is designed to help students learn the activities performed by a legal office professional in a law firm or other legal setting where documents are converted from the spoken word to printed form. This course prepares students to transcribe the most common legal documents as well as empha-

sizes legal terminology. Upon completion of this course, students will have a greater knowledge of the terminology, guidelines, and formatting skills needed to prepare authentic, accurate legal documents. (30-0)

ADM-215 Medical Office Procedures (3 s.h.)
Prerequisite: BCA-129, Basic Word Processing, and BUS-121, Business Communications. Management of a medical office that includes preparing correspondence and patient records, using the Internet to access information, filing, handling telephone services, making and keeping appointments, developing transcription skills, composing letters, discussing professionalism, applying grammar rules, and taking care of general office duties. Also includes medical ethics and etiquette, medical law, and use of a computer for word processing. Students are expected to spend time outside of class working in the computer lab. (45-0) *Equivalent to 15-259, OFFC-850.*

ADN-100 Nursing I (8 s.h.)
Prerequisites: BIO-186, Microbiology, and ENG-105, Composition I, or ENG-102, Composition and Speech I. Corequisites: BIO-206, Anatomy and Physiology I with Lab; PSY-121, Developmental Psychology; and PSY-111, Introduction to Psychology. Nursing I includes the philosophy and conceptual framework of the NIACC Associate Degree Nursing program. The course includes basic concepts related to legal and ethical aspects of nursing, nursing roles, and current trends in health care. The student is introduced to wellness-illness theory, the therapeutic nurse-patient relationship, and effective communication techniques. An introduction to caring concepts is also included. Nursing I utilizes the nursing process with emphasis on assessment and nursing diagnosis in meeting client needs resulting from impairments relating to safety and comfort throughout the life span. Pharmacological concepts, diet modification, psychosocial concepts, and health maintenance are integral considerations in the progressive development of the student's knowledge and skills. Clinical experiences include opportunities to apply nursing roles and the nursing process in long-term care, medical-surgical, and community settings. (75-60-45)

ADN-103 Nursing II (10 s.h.)
Prerequisites: ADN-100, Nursing I; BIO-186, Microbiology; BIO-206, Anatomy and Physiology I with Lab; ENG-105, Composition I; PSY-111, Introduction to Psychology; and PSY-121, Developmental Psychology. Corequisites: BIO-151, Nutrition, and BIO-207, Anatomy and Physiology I with Lab. Nursing II utilizes the nursing process with emphasis on planning in meeting client needs resulting from impairments relating to self-esteem and mobility throughout the life span. Pharmacological concepts, diet modification, psychosocial concepts, and health maintenance are integral considerations in the progressive development of the student's knowledge and skills. Clinical experiences include opportunities to apply nursing roles and the nursing process in maternal-newborn, pediatrics, medical-surgical, and community settings. (105-135) *Equivalent to 90-111, ADNS-703.*

ADN-104 Nursing IIA (1 s.h.)
Prerequisite: Graduate of approved Practical Nursing Program with a cumulative 3.0 GPA in previous nursing courses; hold current, unencumbered practical nurse license, plus successful completion of all freshman nonnursing courses. Provides introduction to program, differentiates roles of LPN and RN, reviews nursing process, presents specific communication techniques, discussion of psychiatric concepts, and reviews content in laboratory setting. Students must obtain a passing grade in this course to continue into Nursing III, ADN-603. If a passing grade is not attained, the student will be required to register for Nursing II, ADN-103. This course has been designated as a pass/no pass course. (14-2) *Equivalent to 90-113, ADNS-704*.

ADN-603 Nursing III (12 s.h.)
Prerequisite: ADN-103, Nursing II; or ADN-104, Nursing IIA, or consent of Associate Degree Nursing faculty, plus all freshman year nonnursing courses. Nursing III utilizes the nursing process with emphasis on implementation in meeting client needs resulting from impairments relating to interpersonal interaction, oxygenation, and nutrition throughout the life span. Pharmacological concepts, diet modification, psychosocial concepts, and health maintenance are integral considerations in the progressive development of the student's knowledge and skills. Clinical experiences will include opportunities to apply nursing roles and the nursing process in a variety of care settings. (105-225) *Equivalent to 90-210, ADNS-801.*

ADN-604 Nursing IV (12 s.h.)
Prerequisite: ADN-603, Nursing III, or consent of Associate Degree Nursing faculty, plus SOC-110, Introduction to Sociology. Nursing IV utilizes the nursing process with emphasis on evaluation in meeting client needs resulting from impairments relating to nutrition, elimination, and sensory stimulation throughout the life span. Pharmacological concepts, diet modification, psychosocial concepts, and health maintenance are integral considerations in the progressive development of the student's knowledge and skills to meet the diverse needs of the client. Concepts of management, legal, and ethical aspects of the nursing profession and issues related to current trends are presented. Clinical experiences will focus on clients with complex needs. The management experience is the culmination of the student's academic and clinical education in which the student will have an opportunity to care for a group of clients and apply basic skills in leadership and conflict management. Clinical experiences will include opportunities to apply nursing roles and the nursing process in a variety of care settings. (105-225) *Equivalent to 90-211, ADNS-802.*

AGA-114 Principles of Agronomy (3 s.h.)
Topics covered include: plant anatomy and physiology; plant classification and ID; pest classification and ID; and pesticides, pest management, application equipment, calibration, laws/regulations. Students will take the Iowa Core Manual examination as a requirement for this course. (38-15) *Equivalent to 90-160, AGAS-701.*

AGA-154 Fundamentals of Soil Science (3 s.h.)
Introduction to the physical, chemical, and biological properties of soils with an emphasis on the functions of the soil as a medium to support plant life. A review of the sources and functions of major and minor plant elements, fertilizers and their properties, soil acidity, liming materials, and soil conservation. (38-15) *Equivalent to 90-186, AGAS-703.*

AGA-852 Principles of Crop Production (3 s.h.)
Production and management practices for corn, soybeans, small grains, and legume crops common to North Iowa agriculture. (38-15) *Equivalent to 90-161, AGAS-702.*

AGA-855 Site-Specific Crop Management (2 s.h.)
Prerequisite: AGA-154, Fundamentals of Soil Science, or its equivalent. Course covers advanced soil management. (30-0) *Equivalent to 92-261, AGPS-702.*

AGA-860 Soils and Crop Management (2 s.h.)
Prerequisite: AGA-154, Fundamentals of Soil Science, or its equivalent. Advanced plant nutrition, soil fertility, and nutrient management. (30-0) *Equivalent to 90-282, AGAS-801.*

AGB-101 Agricultural Economics (3 s.h.)
This course is designed for students seeking an Associate in Applied Science Degree in Agriculture. Students will study the role of agriculture in the American economy. Basic economic concepts, the composition and pricing of agricultural products, government and monetary policy will be discussed. A study of this country's agricultural economic policies with a look at how other countries' agricultural economic policies affect us. The economic decision-making process will be taught built upon the micro and macro management functions. (45-0) *Equivalent to 90-183, AGBS-710.*

AGB-213 Ag Real Estate Evaluation (2 s.h.)
Farm appraisal is the systematic process of classifying and evaluating the characteristics of a farm in order to make a well-reasoned judgment of its value. This course provides students the opportunity to develop an understanding of real estate value and the application of the appraisal process to estimating the market value of agricultural and rural real estate. (30-0) *Equivalent to 92-189, AGBS-812.*

AGB-338 Salesmanship and Advertising (2 s.h.)
This course is designed for students seeking an Associate in Applied Science Degree in Agriculture. Sales presentations and advertising setups of agricultural goods and services will serve as a basis of discussion in this course. Students will study techniques of selling and advertising of agricultural goods and services, and have a firsthand chance to sell products to student/consumers during the course of the semester. (30-0) *Equivalent to 90-189, AGBS-815.*

AGB-436 Grain Merchandising (2 s.h.)
Elements of producer marketing of major Midwest crops with emphasis on formulating marketing goals and plans. Marketing tools, futures and option markets, speculation, hedging, and risk management. (30-0) *Equivalent to 90-185, AGBS-801.*

AGB-438 Ag Futures and Futures Options (2 s.h.)
Prerequisite: AGB-436, Grain Merchandising. Advanced commodity marketing concepts, principles, and terminology. (30-0) *Equivalent to 92-263, AGPS-820.*

AGB-465 Ag Finance Management (2 s.h.)
Prerequisite: ACC-111, Introduction to Accounting. Principles of farm management. Emphasis is given to decision making, implementation, and control in farm operations using economic principles, farm records, enterprise analysis, financial reports, and investment analysis procedures. (30-0) *Equivalent to AGBS-810, 90-285.*

AGC-190 Skills and Safety in Agriculture (1 s.h.)
This course is designed to acquaint the student with the proper personal and shop safety procedures needed to function in an agricultural lab setting. In addition to the safety, students will also receive instruction on first aid in an emergency situation, as well as computing skills needed to be successful in an agricultural setting. (7.5-15)

AGC-314 Leadership in Agriculture (2 s.h.)
Prerequisite: Successful completion of the first year Agriculture Program. Develop skills in parliamentary procedure, business meeting agendas, techniques of delegation, applied communication skills, organization structure and job seeking skills. Emphasis will also be placed on salaries, benefits, retirements, personal finance, and other human resource items deemed viable for today's workplace. (30-0)

AGC-420 Issues in Agriculture (3 s.h.)
Studies the policies and issues that affect American agriculture and rural society. Explores the methods of accessing those who form agricultural policy and economic/social systems. Focuses on agricultural/ environmental laws, regulations and technologies driving current policymaking, and how they impact stakeholders in a rapidly changing agricultural economy. Prepares students to think critically within today's global economy and changing workforce. (45-0)

AGM-120 Basic Agricultural Mechanics (2 s.h.)
Maintenance and management of agricultural machinery and power units. (23-45) *Equivalent to 92-273, AGMS-701.*

AGP-331 Precision Agriculture (2 s.h.)
Prerequisite: AGA-114, Principles of Agronomy, AGA-852, Principles of Crop Production, and demonstrated computer proficiency or permission from instructor. Precision agriculture is a management strategy that uses information technologies to bring data from multiple sources to bear on decisions associated with crop production. It should be viewed as a developing management system and not simply as an application of technology. GPS is considered the enabling tool for the entire Precision Agriculture system. GPS is vital for yield monitoring, soil sampling, measuring field boundaries, and variable-rate application of crop nutrients and crop protection products. Students will be introduced to this and to other important technologies, with hands-on experience being provided using GPS receivers, scouting, navigation tools, and mapping software. (15-30) *Equivalent to AGPS-701, 90-267, AGP-333.*

AGS-109 Animal Science I (3 s.h.)
This course is designed to provide students with a general overview of the livestock industry. It identifies the ways in which domestic animals serve the basic needs of humans for food, fiber, shelter, protection, fuel and emotional well-being. Students will develop an understanding of and be able to apply the basic principles of animal selection, breeding, genetics, feeding, health, and husbandry practices. As a student, you will become familiar with the economic and social issues that confront the livestock industry. (45-0) *Equivalent to 70-112, AGSS-701.*

AGS-110 Animal Science I Lab (1 s.h.)
This course incorporates laboratory experiences designed to help students develop livestock husbandry skills, livestock facilities construction and maintenance skills, related livestock technology use skills, and group problem solving skills. This course is designed to be a companion for AGS-109, Animal Science I, and will provide students with hands-on experiences in each of the Animal Science units of study. Students will be able to apply the basic principles

of animal selection, breeding, feeding, health, and husbandry practices. Students will coordinate specific animal improvement and marketing activities associated with the livestock species at NIACC. (0-30) *Equivalent to AGSS-701L.*

AGS-209 Animal Science II (3 s.h.)
This course applies advanced principles of livestock production and management. Areas of emphasis include: a review of animal husbandry practices, which result in greater performance and profit; livestock facilities requirements; production trends, animal health, and nutritional requirements for livestock produced in the Midwest; emphasis on swine and beef cattle production. (45-0) *Equivalent to 70-212, AGSS-702.*

AGS-210 Animal Science II Lab (1 s.h.)
This course incorporates laboratory experiences designed to help students develop livestock husbandry skills, livestock facilities construction and maintenance skills, related livestock technology use skills, and group problem solving skills. This course is designed to be a companion for AGS-209, Animal Science II, and will provide students with hands-on experiences in each of the Animal Science units of study. Students will be able to apply the basic principles of animal selection, breeding, feeding, health, and husbandry practices. Students will coordinate specific animal improvement and marketing activities associated with the livestock species at NIACC. (0-30) *Equivalent to AGSS-702L.*

AGS-227 Beef Cattle Production (2 s.h.)
This course is designed to help students identify the primary biological principles that contribute to raising productive beef cattle, to integrate biological and economic principles that comprise effective management decisions needed to produce profitable cattle, and to enhance the understanding and communication between all segments of the beef industry. The course material identifies the primary management principles and practices needed by commercial and seed stock producers to raise productive and profitable cattle that can meet the specifications needed by the beef industry. (30-0) *Equivalent to AGSS-810, 90-293.*

AGS-317 Animal Nutrition (2 s.h.)
Fundamentals of nutrition that deal with monogastric and ruminant animals. Materials covered will enable students to identify sources, composition and functions of various feedstuffs. Students will learn to evaluate and formulate livestock rations and will be able to make feeding recommendations based upon varying livestock, environment and management conditions. (30-0) *Equivalent to 90-171, AGSS-710.*

AGS-506 Swine Production (2 s.h.)
This course applies advanced principles of swine production and management. Areas of emphasis include: a review of swine husbandry practices, which result in greater performance and profit; livestock facilities requirements and maintenance, animal health, reproduction, and nutritional requirements. Students will have the opportunity to apply skills learned in the classroom to the swine operation at the NIACC Farm Lab. (30-0) *Equivalent to 90-169, AGSS-720.*

AGS-811 Animal Technologies (1 s.h.)
This course is designed for students seeking an Associate of Science Degree in Agriculture. Students will be involved with techniques and technologies that enable better management decision-making and improved economic efficiency of agricultural operations. Included in the course are Animal Reproductive Technologies, Embryo Transfer, Estrus & Ovulation Synchronization, Electronic Heat Detection, Quality Assurance Evaluation, and Food Safety. (10-15) *Equivalent to AGSS-816.*

ANT-105 Cultural Anthropology (3 s.h.)
This course embraces cultures from all continents; highlights major human subsistence patterns; and illustrates human adaptation to the environment, from the beginning of human history to the present. Individual studies enable students to experience cultures in-depth. The student's goal is to understand one's own culture from a historical perspective and to analyze the forces of today in terms of how those forces may affect the future of earth and humankind. (26-38) *Equivalent to SOCS-115, 80-160.*

ART-101 Art Appreciation (3 s.h.)
An introductory course designed to give a better understanding of art as an important force in present-day living. Aims to develop an appreciation of art and creative thinking through lectures, readings, and visual aids. Experimentation with a variety of tools, techniques, and materials is a meaningful part of the course. Recommended for nonart majors. Entry-level course. (45-0) *Equivalent to 10-101, ARTS-101.*

ART-102 Art for Elementary Education (3 s.h.)
This course is designed for elementary education majors or those who are planning to work with children pre-K to grade 6. Focuses on instructional planning for art studio and response activities with emphasis on interdisciplinary and multicultural approaches. Components are artistic development of children, peer teaching, field observation, and foundations of art education. (45-0) *Equivalent to 10-112, ARTS-103.*

ART-115 Graphic Design (3 s.h.)
Creative problem solving through the exploration of aesthetic and technical aspects of graphic design using computer-aided design software. (20-50) *Equivalent to 10-202, ARTS-202.*

ART-116 Graphic Design II (3 s.h.)
Prerequisite: ART-115, Graphic Design. As a continuation of ART-115, Graphic Design, this course will emphasize the conceptual skills necessary to effectively integrate the principles of visual perception to design projects. Emphasis will be given to the role of color as it relates to visual communication. The theoretical, psychological and cultural aspects of color will be studied in the context of their application to appropriate graphic design decisions. Design software such as but not limited to Adobe InDesign, Photoshop, Illustrator and QuarkXpress will be utilized. (45-0)

ART-120 Two-Dimensional Design (3 s.h.)
Students/artists explore the process of visual problem solving through participation in class critiques of individual projects. Perception and structure: exploring visual order emphasizing two-dimensional concepts. (20-50) *Equivalent to 10-201, ARTS-201.*

ART-123 Three-Dimensional Design (3 s.h.)
Beginning experiences in conceiving and making in three dimensions; emphasis on interaction between work and idea, skills in

art making, and common vocabulary of art. An exploration of aesthetic and practical considerations of working three-dimensionally. (45-0)

ART-131 Digital Publication Design (3 s.h.)
Prerequisite: ART-115, Graphic Design, and GRA-173, Typography, or permission of instructor. Utilizing the skills gained in previous courses, Digital Publication Design will explore how to use conceptual design skills to systematically integrate photographs, type and illustration using page composition software, such as Adobe InDesign. The student will achieve an understanding of printing processes, pre-press, and post-press production, as well as paper specification. (45-0)

ART-133 Drawing (3 s.h.)
The development of visual perception in objective and subjective representation. Study of line, form, texture, and value in a variety of media stressing an individual's creative development. Entry-level course. (20-50) *Equivalent to 10-120, ARTS-120.*

ART-134 Drawing II (3 s.h.)
Prerequisite: ART-133, Drawing I. A continuation of Drawing I, with a greater emphasis on self-expression. (45-0)

ART-143 Painting I (3 s.h.)
Prerequisite: ART-120, Two-Dimensional Design; ART-133, Drawing; or ART-101, Art Appreciation. Beginning course planned to familiarize the student with the basic materials and tools of painting, the elements of pictorial organization, and the individual's creative development. Each student is encouraged to cultivate his or her own visual vocabulary. (45-0) *Equivalent to 10-210, ARTS-210.*

ART-144 Painting II (3 s.h.)
Prerequisite: ART-143, Painting I. Continuation of ART-143. Independent research, reading, and personal exploration of media and techniques. (45-0) *Equivalent to 10-211, ARTS-211.*

ART-173 Ceramics (3 s.h.)
An introductory course involving hand-building, wheel-throwing, glazing, and firing. Slides, lectures, and demonstrations. Ceramics facilities are located in the MacNider Museum, Mason City. (20-50) *Equivalent to 10-130, ARTS-130.*

ART-187 Creative Photography (3 s.h.)
An investigation into the relationship of basic photographic techniques to design, perception, and aesthetics. Each student is encouraged to cultivate his or her own visual vocabulary while working on photographic projects. (20-50) *Equivalent to 10-150, ARTS-150.*

ART-188 Creative Photography II (3 s.h.)
Prerequisite: ART-187, Creative Photography. Emphasis on exploring photographic materials in the development of a personal vision. Technical subject covered: lighting, advanced printing, and camera techniques. Only offered spring semesters. (20-50) *Equivalent to 10-151, ARTS-151.*

ART-203 Art History I (3 s.h.)
Prerequisite: None. This course is *not* required as a prerequisite for ART-204, Art History II. The study of the development of the visual arts of western civilization including painting, sculpture, architecture, and crafts from prehistoric origins through Gothic. (45-0) *Equivalent to 10-102, ARTS-104.*

ART-204 Art History II (3 s.h.)
The study of the development of the visual arts of western civilization including painting, sculpture, architecture, crafts, and photography from the Renaissance through the present time. (45-0) *Equivalent to 10-103, ARTS-105.*

AUT-104 Introduction to Automotive Technology (3 s.h.)
Corequisite: IND-190, Skills and Safety in Industry. Instruction in service procedures, information and equipment. Classroom and laboratory activities emphasize routine vehicle maintenance in the care of fluids, tires, batteries, lighting, belts, hoses, filters, and cooling systems. (30-60) *Equivalent to AUTO-701, 98-144.*

AUT-164 Automotive Engine Repair (4 s.h.)
Prerequisite: AUT-104, Introduction to Automotive Technology. Instruction/laboratory procedures for engine repair diagnosis, removal, disassembly, inspection, overhaul and reassembly of automotive and/or light truck engines according to manufacturer's specifications. (15-90)

AUT-195 Internal Combustion Engine (2 s.h.)
Prerequisite: IND-190, Skills and Safety in Industry. Understand the basic operation and design of today's internal combustion engine. Learn engine construction and classifications as well as configurations and fuel types. (15-30)

AUT-204 Automotive Automatic Transmissions and Transaxles (4 s.h.)
Prerequisite: ELT-115, Electronic Concepts, or instructor's permission. Instruction in diagnosis, maintenance, and overhaul of major automatic transmissions and transaxles in various makes of automobiles. (15-90)

AUT-303 Automotive Manual Drive Trains and Axles (3 s.h.)
Corequisite: AUT-104, Introduction to Automotive Technology. Instruction/laboratory procedures for servicing, diagnosing, and repairing/replacing standard transmissions and clutches, transaxles, and differentials. (15-90) *Equivalent to AUTO-712, 98-149.*

AUT-404 Automotive Suspension & Steering (4 s.h.)
Prerequisites: AUT-104, Introduction to Automotive Technology, and IND-190, Skills and Safety in Industry. Instruction/laboratory service procedures for inspection, adjustments, alignment, repair and/or replacement of suspension and steering components. (15-90)

AUT-504 Automotive Brake Systems (4 s.h.)
Prerequisites: AUT-104, Introduction to Automotive Technology, and IND-190, Skills and Safety in Industry. Instruction in the theory and operating principles of drum, disc, hydraulic and anti-lock brake systems (ABS). Laboratory procedures for inspecting, testing, diagnosing, repairing and/or replacing conventional, power, and ABS brake system components. (15-90)

AUT-612 Automotive Electrical Systems I (3 s.h.)
Corequisite: AUT-104, Introduction to Automotive Technology. Instruction in the electrical and electronic principles and testing

procedures as applied to automotive circuits and microprocessors. Laboratory procedures to include the utilization of wiring schematics and test equipment for diagnosing and repairing instrumentation, electrical accessory, and lighting systems. (30-60) *Equivalent to 98-147, AUTO-710.*

AUT-657 Automotive Electrical Systems II (5 s.h.)
Prerequisite: AUT-612, Automotive Electrical Systems I. Strong mechanical aptitude. Instruction in operation, service, and troubleshooting of automotive electronic/electrical circuits and systems; to include starting, charging, and ignition systems. (45-60) *Equivalent to AUTO-810, 98-209.*

AUT-703 Automotive Heating/Air Conditioning (3 s.h.)
Prerequisite: ELT-115, Electronic Concepts, with a grade of C or higher. Instruction in theory and operation of automotive heating and air-conditioning systems including heat transfer and pressures. Laboratory procedures for servicing and maintaining heating and air conditioning systems and controls utilizing approved refrigerant recovery/recycling equipment and methods. (30-60) *Equivalent to AUTO-715, 98-133.*

AUT-832 Automotive Fuel Delivery Systems (3 s.h.)
Prerequisite: ELT-115, Electronic Concepts, with a grade of C or higher. Strong mechanical aptitude. Instruction in the fundamentals of operation and service of complete fuel systems, including storage, delivery, and metering. (30-30) *Equivalent to AUTO-802, 98-208.*

AUT-840 Automotive Computerized Controls (3 s.h.)
Prerequisite: ELT-115, Electronic Concepts, with a grade of C or higher. Instruction in electronics theory as it applies to automotive computers, sensors, and control devices, with emphasis on developing an organized approach to diagnostics. (30-30) *Equivalent to AUTO-720, 98-180.*

AUT-858 Advanced Automotive Engine Performance (4 s.h.)
Prerequisite: AUT-840, Automotive Computerized Controls, or instructor's permission. Strong mechanical aptitude. Instruction in the theory and operating principles of automotive computerized engine control systems and other advanced electronic systems with emphasis on utilizing relevant vehicle data and service information, lab and oscilloscopes, DVOMs, and scan tools to test/diagnose/repair system malfunctions. (15-90)

AUT-865 Automotive Engine Performance Testing (5 s.h.)
Prerequisite: AUT-840, Automotive Computerized Controls. Strong mechanical aptitude. Instruction in the theory and operating principles of automotive emission systems with emphasis on utilizing relevant vehicle data and service information, lab and oscilloscopes, DVOMs, and scan tools to test/diagnose/repair system malfunctions. (45-90) *Equivalent to AUTO-820, 98-211.*

BCA-100 Computer Literacy (1 s.h.)
Prerequisite: None. This course is intended to familiarize the student with Windows-based personal computers including introductory file control and management using Windows, exposure to different software, and basics on how to use e-mail and the Internet. Students with little or no computer background are encouraged to take this course. This course has been designated as a pass/no pass course. (0-30) *Equivalent to 15-114, COMP-100.*

BCA-101 Introduction to Computers and Information Systems (3 s.h.)
Emphasis on computer literacy and business applications of computer software. Students do business problems using electronic spreadsheets, word processing software, database management software, and presentation software. Students also are exposed to web use, file management, and simple web page development. (45-0) *Equivalent to 15-140, COMP-110.*

BCA-103 Management Information Systems (3 s.h.)
The primary goal of MIS is to prepare students to be productive participants in an information society. The course is designed to develop a broad understanding of business information systems, various ways to discern information from an information system, and look at ways to distribute this information. The student will also learn the basic principles and techniques for developing simple computer-based information systems for managerial decision support systems through an extensive group project component of the course. (45-0) *Equivalent to 15-141, COMP-111.*

BCA-118 Introduction to the PC (1 s.h.)
This course provides an introduction to the desktop PC, its parts and basic operation. The student learns how to operate the computer, work within the windows environment, and manipulate files. Course exercises will include using the MS Office Suite, including Word, Excel, Access, and Outlook to process documents, lay out spreadsheets, compile databases, and send e-mail. Students also learn to explore the Internet to research information. (10-20) *Equivalent to COMP-701, 91-159.*

BCA-119 Computer Orientation (1 s.h.)
Introduction to basic computer hardware and software functions. Emphasis on using the computer as a tool to create personal and business documents. Introductory Windows, word processing, spreadsheet, presentation, and Internet units give students an opportunity to view software capabilities and use some of the features. (15-15) *Equivalent to 96-162, COMP-702.*

BCA-129 Basic Word Processing (2 s.h.)
This course is designed to introduce students to computers and the fundamentals of word processing. The students will progress from basic through intermediate features of word processing software. Also Open Entry. (20-20) *Equivalent to 15-211, COMP-105.*

BCA-136 Advanced Word Processing (3 s.h.)
Prerequisites: BCA-215, Computer Business Applications, and BCA-129, Basic Word Processing. Students will learn intermediate to advanced functions of Microsoft Word including customizing templates, recording macros, creating on-screen forms, managing long documents, creating hyperlinks, and publishing on the World Wide Web. Upon completion of the course, the students will be prepared to take the Expert level Microsoft Office Specialist (MOUS) certification exam. (30-30) *Equivalent to 15-136, COMP-207.*

BCA-152 Comprehensive Spreadsheets (3 s.h.)
Prerequisite: BCA-101, Introduction to Computers and Information Systems, or BCA-215, Computer Business Applications. Learn the fundamentals of spreadsheets, databases, and business graphics using appropriate software. (30-30) *Equivalent to 15-175, COMP-115.*

BCA-163 Microsoft Access (1 s.h.)
This course is designed to take students through the core competencies of Microsoft Access. (5-20) *Equivalent to 15-225, COMP-113.*

BCA-170 Personal Information Management (2 s.h.)
The course is designed to take students through the core competencies of Microsoft Outlook. (15-30) *Equivalent to 15-227, COMP-112.*

BCA-174 Basic Presentation Software (1 s.h.)
This course is designed to take students through the core competencies of Microsoft PowerPoint. (5-20) *Equivalent to 15-226, COMP-114.*

BCA-182 Introduction to Microsoft Publisher (1 s.h.)
Introduction to Microsoft Publisher 2002 demonstrates layout and design techniques to create brochures, newsletters, and publish a website to the Internet. This course has been designated as a pass/no pass course. (5-20) *Equivalent to 15-244, BUSN-252.*

BCA-185 Beginning Web Page Development (3 s.h.)
This class covers the basics of building a web page. Students will learn basic coding with HTML and explore web development products such as Kompozer and Weebly to build a web page. Students will also learn how to post a web page on web server to be seen on the Internet, add graphics, change fonts, add colors, develop navigation, and design tables. (45-0) *Equivalent to 15-137, ECOM-100.*

BCA-215 Computer Business Applications (3 s.h.)
Emphasis on business applications of computer software. Students do business problems using word processing, electronic spreadsheet, and database management software. Students are also exposed to Windows operating systems, presentation software, and the Internet. (45-0) *Equivalent to 15-134, COMP-101.*

BCA-259 Project Management Software (2 s.h.)
Project Management Software provides students with detailed instruction on how to generate, build, revise, update, and report project time, cost, and resource schedule information using Microsoft Office Project. The hands-on approach of this course walks students through MS Project features and functions in a lab tutorial format. In addition to the step-by-step approach to MS Project, students learn how to calculate a Critical Path Method (CPM) schedule enabling knowledgeable application of any project management software application. Although some prior knowledge of the project management context is helpful, it is not required to gain ability to create a valuable schedule and learn the technical aspects of MS Project. (15-30)

BCA-270 Learn to Buy and Sell on eBay (1 s.h.)
Learn to Buy and Sell on eBay demonstrates skills of entitling, creating advertisements, uploading photographs, conduct financial transactions and protect against fraud. This course has been designated as a pass/no pass course. (5-20) *Equivalent to 15-245, BUSN-253.*

BCA-280 Introduction to QuickBooks (1 s.h.)
Introduction to QuickBooks provides a traditional approach to small business accounting by creating a chart of accounts, reconciling checking accounts, creating invoices, receipts, statements, a payable registry, inventory, a receivables registry, and generating reports. This course has been designated as a pass/no pass course. (5-20) *Equivalent to BUSN-254, 15-246.*

BCA-601 Create a Website (1 s.h.)
Create a Website will demonstrate how to create, build, design, and implement a functional website for business, personal, and nonprofits. This course has been designated as a pass/no pass course. (8-14)

BCA-602 Microsoft Excel (1 s.h.)
Microsoft Excel demonstrates building a spreadsheet using mathematical formulas, functions, wizards, graphs, charts, and databases. This course has been designated as a pass/no pass course. (8-14)

BCA-603 Microsoft Access for the Workplace (1 s.h.)
Using Microsoft's powerful database, Access, business people can create, store, and locate any amount of information. Learn to create tables, forms, queries, reports, and relationships. This course has been designated as a pass/no pass course. (8-14)

BCA-729 Search Engine Optimization (1 s.h.)
Prerequisite: CIS-210, Web Development I. There is nothing more useless than having the link to your website show up on page 417 of the Google search results. Learn the tricks to getting your page on the first couple pages instead of out of the reach of all of your users. (15-0)

BCA-775 JavaScript Programming for the Web (1 s.h.)
Prerequisite: CIS-210, Web Development I. Creating web pages in HTML is only the beginning. By adding JavaScript to the page, the interface comes alive, interacting with the viewer, modifying page content, and making the Internet a more enjoyable experience. Learn the basics of this powerful language and bring your site to the next level. (15-0)

BCA-778 AJAX Basics (1 s.h.)
Prerequisite: CIS-210, Web Development I, and BCA-775, JavaScript Programming for the Web. Users love to have interactive, responsive web experiences. HTML, CSS, and JavaScript go a long way toward making sites truly dynamic, but AJAX puts them over the top. Learn this exciting way to ensure a totally interactive experience for the web user. (15-0)

BIO-102 Introductory Biology (3 s.h.)
Study of organismic biology including organization, metabolism, and reproduction of living systems. Includes evolutionary patterns, inheritance, ecosystems, and structure-function relationships among organisms. (45-0) *Equivalent to BIOL-101, 70-101.*

BIO-103 Introductory Biology Lab (1 s.h.)
Corequisite: Credit for or current enrollment in BIO-102, Introductory Biology. This is a lab component intended to supplement Introductory Biology. (0-30) *Equivalent to BIOL-102, 70-102.*

BIO-123 Inquiry Into Life Science (4 s.h.)
Prerequisite: EDU-216, Introduction to Teaching. This course is specifically designed for education majors. Topics include ecosystems, plants, gene, homeostasis, microbes and metabolism.

These topics are presented while modeling effective pedagogy when it comes to teaching science. The course is modeled on the *Teaching Standards and Content Standards* of the *National Science Education Standards*. (45-30) *Equivalent to 70-190, BIOL-103.*

BIO-151 Nutrition (3 s.h.)
Prerequisite: three credit hours of high school inorganic chemistry. Physiology or biology helpful, but not essential. Basic math skills will be employed. Introduces the science of human nutrition and its application to the role of the nurse, other allied health professional or educator in promoting good nutrition throughout the life span. Emphasis is placed on the study of macro and micro nutrient needs; and the use of science-based evidence for evaluation of findings and adoption of applications promoting sound nutritional practices among patients, clients and the community at large. Some principles of diet modification are presented as they relate to common chronic health problems, such as heart disease and diabetes. (45-0) *Equivalent to 70-200, BIOL-205.*

BIO-152 Health and Nutrition (3 s.h.)
This course covers the science of health and its application to the individual, family, and community. Topics presented include stress management, human sexuality, elementary physiology, nutrition, dependency behaviors, and other current national health concerns. (45-0) *Equivalent to 70-110, BIOL-105.*

BIO-186 Microbiology (4 s.h.)
Morphology, physiology, taxonomy, and relationship of microorganisms to disease. In-depth laboratory study and suitable lecture material with applications to agriculture, industry, and medicine. (45-30) *Equivalent to 70-109, BIOL-109.*

BIO-196 Introduction to Bio-Technology (4 s.h.)
The purpose of this course is to help students understand the importance and impact of bio-technology on our lives. Students will be introduced to bio-science's impact on society and made to realize that technologies, like the tools they are manifested in, can be used "for better or for worse." The benefits of bio-science will be discussed in six major categories: agriculture, industry, medicine, environmental, forensic, and advancement of knowledge. (45-30)

BIO-202 Biology I (4 s.h.)
Prerequisite or Corequisite: CHM-151, College Chemistry I, or CHM-166, General Chemistry I. This course, with the addition of BIO-203, Biology II, is a detailed study of the fundamental principles of biology. It is intended for students who will major in biology and it should be taken with the understanding that Biology II will be taken at NIACC also. Problems may result for the student who takes one Biology semester here and takes the other semester at a different institution. Biology I includes the study of ecology and environmental issues, cell structure and function, energy transfer, inheritance, and evolution. (45-30) *Equivalent to 70-105, BIOL-201*.

BIO-203 Biology II (4 s.h.)
Prerequisite: BIO-202, Biology I or permission of instructor. This course, with the addition of Biology I, is a lecture and laboratory-based study of evolution, the diversity of life, and the structure and function of organisms. Students enrolling in Biology I or II should plan on taking both semesters of the sequence at NIACC, preferably during the same academic year. Problems may result for the student who takes one Biology semester at NIACC and the other semester at a different institution. (45-30) *Equivalent to 70-108, BIOL-202.*

BIO-206 Anatomy and Physiology I (4 s.h.)
Prerequisite: BIO-102, Introductory Biology, or HSC-150, Body Structure and Function, highly recommended. A lecture and laboratory-based study of the human body emphasizing the complementary nature of structure and function, molecular and cellular interactions, homeostasis, and metabolic processes. Includes a study of cells, tissues, membranes, skeletal, muscular, and reproductive systems. Students enrolling in Anatomy and Physiology I or II should plan on taking both semesters of the sequence at NIACC. Problems may result for the student who takes one A&P semester at NIACC and the other semester at a different institution. (45-30) *Equivalent to 70-250, BIOL-220.*

BIO-207 Anatomy and Physiology II (4 s.h.)
Prerequisite: BIO-206, Anatomy and Physiology I, or permission of instructor. A continuation of BIO-206, Anatomy and Physiology I. Includes a study of the circulatory, respiratory, digestive, endocrine, urinary, and nervous systems. Cat, heart, kidney, brain, and eye dissections are required laboratory activities. Students enrolling in Anatomy and Physiology I or II should plan on taking both semesters of the sequence at NIACC. Problems may result for the student who takes one A&P semester at NIACC and the other semester at a different institution. (45-30) *Equivalent to 70-251, BIOL-221.*

BIO-922A-D Field Studies in Biology (1-4 s.h.)
Prerequisite: permission of the instructor. Field-based exploration of fundamental concepts of ecology and biology through active investigation. Use of nature centers, field professionals, parks, and the environment itself for learning and interpretation. Past trips include Belize, tropical ecology; Washington state, temperate rainforest and tide pool ecology; northern Minnesota, boreal forest ecology. (5-30 to 120) Equivalent to 70-204, BIOL-922A-D.

BMA-168 Steam Plant Operations I (Low Pressure Boilers)(2 s.h.)
This course presents principles of safe operation and maintenance of low-pressure boiler systems and prepares students for the state certification exam. This is a pass/no pass course. (30-0)

BMA-169 Steam Plant Operations II (High Pressure Boilers) (2 s.h.)
This course provides an overview of high pressure boiler operations and is used as a preparatory course for the state boiler technician exam. This is a pass/no pass course. (30-0)

BUS-102 Introduction to Business (3 s.h.)
An overview of the phases and functions of the business enterprise. Units of instruction include the organization, financing, production, and contemporary issues in business. The course provides an awareness and understanding of the complexities of the business world. (45-0) *Equivalent to 15-101, BUSN-101.*

BUS-107 Business Careers (1 s.h.)
A preparatory course that helps students plan for the world of work. Instruction focuses on: planning a career in business, searching for a job, preparing career search documents, interviewing, job securement, and job-keeping skills. This is a pass/no pass course. (15-0)

BUS-121 Business Communications (3 s.h.)
This course will help the student become an effective communicator in the business world. Basic written communication will be emphasized through practice in grammar structure, vocabulary building, and organization of thoughts. These skills will then be implemented when the student plans and writes business letters and interoffice memorandums. A secondary emphasis will be placed on oral communication, listening skills, and nonverbal communication. (45-0) *Equivalent to 15-212, ENGL-705.*

BUS-122 Emerging Business Practices & Technologies(3 s.h.)
This is an introductory course designed to assist students in creating a simple, inexpensive technologies including a webpage for a new business or concept while applying basic marketing, advertising, and sales techniques that are targeted to Internet or electronic information and sales. (15-60)

BUS-130 Introduction to Entrepreneurship (3 s.h.)
This course introduces the concept of Entrepreneurship beginning with identifying characteristics of the Entrepreneur, evaluating opportunities, feasibility, financing, and planning for success. Students will also understand the need for a contingency plan as well as an exit strategy. (45-0)

BUS-134 The Successful Entrepreneur (2 s.h.)
Students will learn the personal traits and characteristics necessary to succeed in the fast-paced environment. This course will examine the various skills and habits necessary for being a successful entrepreneur. Various case studies will be examined as to why some businesses fail while others succeed. Students will identify their individual strengths and weaknesses and will learn what area they need to work on to insure success in an entrepreneurial venture. Students will be exposed to many types of entrepreneurial ventures, and will generate personal preferences for the types of ventures they would like to own. This course should be taken after taking BUS-136 Creativity, Innovation & Opportunity Analysis. (30-0)

BUS-136 Creativity, Innovation & Opportunity Analysis (2 s.h.)
This course will teach students to assess the current economic, social, and political climate for entrepreneurial ventures. Students will be able to explain how demographic, creativity, innovation, technology and social changes create business opportunities. Students will assess the personal appropriateness of their business idea based on their strengths and skills, and professional and financial goals. An initial market assessment will be made and students will test their concepts through basic market research. This course should be taken prior to taking BUS-134 The Successful Entrepreneur. (30-0)

BUS-142 Planning the Entrepreneurial Venture (3 s.h.)
Prerequisite: BUS-102, Introduction to Business; BUS-134, The Successful Entrepreneur; BUS-136, Creativity, Innovation and Opportunity Analysis; and, ACC-111, Introduction to Accounting or ACC-121, Principles of Accounting I. Planning the Entrepreneurial Venture is a blended-learning course designed to teach students how to research, develop, and write detailed start-up Business Plans, which can be used to create successful businesses. The blended-learning environment provides a dynamic, interactive experience that combines the flexibility of Internet-based e-learning with the benefits of face-to-face instruction. (45-0)

BUS-151 Introduction to E-Commerce (3 s.h.)
This course provides students with foundational skills and general information about electronic business solutions on the World Wide Web. Topics will include features of Internet marketing, sales, computer graphics, and network security. Students will also be introduced to Internet-related programming concepts and tools used to create web-based solutions. (45-0) *Equivalent to 15-191, ECOM-101.*

BUS-159 Internet Law, Copyright and Computer Ethics (1 s.h.)
The ever-evolving world of the Internet is filled with unseen traps and speed bumps. Many of these obstacles can be avoided with the right knowledge. Internet Law, Copyright and Computer Ethics is not designed to make you a lawyer or even totally understand all the laws. This course is designed to make you aware of some of the more important things to be aware of, keeping you out of trouble. (15-0)

BUS-161 Human Relations (3 s.h.)
Human Relations is a course designed to improve the student's ability to function in the workplace. This class will work on increasing the student's self-awareness and improving their ability to get along with customers, coworkers, and supervisors. (45-0) *Equivalent to 15-241, BUSN-105.*

BUS-185 Business Law I (3 s.h.)
Law as applied to business transactions and business relationships. An introduction to jurisprudence and the courts, contracts, commercial paper, sales, and security agreements. (45-0) *Equivalent to 15-120, BUSN-120.*

BUS-186 Business Law II (3 s.h.)
Prerequisite: BUS-185, Business Law I recommended. A continuation of BUS-185. Agency, corporations, partnerships, bailments, real property, wills, trusts, insurance, bankruptcy, and government regulation of business. Some information on international law and liability of accountants and other professionals. (45-0) *Equivalent to 15-121, BUSN-121.*

BUS-225A-E Business Internships (1-5 s.h.)
Prerequisites: 1. Students must enroll in and pass BUS-107, Business Careers. 2. Students must have completed and filed an Application for Employment with their Internship Coordinator. 3. Students must have their proposed experience approved by the Internship Coordinator before they may register and begin. Business Internships is a learning experience which is: 1. based on practical work experience, 2. related directly to the student's program of study, 3. individualized to enable the student to gain valuable work experience and help determine career choices, and 4. geared to the student's academic knowledge, personal development and professional preparation. Instructor's consent required. Course is repeatable for a maximum of 15 credit hours. (0-60 to 300)

BUS-255 60-Hour Real Estate Pre-license (3 s.h.)
This course must be completed prior to taking the Iowa real estate licensing exam to become a Real Estate Salesperson. During the course, you will learn the Iowa Real Estate Commission prescribed course of study. Upon completion of this curriculum, participants will be exposed to principles of real estate, terminology, mathematical calculations, procedures and ethics necessary to enable them to understand the real estate profession. Effective January 1,

2009, an additional 36 hours of coursework (non-credit) are needed before you can apply for your real estate license (Listing Practices - 12 hours, Buying Practices - 12 hours, Developing Professionalism and Ethical Practices - 12 hours) (30-30) *Equivalent to 15-207, BUSN-210.*

BUS-260 Introduction to Insurance (3 s.h.)
Principles of insurance and risk, including personal and business viewpoints in regard to life, health, property, and liability risks. (45-0) *Equivalent to 15-190, INSS-101.*

BUS-266 Property and Casualty Insurance (3 s.h.)
Prerequisite: BUS-260, Introduction to Insurance. This course is designed to provide instruction that will provide a high level of understanding of property and casualty insurance. Topics covered include fire, homeowners, dwelling, auto, business and professional liability, crime and fidelity, worker's compensation, and applications from a personal and commercial perspective. (45-0) *Equivalent to 15-195, INSS-102.*

BUS-267 Life, Health, and Disability Insurance (3 s.h.)
Prerequisite: BUS-260, Introduction to Insurance. This course is designed to provide instruction in a variety of areas giving the student a good understanding of life insurance, health insurance, and the role and application of both within the industry. (45-0) *Equivalent to 15-200, INSS-103.*

BUS-298 Seminar in Entrepreneurship (3 s.h.)
Prerequisite: BUS-134, The Successful Entrepreneur, and BUS-136, Creativity, Innovation and Opportunity Analysis. Course will combine group discussions with an actual case project at a local entrepreneurial firm. Students will have an opportunity to apply business skills learned throughout their NIACC program as they complete a project for a local entrepreneurial venture. Students also will discover key entrepreneurial success characteristics. (15-60) *Equivalent to 15-173, ENTR-103.*

CAD-216 Architectural CADD (2 s.h.)
Students will be instructed in residential architecture drafting techniques required to design and draft floor plans, exterior and interior details, and structural representations. The course will use architectural CAD software to develop a full set of residential house plans. Upon completion, students should be able to prepare and plot architectural drawings to scale within accepted architectural standards. (16-26)

CFR-100 Computer Forensics I (3 s.h.)
Prerequisite: NET-113, IT Essentials I, or permission of instructor. This course deals with the preservation, identification, extraction, documentation and interpretation of computer data. Topics covered include legal concepts, evidence handling, hashing of data and images, chain of custody, preservation, identification and recovery of computer data. This course also covers establishing the need for doing an investigation, file system structures, and establishing a lab for collecting evidence and analyzing data. (30-30)

CFR-110 Ethics and the Information Age (3 s.h.)
A study of ethics and moral philosophy as a means for providing a framework for ethically grounded decision making in the information age. (30-30)

CFR-150 Computer Forensics II (3 s.h.)
Prerequisite: CFR-100, Computer Forensics I, or permission of instructor. This course deals with the preservation, identification, extraction, documentation and interpretation of computer data. Topics covered include conducting a complete investigation using the terminal and command prompt from various operating systems. The course also covers detailed report writing and using additional tools to acquire images and live information from various systems. (30-30)

CHM-122 Introduction to General Chemistry (4 s.h.)
Prerequisite: MAT-063, Elementary Algebra, or equivalent. A one-semester college chemistry course which surveys important concepts and topics of chemistry. Among these are the metric system of measurement, atomic theory of matter, energy levels and atomic structure, the periodic table, ionic and molecular compounds, ionic and covalent bonding, chemical reactions, and reaction equations and calculations. Additional topics may include discussions on gasses and energy. Laboratory work is an important part of this course. High school chemistry is not a prerequisite. This course is not intended for science majors (but may be appropriate as preparation for a more thorough beginning chemistry course). (45-30) *Equivalent to 70-140, CHEM-101.*

CHM-132 Introduction to Organic and Biochemistry (4 s.h.)
Prerequisite: CHM-122, Introduction to General Chemistry, CHM-151 College Chemistry I, or CHM-166 General Chemistry I. Basic elements of organic chemistry and biochemistry including alkanes and their derivatives, carbohydrates, lipids, proteins, and enzymes, chemistry of cell metabolism, and chemistry of heredity. (45-30)

CHM-151 College Chemistry I (4 s.h.)
Prerequisite: MAT-063, Elementary Algebra, or equivalent. First semester of a two-semester sequence intended for nonscience majors. First semester of a two-semester sequence intended for non-science majors. Introduction to the basic concepts and facts of chemistry. Topics include the metric system of measurement, atomic theory of matter, energy levels and atomic structure, the periodic table, ionic and molecular compounds, ionic bonding, covalent bonding and molecular structure, classification of chemical reactions, and reaction equations and chemical calculations. This course treats these topics in more depth than introductory Chemistry; however, high school chemistry is NOT a prerequisite. Laboratory work is an important part of this course. (45-30)

CHM-152 College Chemistry II (4 s.h.)
Prerequisite: CHM-151 College Chemistry I, or equivalent. Continuation of CHM-151 College Chemistry I, this is the second semester of a two-semester sequence intended for non-science majors. Topics include reaction rates, chemical equilibrium and acid-base chemistry, electron-transfer reactions and electrochemical cells, and, as time permits, introductions to organic and biological chemistry. Laboratory work is an important part of this course. (45-30)

CHM-166 General Chemistry I (5 s.h.)
Prerequisite: satisfactory completion of one year of high school chemistry and MAT-102, Intermediate Algebra, or the equivalent. Atomic structure, stoichiometry, thermochemistry, reactions in aqueous solution, chemical bonding and molecular structure, structure-property relationships. (45-60) *Equivalent to 70-137, CHEM-210.*

CHM-176 General Chemistry II (5 s.h.)
Prerequisite: CHM-166, General Chemistry I, or equivalent. Physical properties (gases, liquids, solids), chemical equilibrium and kinetics, acid-base chemistry, chemical thermodynamics, electrochemistry, nuclear chemistry, and an introduction to organic compounds and polymers. (45-60) *Equivalent to 70-138, CHEM-211.*

CHM-263 Organic Chemistry I (5 s.h.)
Prerequisite: CHM-152, College Chemistry II, or CHM-176, General Chemistry II. Survey of some major classes of organic compounds emphasizing nomenclature, molecular structure, stereochemistry, reaction mechanisms and synthesis. Laboratory work introduces standard procedures of distillation, recrystallization, solvent extraction, polarimetry, chromatography, and computer-aided molecular modeling. (45-60) *Equivalent to 70-274, CHEM-220.*

CHM-273 Organic Chemistry II (5 s.h.)
Prerequisite: CHM-263, Organic Chemistry I. Introduction to electron delocalization and its effect of the stability and reactivity of organic compounds. Substitution and elimination reaction mechanisms will be described and used to explain the chemistry of some important classes of organic compounds. Students will be introduced to the technique of molecular structure determination by the analysis of infrared and nuclear magnetic resonance spectra. Laboratory work includes synthesis of organic compounds and their analysis by infrared spectroscopy, gas chromatography, and molecular modeling software programs. (45-60) *Equivalent to 70-275, CHEM-221.*

CIS-119 Introduction to Programming (4 s.h.)
Prerequisite: CIS-125, Introduction to Programming Logic with Language, or permission of the instructor. This course provides students exposure to computer program design, structure, development, and troubleshooting through an examination of such topics as logic concepts, variables, input/output, interactive constructs, conditional flow, modular design, create and manage databases, debugging, cgi scripting, object-oriented programming, and the comparison of programming languages. (60-0) *Equivalent to 15-168, ISTS-105.*

CIS-125 Introduction to Programming Logic with Language (3 s.h.)
A fundamental requirement for people in the Information Technology field is the ability to organize a solution to a problem. This, in and of itself, is a difficult task. Often, however, this skill takes a backseat to learning code or is lost in the complexity of the task. Introduction to Programming Logic w/Language concentrates on the process of developing a logical algorithmic solution to a problem. (45-0) *Equivalent to 15-196, ISTS-125.*

CIS-153 Data Structures (4 s.h.)
Prerequisite: CIS-125, Introduction to Programming Logic with Language. Students will study functional decomposition. Students will learn the data structures and accompanying algorithms that are most fundamental to computer science discipline and analyze various implementations of each. (60-0)

CIS-155 Introduction to Video Game Testing (3 s.h.)
Introduction to Video Game Testing defines the steps involved in taking the basic idea for a video or computer game through the formal steps of definition and implementation. The course is meant to provide the overview of how testing is incorporated into video game production and development. Basic testing concepts will be introduced to the students. Students will develop their working video game. The students will then thoroughly test other students' video games. *Equivalent to ISTS-140.* (45-0)

CIS-156 Testing Concepts (4 s.h.)
Prerequisite: CIS-155, Introduction to Video Game Testing. Covers the basics of testing, including the test plan, the steps in fully testing new software throughout the product lifestyle, and ensuring complete adherence to client requirements. The following areas will be covered: test phases, effective testing, combinatorial testing, test flow diagrams, clean room testing, and test trees. (60-0)

CIS-157 Beginning iPhone Development (3 s.h.)
Are you a programmer looking for a new challenge? Does the idea of creating applications for the iPhone sound like a cool way to make some extra money? Learn to design and implement iPhone applications from concept through completion, then post them in iTunes and let the downloads begin. (45-0)

CIS-172 Java (4 s.h.)
Prerequisite: CIS-119, Introduction to Programming, or permission of the instructor. This course introduces students to doing purely object-oriented programming using the Java syntax. Emphasis is placed on using Java for web development. Students learn how to create their own objects and employ these objects as solutions to common real world-based web problems using applications and applets. Students will learn to create interactive elements and simple GUI elements. Use of the java.awt components, event-handling model, containers, and layout managers will also be emphasized. File handling techniques and multithreading will be presented, along with JavaBeans. Applications and applets will be built from button up to facilitate in deeper understanding of the concepts used in OOP. (60-0) *Equivalent to 15-204, ISTS-220.*

CIS-210 Web Development I (3 s.h.)
This course covers comprehensively the latest version of HTML. Students will learn good coding practices and be introduced to web development tools and FTP programs. Students will also be introduced to CSS (Cascading Style Sheets), image management, browser helper applications, and basic JavaScript. (45-0) *Equivalent to 15-169, ECOM-110.*

CIS-232 Web Development II (1 s.h.)
Prerequisite: CIS-210, Web Development I. There are many ways to turn simple websites into powerful, full-featured sites. Web Development II focuses on some of the most popular website additions, including updatable calendars, threaded discussions, shopping carts, and more. (15-0)

CIS-246 Intermediate Testing Concepts (4 s.h.)
Prerequisite: CIS-155, Introduction to Video Game Testing. Instruction in manual testing, hardware testing, and cross-platform testing. Manual testing is and will always be the cornerstone to effective testing. Cross-platform testing includes learning techniques for ensuring software quality on more than one machine type. Testing environments will include Windows/Mac/Linux computers and various video-gaming consoles. (60-0)

CIS-275 Advanced Testing Concepts (2 s.h.)
Prerequisite: CIS-246, Intermediate Testing Concepts. Instruction in testing automation, capture playback testing, performance testing, regression testing and defect triggers. (30-0)

CIS-332 Database and SQL (3 s.h.)
This course introduces students to database concepts, with topics such as database structure and design, planning, modeling, database software and servers, SQL, reports, fault tolerance, and administration being covered. Exposure to current and popular database systems will be provided. (45-0) *Equivalent to 15-174, COMP-205.*

CIS-620 Bot Programming for Game and Application Automation in Windows (1 s.h.)
Prerequisite: CIS-125, Introduction to Programming Logic with Language. Instruction in programming bots to perform automation for games and software applications in Windows. (15-0)

CON-110 Construction Drawing (1 s.h.)
Students will learn about the fundamentals of drawing using manual drafting skills. Construction Drawing is designed to give students the skills necessary to produce a set of working drawings. Students will learn to draw plans, sections, elevations, details, and schedules. (15-0) *Equivalent to BUIL-705, 91-173.*

CON-112 Blueprint Reading/Estimating (3 s.h.)
Residential and commercial blueprint reading and materials estimating covers understanding drawings, the language of construction. Students learn how to gather and use information from prints and drawings to estimate quantities of materials and perform construction work processes. (45-0) *Equivalent to BUIL-720, 91-198.*

CON-117 Building Codes and Standards (2 s.h.)
This course covers construction-related building codes and standards. Presentations illustrate which of the various codes and standards affect specific types of construction. Students learn how competent construction workers bear responsibility for knowing, understanding, and complying with codes and standards during all phases of the construction process. (30-0) *Equivalent to BUIL-715, 91-174.*

CON-121 Carpentry Fundamentals I (4 s.h.)
General skills instruction covers safety; basic hand tools; basic power tools; jobsite safety; printreading; construction materials and systems; construction fasteners and processes; residential construction practices; and commercial construction practices. (24-75)

CON-123 Carpentry Fundamentals II (4 s.h.)
Prerequisite: CON-121, Carpentry Fundamentals I. General skills instruction covers safety; basic hand tools; basic power tools; jobsite safety; printreading; construction materials and systems; constructional fasteners and processes; residential construction practices; and commercial construction practices. (24-75)

CON-255 Carpentry I (4 s.h.)
Prerequisites: CON-121, Carpentry Fundamentals I, and CON-122, Carpentry Fundamentals II. General skills instruction covers safety; hand tools; power tools; printreading; builders level, transit, and laser; scaffolding; and rigging. Residential skills instruction covers site work; building layout; formwork; floor and still framing; wall and ceiling framing; roof framing; stair construction; exterior walls, soffits, and cornice construction; roof coverings; window and door installation; cabinet fabrication; and running trims and hardware installations. (24-75)

CON-256 Carpentry II (4 s.h.)
Prerequisite: CON-255, Carpentry I. General skills instruction covers safety; hand tool; power tools; printreading; builders level, transit and laser; scaffolding; rigging; arc welding; cutting and burning. Commercial skills instruction covers site work; building layout; footing, wall, stair, column, beam, and deck form constructions; wood and steel stud framing; exterior walls and canopying construction; cabinet fabrication; wood and steel jamb;, window, door, millwork, and hardware installations; and office partition, and acoustical ceiling installations. (24-75)

CON-305 Cabinetry and Millwork (3 s.h.)
This competency-based course prepares students for entry-level positions in the cabinetmaking and millwork, furniture-making and woodworking industries. (15-60)

CON-315 Guitar Building (2 s.h.)
No prerequisite, but CON-107, Construction Safety, or CON-305, Cabinetry and Millwork, is beneficial. Students in Guitar Building will design and build an electric guitar or bass and learn a lot about types and species of woods, as well as the intricate details that go into guitar building. This course will cover a number of different concepts as they relate to design, engineering, materials processes, fastening techniques, precision measuring and machining, electronics, physics, math and communications. As time allows, students will also learn basic chording and rhythm techniques with their custom built instrument. Students will be responsible for the cost of their instrument. (8-40)

CON-949A-C Special Topics in Carpentry (1-3 s.h.)
This course provides options for students that have earned a Building Trades diploma and are seeking a degree. It provides an opportunity to focus on specific skill sets for a current or potential employer. (0-30, 0-60, 0-90)

CRJ-100 Introduction to Criminal Justice (3 s.h.)
Arrest, search and seizure; review of court systems; procedures from incident to final disposition; principles of constitutional, federal, state, and civil laws as they apply to and affect law enforcement. (45-0) *Equivalent to CRIM-107, 80-291.*

CRJ-105 Intermediate Criminal Investigation (3 s.h.)
Prerequisite: CRJ-141, Criminal Investigation. An overview of essential topics in private or public criminal justice careers. Units of instruction include crime scene forensic techniques, investigation of drug crimes, interview and interrogation skills, report writing, community policing, police ethics and contemporary issues in criminal justice. (45-0)

CRJ-111 Police and Society (3 s.h.)
This course examines the police as part of society's official control apparatus. The course examines current police issues, integrating six core elements: history, role, socialization, culture, function, and experience. Topics covered include history, basic police role and organization, the making of a police officer, police behavior, stress, the delivery of effective police services, and the future of law enforcement. (45-0)

CRJ-130 Criminal Law (3 s.h.)
The philosophy and basis for law; the historical development of criminal law and procedures; the structure, definitions, and criminal laws of Iowa. (45-0) *Equivalent to CRIM-101, 80-190.*

CRJ-141 Criminal Investigation (3 s.h.)
Prerequisite: CRJ-100, Introduction to Criminal Justice. The examination of fundamental investigative techniques, and the application of these techniques to specific investigative situations. (45-0) *Equivalent to CRIM-108, 80-292.*

CRJ-227 Employment Strategies for Criminal Justice (1 s.h.)
Prerequisite: Student must be registered in the Criminal Justice Program. This course prepares students for the steps involved in securing a position in criminal justice fields. It is an introduction to the job search process, including the resume, cover letter, and job interview. It also covers information unique to the criminal justice selection process. (15-0)

CRJ-230 Evidence (3 s.h.)
The kinds and degrees of evidence and the rules governing the admissibility of evidence in court. (45-0) *Equivalent to CRIM-106, 80-290.*

DRA-119 Introduction to Theatre, TV and Film (3 s.h.)
A survey of dramatic theatre, television, and film. (45-0) *Equivalent to DRAM-101, 85-150.*

DRA-145 Oral Interpretation (3 s.h.)
Meets either Communications or Humanities requirement. Analyzing prose, poetry, and drama selections for their logical and emotional content, and learning platform techniques to present this material to an audience. (45-0) *Equivalent to 30-110, LITS-110.*

DSL-352 Introduction to Diesel Engines (2 s.h.)
This course begins with diesel engine design and theory. Included are disassembly, inspection, and reassembly of the engine and its components. Special attention will be given to diesel engine systems troubleshooting, parts failure analysis, and fuel systems. (15-30)

DSL-402 Diesel Engine Electronics I (2 s.h.)
The purpose of this course is to familiarize you with the components and controls of electronically controlled diesel engines. You will study electronic control modules (ECM), sensors, and electronic unit injectors (EUI). This course concentrates on theory, troubleshooting, repair, and parameter changes of electronic controlled systems. (15-30)

DSL-591 Power Trains and Suspension (1 s.h.)
This course is designed to provide the necessary knowledge required to be able to identify, service, troubleshoot, remove, disassemble, inspect, reassemble, and install rear axle assemblies, transmissions, and suspensions. Lubrication, manual and remote controls, failure analysis, and parts evaluations are included. (7.5-15)

DSL-631 Air Systems and Brakes (1 s.h.)
This course covers the operation and repair of the complete air systems and brakes including antilock and traction control systems used on trucks and trailers. The regulation of the air brake safety standards set by the DOT is included. (7.5-15)

DSL-801 Truck and Trailer Service (1 s.h.)
This is a course designed to acquaint you with maintenance on trucks and trailers. The course includes lubrication, preventive maintenance inspection, federal DOT inspection, adjustments, and basic fuel and brake systems on trucks and trailers. (0-30)

DSL-810 Truck and Diesel Lab I (10 s.h.)
This course allows you to work in a real life repair and service atmosphere where you are exposed to all types of equipment and components used in the trucking industry. (45-210)

DSL-820 Truck and Diesel Lab II (10 s.h.)
This course allows you to work in a real life repair and service atmosphere where you are exposed to all types of equipment and components used in the trucking industry. (45-210)

ECE-103 Introduction to Early Childhood Education (3 s.h.)
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. (45-0) *Equivalent to 20-125, EDUC-125.*

ECE-131 Home & School Relationships in Early Childhood (3 s.h.)
Home & School Relationships in Early Childhood provides techniques for developing home, school, and community relationships to encourage the learning and well-being of each child. Birth through age 8 is emphasized. (45-0) *Equivalent to EDUC-128.*

ECE-133 Child Health, Safety, and Nutrition (3 s.h.)
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. (45-0) *Equivalent to 20-126, EDUC-126.*

ECE-159 Early Childhood Curriculum II (3 s.h.)
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. (45-0)

ECE-170 Child Growth and Development (3 s.h.)
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. (45-0)

ECE-243 Early Childhood Guidance (3 s.h.)
This course focuses on effective approaches and positive guidance strategies for supporting the development of all children. Emphasizes supportive interactions and developmentally appropriate environments. Uses assessment to analyze and guide behaviors. Studies impact of families and diversity on child guidance. (45-0) *Equivalent to EDUC-129.*

ECN-110 Introduction to Economics (3 s.h.)
An introductory study of how people use scarce resources to satisfy their many material wants and needs. The general concepts include scarcity, supply and demand, and the structure and function of a market economy. Microeconomic concepts include decision making by consumers and producers in competitive and monopolized product and labor markets. Macroeconomic concepts include business cycles, aggregate supply and demand, fiscal policy, economic growth, money and banking systems and monetary policy. This course cannot be transferred as barrier credit. (45-0)

ECN-115 Personal Finance (3 s.h.)
Introduction to financial planning, using financial services and your income wisely, protecting your assets, increasing your income through savings and investments, and planning for retirement. The primary emphasis is on investments. These include, but are not limited to stocks, bonds, real estate, and financial derivatives. (45-0) *Equivalent to ECON-101, 80-135.*

ECN-120 Principles of Macroeconomics (3 s.h.)
An introductory study of how people use scarce resources to satisfy unlimited wants. After an introduction to economics, the emphasis is on the determination of national income, output, employment, and the general price level in the national economy including an examination of the money and banking system. (45-0) *Equivalent to 80-133, ECON-110.*

ECN-130 Principles of Microeconomics (3 s.h.)
Prerequisite: ECN-120, Principles of Macroeconomics. An introductory study of how people use scarce resources to satisfy unlimited wants. The emphasis is on the behavior and decision making by individual consumers, entrepreneurs, workers, and other resource owners in the product and resource markets and the resulting effects on the efficiency with which resources are used. (45-0) *Equivalent to 80-134, ECON-111.*

EDU-216 Introduction to Teaching (3 s.h.)
An introductory course in teacher education that gives students a clear view of the skills and knowledge they will need to be successful professionals. The course covers the place of the school in the community, basic philosophy including foundations and the future, the organization and administration of schools, and the nature of the curriculum. (45-0) *Equivalent to 20-101, EDUC-101.*

EDU-219 Field Experience and Seminar (1 s.h.)
Corequisite: EDU-216, Introduction to Teaching. Field experience provides purposeful classroom observations for pre-service teachers. Students will reflect on the ways schools function, identify the roles and responsibilities of teachers, and observe student behavior. Through this field experience, the students will get a realistic view of being a teacher and will be able to make an informed decision as to whether or not teaching is a good career choice. Evaluation is pass/no pass. (5-30)

EDU-235 Children's Literature (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, and ENG-103, Composition & Speech II, or ENG-106, Composition II, or comparable courses or approval of instructor. EDU-216, Introduction to Teaching, is also a prerequisite. A study of Children's Literature by genre. An emphasis on teaching literature in the classroom will be a major component of the course. Purposeful school visitations will provide practical experience. This course meets some education program requirements. (45-0) *Equivalent to 30-210, EDUC-201.*

EDU-236 Young Adult Literature (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, ENG-103, Composition & Speech II, and EDU-216, Introduction to Teaching preferred (may be taken concurrently). This course is designed to discuss, evaluate, and select literature written for adolescents (grades 6-12). Types of literature and methods of utilization and evaluation for use in upper elementary, mid-level, and high schools will be addressed. An emphasis on teaching literature will be a component of this course. Purposeful school visitations will provide practical experience. (30-30)

EDU-242 Classroom Assessment (2 s.h.)
Prerequisite: EDU-216, Introduction to Teaching. This course is an introduction to the assessment process for classroom teachers. It will focus on the interaction between assessment and instruction, formative and summative assessment, development and use of teacher-constructed assessments, purposes and interpretation of standardized assessments, and grading and communicating about student performance. (30-0) *Equivalent to 20-110, EDUC-210.*

EDU-246 Including Diverse Learners (3 s.h.)
Prerequisite: EDU-216, Introduction to Teaching. An introductory discussion of issues and practices regarding the inclusion of diverse student populations in general education settings. Emphasis is placed on addressing the needs of all students, i.e. general education, special education, gifted, at risk, and multicultural. Formal and informal projects explore adaptive strategies for the curriculum and the classroom. (45-0) *Equivalent to 20-120, EDUC-220.*

EDU-250 Educational Technology and Design (3 s.h.)
Prerequisite: None; however, prior education courses are recommended. The production of instructional media/computer technology and their relationship to educational strategies within an instructional design framework. Course activities include the planning, design, and production of media and the operation of hardware and software for educational use. Students will be exposed to various ways of thinking about educational media and the messages they deliver. The course provides students with experiences that enable them to integrate technology resources to support clearly defined learning objectives. (30-30) *Equivalent to 20-195, EDUC-195.*

EDU-290 Education Capstone Seminar (1 s.h.)
Corequisite: Enrolled in the Elementary Education Learning Community which consists of the following courses: BIO-123, Inquiry Into Life Science; EDU-242, Classroom Assessment; EDU-246, Including Diverse Learners; and MAT-154, Math for Elementary Teachers II; or permission from any of the four instructors. This course provides an opportunity for Education majors to discuss: i) current education topics; ii) characteristics of effective educators focusing on dispositions; and, iii) professional development organizations and opportunities. Students will work on assembling an education portfolio, and will learn about further opportunities in education. This is a pass/no pass credit course. (15-0)

EGR-100 Engineering Orientation (1 s.h.)
Introduction to the profession of engineering and preparations for professional employment. Considerations of engineering academic programs and planning an engineering curriculum. Discussion of the ethics of the engineering profession and introduction to case studies. Opportunities to interact with local engineers. Information concerning college policies, procedures, and resources. This course has been designated as a pass/no pass course. (15-0)

EGT-119 Mechanics of Materials (3 s.h.)
Prerequisite: EGT-129, Statics for Engineering, with grade of C or higher. Plane stress, plane strain, stress-strain relationships, and elements of material behavior. Application of stress and deformation analysis to members subject to centric, torsional, flexural, and combined loadings. Elementary considerations of theories of failure, buckling. (45-0) *Equivalent to 25-251, ENGR-232.*

EGT-129 Statics for Engineering (3 s.h.)
Prerequisite: MAT-210, Calculus I, with a grade of C or higher. Corequisite: MAT-216, Calculus II; and PHY-212, Classical Physics I. Scalar and vector quantities, forces, moments of forces, couples, and force systems; equilibrium, centroids and centers of gravity; analysis of structures; internal forces, shear and bending moments; friction; moments of inertia of areas. (45-0) *Equivalent to 25-231, ENGR-231.*

EGT-181 Engineering Problems/FORTRAN (3 s.h.)
Corequisite: MAT-121, College Algebra; or MAT-128, Precalculus; or MAT-134, Trigonometry and Analytic Geometry; or MAT-165, Calculus. Development of skills, standards, and orderly methods of solving engineering problems. SI and English measurement and unit conversion. Estimation and calculation with approximate numbers. Significant figures. Graphing and curve-fitting of technical data. Using logarithmic and trigonometric functions. Introduction to engineering economics and statistics. Solution of engineering problems using the FORTRAN language. (30-30) *Equivalent to 25-111, ENGR-111.*

EGT-192 Engineering Graphics and Design (3 s.h.)
Corequisite: Credit (with grade of C or higher) or enrollment in MAT-121, College Algebra; or MAT-128, Precalculus; or MAT-134, Trigonometry and Analytic Geometry; or MAT-165 Calculus. The integration of fundamental engineering graphics, computer-aided design (CAD), and engineering design. CAD drawing of orthographic views and isometric pictorials; and basic dimensioning. Techniques for visualizing, analyzing and communicating 3-D geometries. Application through creative design projects with written and oral reports. (15-75) *Equivalent to 25-112, ENGR-112.*

EGT-400 Project-Lead-The-Way -- Introduction to Engineering Design (3 s.h.)
This course uses a design development process while enriching technical and engineering problem-solving skills; students create and analyze models using specialized computer software (AutoCAD Inventor). (16-64)

EGT-410 Project-Lead-The-Way -- Principles of Engineering (3 s.h.)
Prerequisite: EGT-400, Project-Lead-The-Way -- Introduction to Engineering Design, is recommended, but not required. This course explores technology systems and manufacturing processes using the methodology of project-based engineering problem solving. Learning activities explore a variety of engineering disciplines and address the social and political consequences of technological change. (16-64)

EGT-420 Project-Lead-The-Way -- Digital Electronics (3 s.h.)
Prerequisite: EGT-400, Project-Lead-The-Way -- Introduction to Engineering Design, and EGT-410, Project-Lead-The-Way -- Principles of Engineering, are recommended, but not required. This course teaches applied logic through work with electronic circuitry, which students also construct and test for functionality. (16-64)

EGT-450 Project-Lead-The-Way -- Computer Integrated Manufacturing (3 s.h.)
Prerequisite: EGT-400, Project-Lead-The-Way -- Introduction to Engineering Design, and EGT-410, Project-Lead-The-Way -- Principles of Engineering, are recommended, but not required. This course enhances computer modeling skills by applying principles of robotics and manufacturing automation to the creation of models of three-dimensional designs. (16-64)

EGT-460 Project-Lead-The-Way -- Civil Engineering and Architecture (3 s.h.)
Prerequisite: EGT-400, Project-Lead-The-Way -- Introduction to Engineering Design, or EGT-410, Project-Lead-The-Way -- Principles of Engineering, or consent of instructor. This course introduces students to the interdependent fields of civil engineering and architecture. Students learn project planning, site planning, and building design. (15-60)

EGT-470 Project-Lead-The-Way -- Engineering Design and Development (3 s.h.)
Prerequisite: EGT-400, Project-Lead-The-Way -- Introduction to Engineering Design, and EGT-410, Project-Lead-The-Way -- Principles of Engineering, plus one of the following courses: EGT-420, Project-Lead-The-Way -- Digital Electronics, or EGT-430, Project-Lead-The-Way -- Aerospace Engineering, or EGT-440, Project-Lead-The-Way -- Biotechnical Engineering, or EGT-450, Project-Lead-The-Way -- Computer Integrated Manufacturing, or EGT-460, Project-Lead-The-Way -- Civil Engineering and Architecture. This course is a research course that requires students to formulate the solution to an open-ended engineering question. With a community mentor and skills gained in their previous courses, students create written reports on their applications, defend the reports, and submit them to a panel of outside reviewers. (16-64)

ELT-115 Electronic Concepts (3 s.h.)
Electronic Concepts is an introductory survey of electricity and electronics suitable for students interested in pursing a career in such technical fields as electronics, automotive, HVAC, and other fields that require knowledge of basic electrical/electronic concepts. Topics include safety, shop and lab practices, motors and controls, direct and alternating current, and semiconductor and digital electronics. Course work consists of problem solving, computer-assisted instruction, computer simulation, and hands-on exercises with industrial grade equipment. (30-30) *Equivalent to 96-132, INDU-701.*

ELT-124 Advanced PLCs and System Integration (3 s.h.)
Corequisite: ELT-170, Introduction to PLC's. Advanced topics in programmable logic controllers using the Allen-Bradley SLC500 and RSLogix 500 programming software including analog I/O and PID control. Application of RSLinx to establish communications and DH485 LAN networking. Controller Area Networking (CAN) using DeviceNET programming and integration using RSNetworx. PanelVIEW programming and integration using the Allen-Bradley PanelView 500 and PanelBuilder32. Projects involving practical field devices and program development. (30-45) *Equivalent to EMST-803, 91-203.*

ELT-133 Electric Motor Drives (2 s.h.)
Prerequisite: ELT-210, Motor Control Circuits. Study of AC general purpose variable speed drives, AC vector (spindle) drives, and AC servo drives. Hands-on exercises provide experience with typical components and interconnections needed to implement various control systems. Concepts of system stability, frequency response, feedback, damping, position and speed control are covered. System troubleshooting. (15-31) *Equivalent to 96-157, EMST-815.*

ELT-170 Introduction to PLC's (3 s.h.)
Introduction to programmable logic controllers (PLC's) using computer simulation of the Allen Bradley and RSLogix programming software, elementary ladder logic and discrete I/O instructions, counters, timers, program development techniques, and troubleshooting. Advanced topics in programmable logic controllers including program control instructions, math operations, sequencers, and data manipulation. This course is offered on campus as an instructor-supervised/student-paced format and is also offered online. Students enrolled in this course should expect to spend 75-90 hours (5-6 hours/week) to complete the course. If in an on-campus section, that time will be spent in the Industrial Systems Technology Lab. (30-45) *Equivalent to EMST-802, 91-202.*

ELT-190 Introduction to Tech Computing & CAD (3 s.h.)
Prerequisite/Corequisite: Ability to key-enter the equivalent of 25 words/minute at a computer keyboard. Introduction to Technical Computing and CAD is designed to familiarize the student with microcomputer basics relating to occupations in the industrial/technical area. Topics include computer hardware, operating systems, commands and tasks, disk organization and access, word processing, spreadsheets, and two-dimensional computer-aided drafting (CAD). The student should expect to spend 5-6 hours per week in the Industrial Systems Technology lab to accomplish the required modular learning labs. (15-60) *Equivalent to EMST-701, 91-104.*

ELT-210 Motor Control Circuits (3 s.h.)
Prerequisite: ELT-382, Electronic Circuit Analysis. Introduction to industrial electrical motor and control circuitry. Emphasis placed on AC single- and three-phase circuit and transformer theory and industrial applications. Applications include various types of control elements. Study of the National Electrical Code as it pertains to manufacturing/industrial environment. Fundamental skills in electrical wiring and raceway techniques are learned through lab and/or project exercises. This course is offered in an instructor-supervised/student-paced format. Students enrolled in this course should expect to spend 75-90 hours (5-6 hours/week) in the Industrial Systems Technology Lab to complete the course. (15-69) *Equivalent to EMST-710, 91-105.*

ELT-333 Analog and Digital Electronics (4 s.h.)
Prerequisite: ELT-382, Electronic Circuit Analysis. Digital: Study of number systems related to digital circuits, Boolean Algebra/ Karnaugh Maps. Combinational logic including AND, OR, NAND, NOR, NOT, XOR. Combinational circuits decoders. Basic sequential elements including SR, D, JK, and Master-Slave flip-flops. Sequential circuits including registers and counters. Memory circuits and applications. Analog to digital (A/D) and digital to analog (D/A) conversion and elementary interfacing. Design, analysis, and computer simulation. Analog: Study of diodes, bipolar transistors and field effect transistors (JFETs and MOSFETs) as they are used in both AC and DC electronic circuits. Applications such as power supplies, switching circuits and amplifier circuits are covered. Advanced topics in electronic devices including operational amplifiers (op amps), active filters, thyristors, and voltage regulation are covered. Computer simulation of the devices under study is covered. Both circuit analysis and measurement techniques using meters and oscilloscopes are stressed. This course is offered in an instructor-supervised/student-paced format. Students enrolled in this course should expect to spend 90 hours in the Industrial Systems Technology Lab to complete the course. (15-90)

ELT-382 Electronic Circuit Analysis (3 s.h.)
Prerequisite/Corequisite: MAT-770, Applied Math, and MAT-771, Applied Math II. Study of the nature of electricity involving both direct and alternating current. DC circuit analysis utilizing more advanced techniques such as: superposition, Thevinin's and Norton's theorems. AC circuit analysis involving RL, RC, and RLC circuits, inductive and capacitive reactances, resonance, and transformer fundamentals. Computer circuit simulation of both DC and AC circuits is stressed along with an application of electronic test equipment; oscilloscopes, meters, and power supplies. This course is offered in an instructor-supervised/student-paced format. Students enrolled in this course should expect to spend 75-90 hours (5-6 hours/week) in the Industrial Systems Technology Lab to complete the course. (15-60) *Equivalent to EMST-702, 91-175.*

ELT-710 Computer Automated Manufacturing (3 s.h.)
Prerequisite/Corequisite: ELT-790, Fluid Power and ELT-124, Advanced PLCs and System Integration. Capstone projects in Industrial Systems Technology: project identification, planning, and implementation, as well as, group dynamics, project structure, and troubleshooting techniques. Projects may include, but are not limited to automation, control, manufacturing, or educational hardware for program use. The integration of robots, instrumentation, computers, and programmable logic controllers, human/machine interface, communications, and other industrial systems. (15-65) *Equivalent to EMST-816, 91-206.*

ELT-734 Industrial Instrumentation (4 s.h.)
Prerequisites: ELT-170, Introduction to PLC's, and ELT-333, Analog and Digital Electronics. The student studies modern instrumentation techniques as they apply to the manufacturing environment and uses industrial sensors, transducers, and related components. Instrumentation labs use a variety of control techniques and may include RSLogix500, DeviceNet, and Panel Builder. The labs are self-paced but students should expect to spend 5-6 hours/week in the lab. Lectures are scheduled at a specific time every week. (15-90) *Equivalent to EMST-817, 91-207.*

ELT-745 Maintenance Shop Operations (3 s.h.)
Introduction to shop equipment generally found in the industrial maintenance environment. Instruction and practice with metal saws, drills, grinders, elementary welding and cutting, thread repair, anchors and fasteners. Study of mechanical prints to identify parts in assembly and repair situations is practiced, along with the use of catalogs to find and order repair parts, study of bearings and seals, applications, and failure analysis. (30-30) *Equivalent to 96-156, EMST-805.*

ELT-750 Facilities Maintenance (3 s.h.)
Prerequisite: ELT-210, Motor Control Circuits. The student studies topics specific to maintenance of facilities. Topics include project estimating issues including installation, cost, and time. The student reads building schematics and blueprints, studies the fundamentals of HVAC with lab exercises, and researches construction issues including sprinkler, electrical, and plumbing systems. Field trips provide a general compare and contrast of industry facility maintenance systems. (45-0) *Equivalent to 96-155, EMST-820.*

ELT-790 Fluid Power (3 s.h.)
Prerequisite/Corequisite: MAT-770, Applied Math, and MAT-771, Applied Math II. Students gain knowledge and hands-on experience with hydraulic and pneumatic components and circuits; the transmission of force through fluids; conversion of force to pressure; the control of power and systematic methods of troubleshooting and testing hydraulic and pneumatic systems. This is an instructor-supervised/student-paced format. The student should expect to spend 5-6 hours per week in the Industrial Systems Technology Lab to complete the course. (15-65) *Equivalent to EMST-703, 92-118.*

ELT-895 Industrial Internship (2 s.h.)
Prerequisite: sophomore status in the Industrial Systems Technology Program and permission of internship coordinator. Supervised work experience in a business or industry, which normally is four weeks in duration. Work must be related to the major field of study; i.e., electricity/electronics, industrial maintenance, installation or service of control systems, etc. (0-160) Instructor's consent required. *Equivalent to EMST-801, 91-110.*

EMS-114 Emergency Medical Responder (2 s.h.)
Prerequisites: Must be at least 17 years of age at the time of enrollment; must be able to speak, write, and read English proficiently; must be physically and emotionally capable of performing all functions and skills of an EMT; possess maturity of judgment and sound moral character; must provide documentation of current certification in BLS for Healthcare Providers. This course provides the student with the necessary skills and knowledge to identify and treat life-threatening emergencies, wounds and fractures, medical and environmental emergencies, and patient access and handling. This course utilizes a combination of classroom lectures and skill practice. An additional 6 hours is required to complete the psychomotor and cognitive examinations required for certification. (25-20)

EMS-201 Emergency Medical Technician (7 s.h.)
Prerequisites: Be at least 17 years of age at the time of enrollment; must be able to speak, write, and read English proficiently; must be physically and emotionally capable of performing all functions and skills of an EMT, possess maturity of judgment and sound moral character; must provide documentation of current certification in BLS for Healthcare Providers; a physical examination, immunization record, and background check is required prior to beginning the hospital or field clinical portion of the course. This course provides the student with the necessary knowledge and skills to perform emergency care and transport. It includes a Preparatory Module, Function and Development of the Human Body Module, Pharmacology Module, Airway Management Module, Patient Assessment Module, Medical Emergencies Module, Shock Module, Trauma Module, Special Patient Populations Module, and EMS Operations Module. An additional 18 hours of hospital-based clinical and 12 hours of ambulance ride time is required. (70-60-30)

EMS-237 Advanced Emergency Medical Technician (8 s.h.)
Prerequisites: Must be at least 17 years of age at the time of enrollment; must be able to speak, write, and read English proficiently; must be physically and emotionally capable of performing all functions and skills of an AEMT, possess maturity of judgment and sound moral character; must provide documentation of current certification in BLS for Healthcare Providers and State of Iowa EMT-B and EMT certification; a physical examination, immunization record, and background check is required prior to beginning the hospital or field clinical portion of the course. This course provides the student with the necessary knowledge and skills to perform advanced-level emergency care and transport. It includes a Preparatory Module, Vascular Access and Medicine Administration Module, Function and Development of the Human Body Module, Pharmacology Module, Airway Management Module, Patient Assessment Module, Medical Emergencies Module, Shock Module, Trauma Module, Special Patient Populations Module, and EMS Operations Module. An additional 52 hours of hospital clinical and 48 hours of ambulance ride time is required. Students will be required to complete patient assessments and perform skills within the AEMT scope of practice. (68-45-100)

ENG-014A-D Mastery Writing (1-4 s.h.)
Prerequisite: Recommendation of current/previous instructor, college recommendation, or student request. The Mastery Writing course provides developmental writing instruction to students referred by orientation assessment or by instructor who prefer a competency-based approach to improving their writing skills. Emphasis is on writing as a process; students will learn strategies for recognizing and compensating for individual writing challenges. Course work may include achieving mastery in three areas: language (grammar and mechanics), conceptual aspects (planning, style, content), and structure (organization, development, and support). Students' ability to succeed in a self-management style course will be assessed prior to approving registration in the course. Learning objectives include achievement on standardized tests and demonstrated mastery through writing samples for subsequent enrollment in writing courses. Credit may be repeated up to 8 hours. Credit will not satisfy the requirement for an Associate Degree. This course has been designated as a pass/no pass course. (5-20, 10-40, 15-60, 20-80)

ENG-015 Elements of Writing (4 s.h.)
A developmental writing course designed for students referred by orientation assessment or by instructors. Emphasis is on writing; students will learn strategies for recognizing and compensating for individual writing problems. Students complete the course by meeting the minimum entrance requirements for Composition & Speech I. Credit earned will not satisfy the requirements for an Associate

Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (60-0) *Equivalent to ENGL-094, 30-090.*

ENG-046 Communications/Reading & Writing Enrich (4 s.h.)
Prerequisite: Consent of instructor or college placement. This Enrich course will focus on strategies that enable adult students to understand and apply reading skills to printed material, and to express ideas clearly and correctly in writing. Applications will be in daily life, at work, and in leisure activities. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (60-0) *Equivalent to 30-048, ENRI-045.*

ENG-047 Communications/Reading & Writing Enrich II (4 s.h.)
Prerequisite: Consent of instructor or college placement. This Enrich course will focus on strategies that enable adult students to understand and apply reading skills to printed material and to express ideas clearly and correctly in writing. Applications will be in daily life, at work, and in leisure activities. Emphasis will be on decoding, vocabulary building, and writing. This course is designed to follow Communication Through Reading and Writing Enrichment, ENG-046 but may be taken without that prerequisite. Students will participate in the Power Reading Program for development of stronger reading skills. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (60-0) *Equivalent to 30-049, ENRI-046.*

ENG-102 Composition & Speech I (4 s.h.)
Improvement of skills in reading, writing, speaking, and listening, with an emphasis on expository methods of development and personal experience as supporting material. Students will use word processors and the Writer's Workbench analyses programs, the Writer's Workbench STEPS programs, and the structuring sentences video series. Students must meet minimum competency requirements in writing and speaking to receive a grade of C or higher. (60-0) *Equivalent to ENGL-101, ENGL-104, 30-101, ENG-105.*

ENG-103 Composition & Speech II (4 s.h.)
Prerequisite: ENG-102, Composition & Speech I. Students must have earned a C or higher grade in Composition & Speech I before enrolling in Composition & Speech II. A continuation of ENG-102, Composition & Speech I, with an emphasis on argumentative and persuasive writing and speaking, on research methods, and on language. Students will use word processors, Writer's Workbench analyses, Writer's Workbench STEPS, and sentence structuring videos. (60-0) *Equivalent to ENGL-102, 30-102, ENG-106, ENGL-105.*

ENG-105 Composition I (3 s.h.)
Improvement of skills in reading, writing, and listening with an emphasis on expository methods of development and personal experience as supporting material. Students may be requested to use word processors and the Writer's Workbench analyses programs, the Writer's Workbench STEPS programs, and the structuring sentences video series. Students must meet minimum competency requirements in writing to receive a grade of C or higher. (45-0) *Equivalent to ENGL-104, ENGL-101, 30-101, ENG-102.*

ENG-106 Composition II (3 s.h.)
Prerequisite: ENG-105, Composition I, or ENG-102, Composition & Speech I. Students must have earned a C or higher grade in Composition I or Composition & Speech I before enrolling in Composition II. A continuation of ENG-105 Composition I, with an emphasis on argumentative and persuasive writing, on research methods, and on language. Students may be requested to use word processors, Writer's Workbench analyses, Writer's Workbench STEPS, and sentence structuring videos. (45-0) *Equivalent to ENGL-102, ENGL-105, 30-102, ENG-103.*

ENG-221 Creative Writing (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. A practical workshop in writing and rewriting manuscripts in preparation for submitting for publication. Emphasis on nonfiction articles and short stories but also covers poetry, plays, and screenplays. (45-0) *Equivalent to 30-205, ENGL-205.*

ENG-701 Communications I (3 s.h.)
Study designed to assist students in improving and/or refining skills in the areas of reading, writing, listening, and speaking to help meet communication needs in college and for success and advancement in a career. (45-0) *Equivalent to 95-130, ENGL-701.*

ENG-702 Communications II (3 s.h.)
Prerequisite: ENG-701, Communications I or equivalent. Further study designed to assist students in improving and/or refining skills in the areas of reading, writing, listening, and speaking to help meet communication needs in college and for success and advancement in a career. (45-0) *Equivalent to 95-131, ENGL-702.*

ENV-110 Environmental Science (3 s.h.)
The study of ecological principles and the interrelationships among populations, resources, and pollution in developing a sustainable society. Lecture and laboratory-based topics include: population, ecology, soil, water, land, air, and energy resources, plus air, water, soil, and waste management. Environmental decision-making strategies to resolve current and future environmental issues are stressed. (30-30) *Equivalent to ENVR-101, 70-104.*

FIN-101 Principles of Banking (3 s.h.)
Fundamental bank functions presented in a descriptive fashion so that the beginning banker may view the chosen profession in broad (and operational) perspective. (45-0) *Equivalent to 15-170, BUSN-140.*

FIN-210 Analysis and Valuation of Stocks (1 s.h.)
The Analysis and Valuation of Stocks is a comprehensive course designed to provide you with conventional and advanced techniques in researching and valuing stocks. Starting off with the basics, you will learn how to read financial statements and calculate financial ratios, and then move on to perform industrial comparisons, value stocks, and conduct economic and industrial research. This course is taught in a manner that uses everyday language, simple, yet insightful analogies, and a just-the-facts attitude that you will understand and appreciate. By the end of this course, you will have a strong foundation in the analysis and valuation of stocks. This course has been designated as a pass/no pass course. (5-20) *Equivalent to 15-272, BUSN-250.*

FIN-214 Stocks, Bonds, and Investing: Oh My! (1 s.h.)
Stocks, Bonds, and Investing: Oh My! emphasizes preemptive planning for a financial account by comprehending financial markets through identifying how financial markets operate. This course has been designated as a pass/no pass course. (5-20) *Equivalent to 15-247, BUSN-255.*

FIR-155 Fire Protection Technology (4 s.h.)
This course will familiarize the student with the different types of building construction as they relate to fire protection. Also covered will be: private fire protection systems, municipal water systems, state and local codes. (65-15) *Equivalent to 70-115, FIRE-102.*

FIR-184 Hazardous Material Technician (3 s.h.)
This course will be oriented toward preparing emergency response team members to perform advanced control, containment, and/or confinement operations; understand hazard and risk assessment techniques; know how to identify materials using field response plan; understand the various roles within the incident command system; properly identify, select, and use specialized chemical protective clothing; and perform decontamination activities on personnel equipment. (30-30) *Equivalent to 70-116, FIRE-103.*

FIR-210 Incident Command System (1 s.h.)
This course is designed to meet the needs of fire officers and managers with responsibilities to use, deploy, implement, and/or function within an incident command system. This program addresses the need for incident management systems, an overview of the structure and expandable nature of ICS, and understanding of the command skills needed by department officers to effectively use ICS guidelines, and scenario practice. (15-0) *Equivalent to 70-117, FIRE-104.*

FIR-231 Fire Behavior/Investigation (4 s.h.)
This course is designed to assist in training firefighters and fire officers to properly determine the origin and cause of fire. (45-35) *Equivalent to 70-113, FIRE-101.*

FIR-281 Fire Instructor I (2 s.h.)
This course develops the participants' attitudes, knowledge, skills, and abilities to effectively implement and manage tactical operations. Develop a basic understanding of fire fighting strategies and tactics. (24-24) *Equivalent to 70-119, FIRE-105.*

FLS-141 Elementary Spanish I (4 s.h.)
Designed for students with little or no previous study of Spanish. Focus is on acquainting the student with fundamentals, including pronunciation, basic grammar needed to express activities in the present and near future. Basic vocabulary will be learned to enhance speaking, listening, writing, and reading skills. Increase global awareness by video shorts and short readings. (45-30) *Equivalent to 35-110, SPAN-101.*

FLS-142 Elementary Spanish II (4 s.h.)
Prerequisite: FLS-141, Elementary Spanish I or minimum of one year of high school Spanish. Designed as a continuation of Elementary Spanish I. Focus is on reinforcing students' knowledge in fundamentals, including pronunciation, basic grammar needed to express activities in the present and near future. Basic vocabulary will be learned to enhance speaking, listening, writing, and reading skills. New grammar includes being able to communicate in the past tenses, and giving commands for common verbs. Students are expected to use as much Spanish as possible with classmates and the instructor. (45-30) *Equivalent to 35-111, SPAN-102.*

FLS-241 Intermediate Spanish I (4 s.h.)
Prerequisite: FLS-142, Elementary Spanish II or minimum of two years of high school Spanish. Designed as a comprehensive grammar review, composition, and speaking course. Builds on aural-oral skills, increased vocabulary, and reading short pedagogical (using vocabulary and grammar students are familiar with) stories and authentic language literature. (45-30) *Equivalent to 35-211, SPAN-201.*

FLS-242 Intermediate Spanish II (4 s.h.)
Prerequisite: FLS-241, Intermediate Spanish I or minimum of three years of high school Spanish with instructor approval. Designed as a comprehensive grammar review, composition, and speaking course. Builds on aural-oral skills, increased vocabulary, and reading short pedagogical stories and authentic language literature. (45-30) *Equivalent to 35-212, SPAN-202.*

FLS-261 Advanced Spanish I (3 s.h.)
Prerequisite: FLS-242, Intermediate Spanish II; or four years of high school Spanish with instructor approval. Students will become more comfortable speaking by Q & A, impromptu speaking. Reading skills will be enhanced by reading original short stories and cultural and historical selections from the text. Use of visual aids, video shorts, speaking, and reading will increase vocabulary competency. Grammar study and activities will increase language accuracy and expression. Use of exams will be limited; students will be graded on in-class discussion and homework completion. Students will at times use the Internet to find and interpret articles from Hispanic newspapers. A final oral (optional) and written evaluation will determine the student's progress in the above-mentioned areas. (30-30) *Equivalent to 35-260, SPAN-260.*

FLS-262 Advanced Spanish II (3 s.h.)
Prerequisite: FLS-261, Advanced Spanish I, or four satisfactory years of high school Spanish with instructor approval. Students are expected to maximize their use of Spanish in the classroom. Guided dialogs as well as extemporaneous speaking will increase fluency. Original texts from various Hispanic countries will be used to gain cultural understanding, vocabulary, and provide topics for classroom discussion. By end of semester, students should be able to express themselves in speech and writing using all verb tenses. Short creative writings will be done. Articles from Hispanic countries will be used to expose students to a wide range of events and cultural differences. The use of contemporary music and videos will enhance student listening comprehension. Limited use of tests will be used along with in-class participation and out-of-class work to evaluate student progress. This semester's reading will include one drama, "En la ardiente oscuridad." Mexican movies, such as "Diarios de Motocicleta (Argentina)" and "Tapas (España)," will be viewed for which students will write a summary. Projects may include transcription of a song or video segment, or researching a topic of a current event in a Hispanic country. Every student should demonstrate improvement in all four skills--reading, writing, listening, and speaking. (30-30) *Equivalent to 35-261, SPAN-261.*

GEO-124 Regional Geography of the Nonwestern World (3 s.h.)
A regional study of the physical and cultural spatial patterns of Middle America, South America, North Africa/Southwest Asia, South Asia, East Asia, Southeast Asia and the Pacific World. (45-0) *Equivalent to GEOG-103, 80-152.*

GEO-125 Regional Geography of the Developed World (3 s.h.)
A regional study of the physical and cultural spatial patterns of Europe, Australia, Russia, and Anglo-American. (45-0) *Equivalent to GEOG-102, 80-151.*

GEO-131 Physical Geography (3 s.h.)
An introductory systems course in physical geography that acquaints the student with the spatial relationships that exist between man and his physical environment. (45-0) *Equivalent to GEOG-101, 80-150.*

GRA-108 Visual Communication (3 s.h.)
Prerequisite: CIS-210, Web Development I, or permission of the instructor. Visual Communication is an introduction to visual problem solving and communication. This course will cover basic technical terminology, an overview of software and equipment for web and graphic design and an introduction into imagery as a form of communication. The goal is to expand student competency in basic visual and technical skills, developing and understanding of how perception relates to communication and expose students to current issues related to design. (45-0) *Equivalent to 15-201, ECOM-115.*

GRA-123 Principles of Illustration (3 s.h.)
Prerequisite: ART-120, Two-Dimensional Design, and ART-133, Drawing. This course will emphasize the research and conceptual development skills needed to complete successful illustrations for publications in print or on the web. It will explore the various techniques used by contemporary illustrators, including traditional methods such as drawing as well as digital processes. Skills in digital illustration programs such as Adobe Illustrator and Photoshop will also be developed. (45-0) *Equivalent to GRA-117.*

GRA-140 Digital Imaging (3 s.h.)
Introduction to image creation and manipulation using industry-standard software. The student will learn the basics of image production through a series of hands-on projects, each demonstrating a unique aspect of digital imagery. Students will produce images for print, the web, and video, demonstrating different techniques and skills for each. Specific areas of study include working with photos, color correction, product photography, and using scanners and cameras. (45-0)

GRA-151 Web Design (3 s.h.)
Prerequisite: GRA-108, Visual Communication, or permission of instructor. This course is an expansion of graphic design concepts merging traditional page design, typography, and digital imagery into the concepts and practices of web design. This studio course will cover the preparation of digital images, compositional dynamics, and sequencing of images into a complete working web design. Students will work with current graphic and digital imaging software and web authoring software. (45-0) Equivalent to 15-202, ECOM-201.

GRA-158 Web Multimedia (3 s.h.)
An introduction to the creation of multimedia for use with Web pages, kiosks, and CD/DVD. Video camcorders, digital cameras, digital recorders, touch screens, and iPods will be utilized in conjunction with computer hardware and software for media creation and manipulation. Media covered in the course will include podcasting, streaming video, streaming audio, live broadcasts, and presentations. (45-0)

GRA-166 Web Animation (3 s.h.)
Prerequisite: GRA-108, Visual Communication, or permission of instructor. Animation can be an important part of information transfer from a website to the viewer. Topics will include when animation is an appropriate tool to use, when animation should be avoided, what tools are the current standard for Web animation, and how animation can be used to present information. The class will be project-based, with the student solving animation-related problems based on real business situations. Students will be expected to animate their solutions using current software. Animations will be judged on their completeness, correctness, and professionalism. (45-0) *Equivalent to 15-206, ECOM-205.*

GRA-173 Typography (3 s.h.)
Prerequisite: ART-115, Graphic Design, or permission of instructor. Because type takes the place of the spoken word in many forms of visual communication, it is critical that it be understood. This course introduces the student to the history and principles of good typographic design and how these principles can be used effectively in all forms of communication that depend on the printed word, including web design, publication design and advertising design. (45-0)

GRA-194 Design Studio Applications (3 s.h.)
Prerequisite: ART-115, Graphic Design, and GRA-108, Visual Communication. Building upon the knowledge gained throughout the design program, this capstone course takes students into the field to address real graphical problems for non-profits in the community. Students will meet with representatives of the organization to determine need, address the need in a professional manner that solves the client problem, and complete the process through printed or electronic media. (45-0)

GRA-299 Electronic Portfolio (3 s.h.)
Electronic Portfolio will help prepare the student for the next step, whether that is moving into the work force or presenting to the teachers at a four-year institution. Skills taught in this class will include final touches to the electronic portfolio, career-advancement skills, resume writing, and interviewing. Student will be expected to present themselves as professionals in various ways, including speaking to members of the business community and various members of the NIACC staff. The course culminates in a formal presentation of the electronic portfolio to staff and business people. (30-30) *Equivalent to 15-220, ISTS-250.*

GRA-761 Dreamweaver Basics (1 s.h.)
Adobe Dreamweaver is an industry-standard website development tool. This course will focus on learning the tool correctly through the use of recorded demonstrations of actual product usage. Develop new skills or learn about the latest release in this online course. (15-0)

GRA-762 Flash Basics (1 s.h.)
Adobe Flash is an industry-standard animation tool. This course will focus on learning the tool correctly through the use of recorded demonstrations of actual product usage. Develop new skills or learn about the latest release in this online course. (15-0)

GRA-763 Fireworks Basics (1 s.h.)
Adobe Fireworks is a powerful prototyping tool for generating websites and application interfaces. This course will focus on learning the tool correctly through the use of recorded demonstrations of actual product usage. Develop new skills or learn about the latest release in this online course. (15-0)

GRA-764 Illustrator Basics (1 s.h.)
Adobe Illustrator is an industry-standard vector-based drawing tool. This course will focus on learning the tool correctly through the use of recorded demonstrations of actual product usage. Develop new skills or learn about the latest release in this online course. (15-0)

GRA-765 InDesign Basics (1 s.h.)
Adobe InDesign is an industry-standard page layout tool. This course will focus on learning the tool correctly through the use of recorded demonstrations of actual product usage. Develop new skills or learn about the latest release in this online course. (15-0)

GRA-766 Photoshop Basics (1 s.h.)
Adobe Photoshop is the industry-standard in photography and graphic image creation. This course will focus on learning the tool correctly through the use of recorded demonstrations of actual product usage. Develop new skills or learn about the latest release in this online course. (15-0)

HCM-103 ServSafe Food Safety (1 s.h.)
ServSafe is nationally recognized and accepted by more federal, state, and local jurisdictions than any other food safety training program. The course includes latest science-based information and industry best practices. It incorporates new manager job task analysis--tasks that industry, academic and regulatory experts deem essential to the role of food service professionals who are responsible for ensuring an operation is serving safe food. It equips future managers with food safety knowledge they can share with their employees. (15-0) *Equivalent to FOOD-703, 90-248.*

HCM-135 Food Production (4 s.h.)
Professional cooking is a course designed to provide a foundation for students in developing their cooking competence. This course will show students what they need to know and how to cook in order to manage restaurant and food service operations. Units covered include cooking meats and game, poultry, fish, seafood, vegetables, and salads. (45-30)

HCM-205 Dinner and Front of the House (3 s.h.)
Prerequisite: HCM-135, Food Production. This is a capstone, project-driven course where all of the students will complete the entire planning process and execution of a formal dinner event. (15-60) *Equivalent to FOOD-802, 90:257.*

HCM-232 Culinary Nutrition (2 s.h.)
Provides up-to-date information on nutrition and diet. This course covers topics about biotechnology, vitamins, minerals, and organic foods. The course presents a broad range of facts on the nutritional value of foods, as well as coverage on the nutritional value of foods from other parts of the world. (30-0) *Equivalent to FOOD-704, 90-249.*

HCM-236 Culinary Arts and Book of Yields (2 s.h.)
This course will provide students with an introduction to chefs' technical references to inventory and portion control. (30-0)

HCM-239 Customer Service (2 s.h.)
The course will introduce students to all aspects of customer service in the hospitality industry. In addition, the course will assist each student in developing a proper customer service attitude, while taking them through activities to meet the high standards of customer service. (30-0)

HCM-283 Controlling Food Service Costs (2 s.h.)
Provide students with a wide-ranging knowledge and specific solutions they need to keep costs low and margins high. Provide instruction in food and beverage sanitation, production, and service methods. (30-0)

HCM-325 Human Resources Management & Supervision (2 s.h.)
This course provides skills-based information in a clear and logical way, covering all of the essential topics and responses to the changing needs of the hospitality supervision industry today. (30-0) *Equivalent to 90-246, FOOD-701.*

HCM-607 Hospitality & Restaurant Management (2 s.h.)
Hospitality marketing is the performance of business activities that direct the flow of goods and services from product to consumer. The marketing role in a hotel or restaurant is concerned about understanding customer needs, creating a product-service mix that satisfies these needs. (30-0) *Equivalent to 90-251, FOOD-706.*

HCR-115 Residential Heating Systems (4 s.h.)
Corequisite: ELT-115, Electronic Concepts, or instructor's permission. The purpose of this course is to introduce the student to the various types of residential heating systems. Areas and concepts covered include combustion theory, basic air distribution, furnace construction, filters, humidifiers, installation techniques, and maintenance procedures. (30-105) *Equivalent to 96-128, HVAC-701.*

HCR-150 Commercial Heating Systems (5 s.h.)
Prerequisite: HCR-115, Residential Heating Systems, or instructor's permission. This course covers large heating systems used in commercial, institutional, and industrial applications. Types of equipment include hot water and low-pressure steam boilers and rooftop heating units. (30-135) *Equivalent to 96-230, HVAC-803.*

HCR-155 Troubleshooting Heating Systems (3 s.h.)
Prerequisite: ELT-115, Electronic Concepts, or instructor's permission. 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 writing diagrams. (15-90) *Equivalent to 96-129, HVAC-702.*

HCR-205 Air-Conditioning Principles (2 s.h.)
A study of the theory of air-conditioning. Includes psychometrics, heat gain/loss problems, and equipment sizing. (15-45) *Equivalent to 96-134, HVAC-710.*

HCR-210 Residential Air-Conditioning Systems (4 s.h.)
Prerequisite: ELT-115, Electronic Concepts, or instructor's permission. The purpose of this course is to introduce the student to the various types of residential air-conditioning and heat pump systems. Areas and concepts covered include refrigeration, air-conditioning, heat pump theory, heat pump construction, installation techniques, and maintenance procedures. (30-105) *Equivalent to 96-138, HVAC-711.*

HCR-235 Commercial Air-Conditioning Systems (5 s.h.)
Prerequisite: HCR-210, Residential Air-Conditioning Systems, or instructor's permission. This course covers large cooling systems used in commercial, institutional, and industrial applications. Types of equipment include water chillers, multistage reciprocating units, and an introduction to absorption systems. (30-135) *Equivalent to 96-234, HVAC-812.*

HCR-240 Troubleshooting Air Conditioning Systems (3 s.h.)
Prerequisite: ELT-115, Electronic Concepts, or instructor's permission. 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. (15-90) *Equivalent to 96-139, HVAC-712.*

HCR-510 Sheet Metal Fabrication (2 s.h.)
Prerequisite: HCR-115, Residential Heating Systems. Use of selected sheet metal tools, layout, cutting, forming, and assembly of sheet metal as well as soldering and brazing processes. (15-45) *Equivalent to 96-140, HVAC-802.*

HCR-705 Technical Graphics (2 s.h.)
Prerequisite: HCR-150, Commercial Heating Systems. A development of blueprint skills students will need to interpret and sketch various drawings including construction, mechanical, pneumatic, electrical, plumbing, and duct patterns. Students will use simple sketching aids and appropriate templates to aid them in their development of drawings. The end result of these efforts will be the understanding of graphic drawings as a means of communicating information in their field of work. (30-0) *Equivalent to HVAC-801, 91-124.*

HCR-806 Controls I (3 s.h.)
Prerequisite: HCR-115, Residential Heating Systems. Major emphasis is on four basic types of control systems: pneumatic, electronic, electromechanical, and digital as applied to residential and commercial heating and air-conditioning practices. (30-60)

HCR-807 Controls II (3 s.h.)
Prerequisite: HCR-806, Controls I. This course presents a more advanced study of electrical controls and their applications and an introduction to electronics and the controls used in HVAC systems. (30-60)

HCR-923 Systems Design (3 s.h.)
Prerequisite: HCR-150, Commercial Heating Systems. This course utilizes the knowledge base students have gained throughout the program to create a heating and cooling system at either the residential or commercial level. (15-60)

HIS-112 Western Civilization: Ancient-Early Modern (4 s.h.)
A study of the major social, political, economic, cultural, and philosophical movements in the Western World from the beginning of civilization to 1648. (60-0) *Equivalent to HIST-201, 80-201.*

HIS-113 Western Civilization: Early Modern to Present (4 s.h.)
A study of the major social, political, economic, and philosophical movements in the Western World from 1648 to the present. (60-0) *Equivalent to HIST-202, 80-202.*

HIS-151 U.S. History to 1877 (3 s.h.)
A survey course covering the social, political, and economic history of American civilization from the Age of Discovery through Reconstruction. (45-0) *Equivalent to HIST-101, 80-140.*

HIS-152 U.S. History Since 1877 (3 s.h.)
A survey course covering the social, political, and economic history of the United States since 1877. (45-0) *Equivalent to HIST-102, 80-141.*

HIS-254 American Indian History (3 s.h.)
American Indian History is an ethnographic and historical survey of the social, cultural, and political systems developed by Native Americans north of Mexico, and the developing relationship of these systems with those of the European-Americans. Native religion and world view, agricultural and hunting practices, material culture, trade, diplomacy and political structures are examined, as are the mutual impact on both societies resulting from contact with and interaction between native North Americans and Europeans and their descendants. (45-0) *Equivalent to HIST-110, 80-144.*

HIS-257 African American History (3 s.h.)
The course chronicles the experience of African Americans 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 birth of racial advancement organizations, the development of twentieth-century urbanization and nationalism, and the struggle for civil rights, political power and cultural expression from mid century to the present. (45-0) *Equivalent to HIST-111.*

HIT-210 Basic Medical Insurance & Coding (2 s.h.)
Corequisite: HSC-120, Medical Terminology I, or permission of instructor. This course will provide the students with an overview of medical health insurance claims submission guidelines and basic coding procedures. In addition, the student will work through a number of relevant case studies. (30-0) *Equivalent to 15-250, OFFC-851.*

HIT-246 Coding I (ICD-9) (3 s.h.)
Corequisite: HSC-120, Medical Terminology I, and HSC-150, Body Structure and Function. Prerequisite: None. However, HIT-210, Basic Medical Insurance & Coding, or experience in medical coding is highly desirable. A study of the International Classification

of Disease (ICD-9-CM) codes, using sample exercises and health records to develop skill and accuracy in coding guidelines required at health care settings. (45-0)

HIT-247 Coding II (CPT) (3 s.h.)
Prerequisite: HSC-120, Medical Terminology I; HSC-150, Body Structure and Function; HIT-246, Coding I, or experience in Medical Coding. This course is a continuation of the study of ICD-9-CM (Coding I) emphasizing its use for prospective payment. Course work focuses on acquiring advanced skills in coding disease and procedures and abstracting medical data. The study of CPT/HCPCS will be emphasized including advanced concepts of coding and payment methodologies. (45-0)

HIT-630 Medical Transcription I (3 s.h.)
This course is designed to simulate medical transcription practices used in a healthcare environment. The main objective is to provide the student with knowledge of the content and formats of medical documents and reports typically dictated in physicians' offices, hospital clinics, and hospital ancillary and support facilities. (15-60) *Equivalent to 15-249, OFFC-852.*

HIT-631 Medical Transcription II (3 s.h.)
Prerequisite: HIT-630, Medical Transcription I. This course is designed to introduce students to hospital dictation. The students will progress through various levels of dictation including some advanced documents. (15-60) *Equivalent to 15-256, OFFC-853.*

HIT-632 Medical Transcription III (3 s.h.)
Prerequisites: HIT-630, Medical Transcription I. This course is designed to introduce students to live medical dictation from the clinical and radiology settings. The students will also be applying the issues of confidentiality and using medical reference books. (15-60) *Equivalent to 15-265, OFFC-854.*

HSC-120 Medical Terminology I (3 s.h.)
Introduction of basic medical terminology utilizing a programmed, word-building system to learn word parts to construct and analyze new terms. Emphasis is placed on spelling, definition, usage, and pronunciation. (45-0) *Equivalent to 15-251, HEAL-110.*

HSC-121 Medical Terminology II (3 s.h.)
Prerequisite: None. However, HSC-120, Medical Terminology I is highly desirable. A continuation of HSC-120. A brief review of basic medical terminology followed by a systems approach to learning terms associated with the anatomical, physiological, and pathological aspects of the body. (45-0) *Equivalent to 15-252, HEAL-111.*

HSC-144 Basic Pharmacology (2 s.h.)
Provides a basic foundation of the study of drugs including general concepts, biological factors affecting the action of drugs, and effects of medications on body systems. Includes allergy overview, the medication order, and discussion of legal and ethical issues related to pharmacology. (30-0) *Equivalent to 90-134, HEAL-701.*

HSC-150 Body Structure and Function (4 s.h.)
A basic study of the anatomy and physiology of the human body. Study progresses from the cell to tissues, organs, and systems with emphasis on their interrelatedness. Discussion includes some of the alterations that occur in illness. Usage of applicable medical terminology is stressed. (45-30) *Equivalent to 94-104, HEAL-704, HSC-150L.*

HSC-155 Laboratory Tests (2 s.h.)
To familiarize the student with clinical laboratory tests and their normal ranges in the areas of hematology, urology, and microbiology. The student will also learn basic surgical position terminology, instruments, and special organ studies. (30-0) *Equivalent to 90-140, HEAL-702.*

HSC-171 Nurse Aide Theory (2 s.h.)
Corequisite: HSC-174, Nurse Aide Clinical. This 75-hour nurse aide course has been designed to meet the training requirements of The Omnibus Budget Reconciliation Act of 1987 (OBRA) for aides working in nursing facilities (NF) and skilled nursing facilities (SNF). Emphasis in the course is on students achieving a basic level of knowledge and demonstrating skills to provide safe, effective resident care. The course has been developed in six units of study. The theory portion includes 30 hours of classroom time and 15 hours of laboratory practice. (30-0) *Equivalent to CNAS-101, 89-164.*

HSC-174 Nurse Aide Clinical (1 s.h.)
Corequisite: HSC-171, Nurse Aide Theory. The clinical experience includes 30 hours in a nursing facility. (0-45) *Equivalent to CNAS-102, 89-165.*

HSC-179 Medication Aide (3 s.h.)
Prerequisites: Must be employed in: (1) A certified nursing facility - minimum of 6 months employment by facility sponsor, must be on Iowa State Direct Care Workers Registry, and must provide documentation from administrator of facility in which he/she is employed; OR (2) A residential or related type of licensed facility - minimum of 6 months employment by facility sponsor, must provide evidence of successful completion of residential attendant course, and must provide documentation from administrator of facility in which he/she is employed; OR (3) An assisted living program - minimum of 6 months employment by facility sponsor, must provide documentation from administrator of facility in which he/she is employed, and must have completed 75-hour Nurse Aide Course or Residential Attendant Course. Must also have an aptitude for reading, writing, and mathematics. This is a 60-hour course consisting of 42 hours of classroom lecture and 18 hours of clinical experience. This course prepares people to safely administer nonparenteral medications in nursing facilities and related areas. The emphasis is on safe administration of medications. It qualifies the aide to administer medications in long term care, residential care, nursing facilities, skilled nursing facilities, adult day care and assisted living facilities. (42-18)

HSC-185 Activity Coordinator (4 s.h.)
A 60-hour course designed to prepare the participant to function as an entry level activity coordinator in a long-term care facility. This course is designated as pass/no pass. (60-0)

HSC-290 Supervising in Healthcare (3 s.h.)
Prerequisite: Must be current RN or LPN. This program is designed to enable the nurse to gain knowledge and develop skills necessary to manage personnel and clients in health care facilities. The program focuses on supervisory skills for nurses in long-term care. This course is designated as pass/no pass. (45-0)

HSV-152 Introduction to Counseling (3 s.h.)
Prerequisite: PSY-121, Developmental Psychology, SOC-110, Introduction to Sociology, and SOC-150, Introduction to Human Services. A survey of the basic theories and techniques of psychological counseling. This is a required course leading to the A.A. degree with a certificate in Human Services. (45-0)

HSV-153 Professional Ethics (3 s.h.)
Prerequisite: PSY-121, Developmental Psychology, SOC-110, Introduction to Sociology, and SOC-150, Introduction to Human Services. An in-depth study of ethical perspectives or a selected area of moral concern. Possible topics include bioethics; business and professional ethics; queer ethics; science, technology, and society; sexual ethics; and comparative religious ethics. This is a required course leading to the A.A. Degree with a certificate in Human Services. (45-0)

HUM-115 Encounters in Humanities (2 s.h.)
This course is designed to introduce students to the world of the humanities; describe the humanities genres and disciplines; provide a systematic method of assessing humanities artifacts; present opportunities to assess humanities artifacts; define methods of participating in the humanities. Four humanities genres are represented with their respective disciplines. (15-30) *Equivalent to 10-100, HUMA-100.*

HUM-139 British Life and Culture (3 s.h.)
Through NIACC's participation in the Iowa Community College Study Abroad Consortium, students have the opportunity for foreign study while remaining full-time NIACC students. Currently, the program is offered in London during the fall semester. British Life and Culture is a mandatory Humanities offering. On this program, students have the opportunity to earn 12 or more credit hours. Instructor's consent required. *Equivalent to HUMA-157, 89-157.*

IND-190 Skills and Safety in Industry (1 s.h.)
This course is designed to acquaint the student with the proper personal and shop safety procedures needed to function in an industrial lab setting. In addition to the safety, students will also receive instruction on first aid in an emergency situation, as well as computing skills needed to be successful in an industrial setting. (7.5-15)

IND-220 Metal Processing/Metallurgy (2 s.h.)
The student uses basic hand tools, drills, measuring tools, lathes, grinders, and welding equipment to build parts with practical applications in automotive service. (15-30) *Equivalent to INDU-705, 98-161.*

JOU-115 Introduction to Journalism (3 s.h.)
Introduction to Journalism is designed to help the student understand the role of the media in a democracy and how that role is accomplished. The student will also improve communication skills because the course stresses the fundamentals of news gathering, news writing, editing, and publication design. Students will have the opportunity to gain practical experience in news writing and interviewing. The course will stress print media. (45-0) *Equivalent to 30-121, JOUR-101.*

JOU-121 News Writing and Reporting (3 s.h.)
Prerequisite: JOU-115, Introduction to Journalism, and ability to type. News Writing and Reporting serves as a class designed to help the student improve his or her news gathering and reporting skills. Students will be expected to write stories for publication in *Logos*, the student news publication. Students will be expected to conduct interviews and utilize the computer programs used by the newspaper. (45-0) *Equivalent to 30-122, JOUR-102.*

JOU-145 Logos (1 s.h.)
Students may contribute to the student news publication, *Logos*, for 1-4 credits during their enrollment at NIACC. Credit may be earned through practical experience in reporting, photography, advertising, and other production-oriented work. Staff members are required to attend weekly staff meetings and meet a minimum number of contributions for a passing grade. (0-30) *Equivalent to 30-113, JOUR-113.*

LIT-101 Introduction to Literature (3 s.h.)
Prerequisite: ENG-102, Composition and Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. An introduction to literature through major genres such as poetry, drama, and fiction. This course will focus on helping students develop skills for reading, interpreting, and critique through group discussion, oral presentation and writing. (45-0)

LIT-130 African American Literature (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. A study of the writings of major African Americans from pre-Civil War to contemporary times. Slave narratives, autobiographies, letters, short stories, poetry, and novels will be studied as works of literature. Discussion and writing will focus on the critical analysis of the works. (45-0) *Equivalent to 30-203, LITS-103.*

LIT-131 Native American Literature (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. A study of the writings of major American Indians from precontact with Europeans to contemporary times. Legends, autobiographies, letters, speeches, poetry, novels and short stories will be studied as works of literature. Discussion and writing will focus on the critical analysis of the works. (45-0) *Equivalent to 30-204, LITS-104.*

LIT-132 Women of Color (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. A study of the writings of contemporary women of color from this country and around the world. Autobiographies, short stories, poetry, plays, essays, and novels will be studied. Discussion and writing will focus on the critical analysis of the works. (45-0) *Equivalent to 30-206, LITS-105.*

LIT-150 World Literature I (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I or ENG-105, Composition I, or comparable course or approval of instructor. Readings are drawn from several of the world's great civilizations up to the 18th Century. This course emphasizes prose and poetry

from the religious and secular traditions of the Far East, South Asia, the Ancient Mediterranean, Northern Europe, and Ancient and Medieval I Near East. (45-0) *Equivalent to 30-201, LITS-201.*

LIT-151 World Literature II (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. Readings are taken from works of short story, poetry, novel, and drama from around the world. The course will primarily focus upon literature written from the early 18th Century to present. World Literature I is not required. (45-0) *Equivalent to 30-202, LITS-202.*

LIT-160 Short Story/Novel (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. A study of selected works of fiction in the short story and novel as forms of literature. Discussion and writing emphasizing interpretation, critical analysis, and judgment/evaluation. (45-0) *Equivalent to 30-112, LITS-102.*

LIT-170 Poetry/Drama (3 s.h.)
Prerequisite: ENG-102, Composition & Speech I, or ENG-105, Composition I, or comparable course or approval of instructor. A study of selected works of poetry and drama as forms of literature. Discussion and writing emphasizing interpretation, critical analysis, and judgment/evaluation. (45-0) *Equivalent to 30-111, LITS-101.*

LIT-230 Law Enforcement in Contemporary Literature (3 s.h.)
Corequisite: ENG-105, Composition I or ENG-102, Composition and Speech I, or permission of instructor. This course will examine issues arising in the field of law enforcement as reflected in contemporary literature and its literary antecedents. The literature will include selected works of poetry, fiction, and drama. Discussion and writing will emphasize interpretation, critical analysis, and judgment/evaluation. (45-0)

MAP-353 Clinical Procedures I (4 s.h.)
Assist physician with examinations and treatments, prepare patients for examinations and diagnostic procedures, administer first aid and CPR, maintain and use aseptic techniques, obtain and record patient data. Perform routine tests, autoclave instruments, and prepare sterile setups. If taking curriculum beyond a one-year period, this course should be taken during the final year of the curriculum. (45-30) *Equivalent to 90-141, MEDA-701.*

MAP-358 Clinical Procedures II (5 s.h.)
Prerequisite: MAP-353, Clinical Procedures I. A continuation of Clinical Procedures I with emphasis on pharmacology, administration of medications, electrocardiography and the circulatory system. Principles of radiography and nutrition. Collection and testing of laboratory specimens, including phlebotomy. If taking curriculum beyond a one-year period, this course should be taken during the final year of the curriculum. (45-75) *Equivalent to 90-142, MEDA-702.*

MAP-622 Medical Assistant Practicum (6 s.h.)
An eight-week term of practical experience in selected physicians' offices, clinics, or laboratories. It offers the students an opportunity to perform various clinical and office procedures under the supervision of the physician, nurse, and the instructor/coordinator. 225 clock hours are completed in the clinical setting. An additional 15 clock hours are completed on campus as a review for the national certification examination. This course has been designated as a pass/no pass course. (15-225) *Equivalent to 90-208, MEDA-720, MAP-616.*

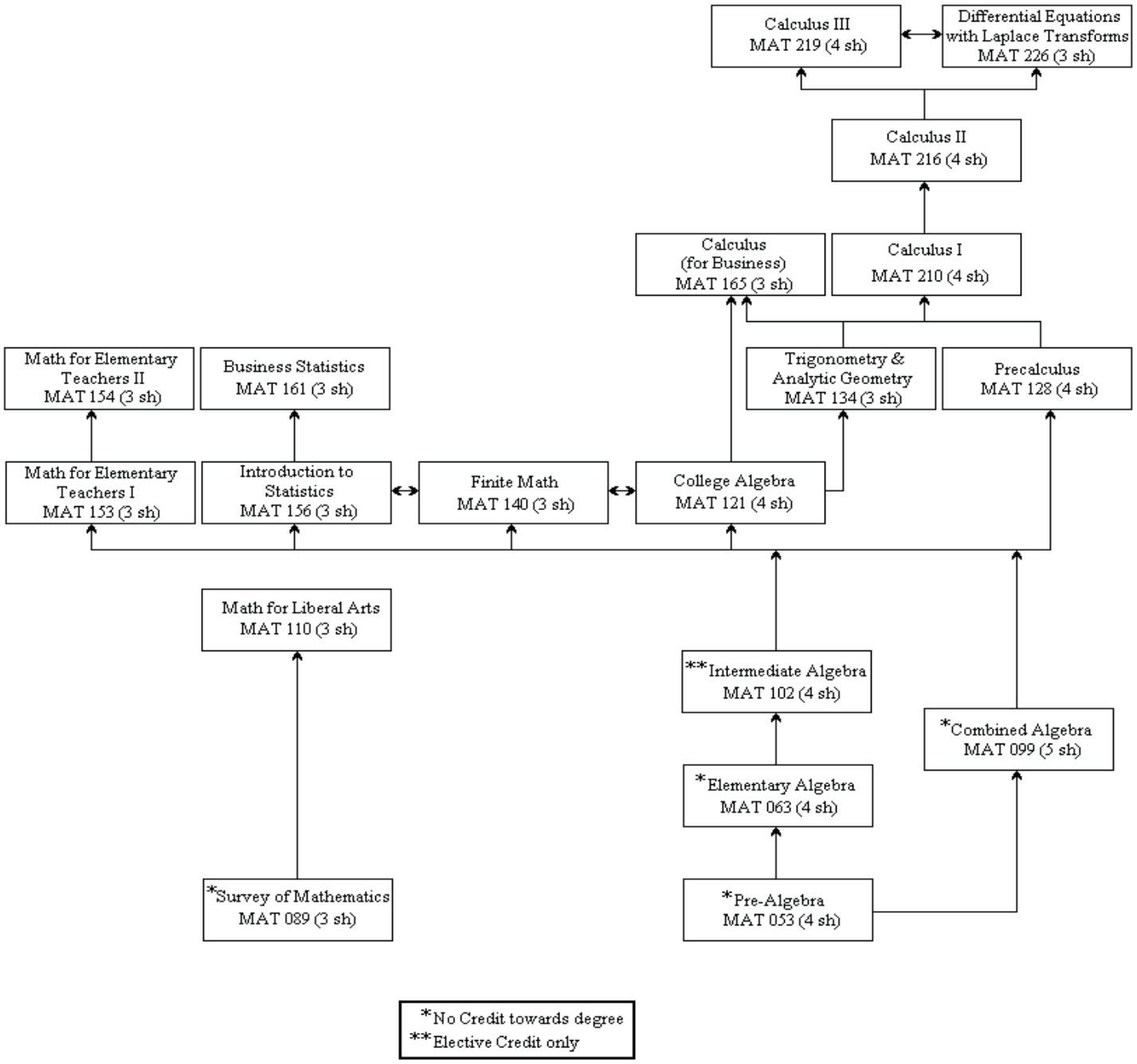
MAS-111 Masonry Lab I (3 s.h.)
A basic course in brick, block, stone, and manufactured masonry products. Topics to be covered include terminology, safety, masonry tools, masonry materials, mortar mixing, basic masonry skills, and basic wall construction techniques. This course has been designated as a pass/no pass course. (0-90)

MAS-211 Masonry Lab II (3 s.h.)
Prerequisite: MAS-111, Masonry Lab I. This course provides a continuation of the masonry skills learned in Masonry Lab I. Topics include constructing walls, wall corners, window skills, openings, composite walls, and similar structures using a variety of brick, block, stone, and manufactured masonry products with bonds and materials. This course has been designated as a pass/no pass course. (0-90)

MAT-030 Enrich Math I (2 s.h.)
Prerequisite: Consent of instructor or college placement. This Enrich course will focus on strategies that enable students to understand and apply mathematics in their daily lives, at work, and in their leisure hours. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (30-0) *Equivalent to ENRI-047, 40-038.*

MAT-031 Enrich Math II (2 s.h.)
Prerequisite: Consent of instructor or college placement. This Enrich course will focus on strategies that enable students to understand and apply mathematics in their daily lives, at work, and in their leisure hours. Focus will be on decimals, fractions, and percents. The course is designed to follow Enrich Math I, but may be taken without that prerequisite. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (30-0) *Equivalent to 40-039, ENRI-048.*

MAT-044 Mastery Math (1, 2, 3, or 4 s.h.)
Prerequisite: Permission of course instructor or college recommendation. This course is intended for students who would benefit from a competency-based approach to increasing their math skills. Student's self-management will be assessed for suitability to the course format prior to approval for course registration. Learning objectives will include succeeding on a standardized test to meet placement requirements for a subsequent math enrollment. This course has been designated as a pass/no pass course. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. Credit may be repeated. (5-20, 10-40, 15-60, or 20-80)



North Iowa Area Community College
Mathematics Division
Course Flow Chart

MAT-053 Pre-Algebra (4 s.h.)
Prerequisite: A score of 15 or higher on the Prealgebra Pretest; COMPASS Prealgebra score of at least 25; or ACT score of at least 12. This course is intended to prepare students for an entry-level math course such as Elementary Algebra or Applied Math. The course covers basic computational skills with whole numbers, fractions, decimals, percentages, and integers. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. (60-0) *Equivalent to MATH-040, 40-040.*

MAT-063 Elementary Algebra (4 s.h.)
Prerequisite: MAT-053, Pre-Algebra, with a grade of C or higher; OR COMPASS Pre-Algebra score of at least 49; OR ACT Math score of at least 16. This course is intended for students who have had no previous experience in algebra. Topics include: the real number system, linear and quadratic equations, exponents, factoring, rational expressions, graphing, systems of equations, radicals, the quadratic formula, square root manipulation, and application of concepts. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. (60-0) *Equivalent to 40-060, 40-119, MATH-060.*

MAT-088 Math for Liberal Arts Supplement (1 s.h.)
Prerequisite: Permission of instructor or college recommendation. This course is intended for students who would benefit from an individualized approach to increasing their math skills and successful completion of Math for Liberal Arts. This course has been designated as a pass/no pass course. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course is repeatable to a maximum of 12 credit hours. (15-0)

MAT-089 Survey of Mathematics (3 s.h.)
Prerequisite: COMPASS Prealgebra score of at least 25 or ACT score of at least 12. This course is for students who are intending on taking Math for Liberal Arts. The course focuses on arithmetic skills without a calculator, college study skills, and an overview of topics from Math for Liberal Arts that include: problem solving, sets, algebra, number theory, percentages, statistics, and geometry. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. (45-0)

MAT-102 Intermediate Algebra (4 s.h.)
Prerequisite: MAT-063, Elementary Algebra, with a grade of C or higher; or COMPASS Algebra score of at least 51; or ACT Math score of at least 20. This course will prepare the student for college algebra or other equivalent course work. Topics include properties of real numbers, linear and quadratic equations, graphs of polynomial functions, systems of equations, polynomials and rational expressions, inequalities, integral and rational exponents, radicals, and complex numbers. This course may not be used to satisfy core requirements. (60-0) *Equivalent to 40-120, MATH-100.*

MAT-103 Combined Algebra (5 s.h.)
Prerequisite: MAT-053, Pre-Algebra, with a grade of B or higher; or a COMPASS Prealgebra score of at least 76 and a COMPASS Algebra score of at least 40; or an ACT Math score of at least 18; or permission of instructor. This course will prepare the student for college algebra or equivalent course work. Topics include properties of real numbers, linear equations and inequalities, graphs of polynomial functions, exponents, factoring, system of equations and inequalities, polynomial and rational expressions, radicals, complex numbers and quadratic equations. This course may not be used to satisfy core requirements. (75-0)

MAT-110 Math for Liberal Arts (3 s.h.)
Prerequisite: MAT-089, Survey of Math, with a grade of C or higher; COMPASS Algebra score of at least 56 OR ACT Math score of at least 21. Math for Liberal Arts provides a survey of mathematics topics that includes sets, logic, statistics, number theory, geometry, critical thinking skills, the metric system, and consumer math. This course will fulfill 3 hours of Natural Science requirement for the A.A. Degree. (45-0) *Equivalent to MATH-101, 40-121.*

MAT-121 College Algebra (4 s.h.)
Prerequisite: MAT-102, Intermediate Algebra with a C or better, OR Math ACT score of at least 21, or Compass Algebra score of 76 or better. This course is intended for students majoring in business, social science, biological sciences, liberal arts, and those mathematics students with insufficient background to begin the study of calculus. The course is a study of various classes of functions, their graphs, and applications. These include linear, polynomial, rational, root, inverse, exponential and logarithmic functions. Also included are systems of equations and inequalities, matrices, sequences and series, and the Binomial Theorem. (60-0) *Equivalent to MATH-121.*

MAT-128 Precalculus (4 s.h.)
Prerequisite: COMPASS College Algebra score of at least 41 or ACT math score of at least 26. This course is intended to provide students with a summary of mathematics topics needed to study analytic geometry and calculus. The functional approach is emphasized. Topics covered include fundamentals of algebra, polynomial, rational, exponential, logarithmic, and trigonometric functions, analytic trigonometry, systems of equations, and analytic geometry of conics. (60-0) *Equivalent to MATH-161, 40-161.*

MAT-134 Trigonometry and Analytic Geometry (3 s.h.)
Prerequisite: MAT-121, College Algebra with a C or better, OR Math ACT score of at least 26. This course is a preparation course intended for students majoring in engineering, mathematics, physics, chemistry or certain vocational fields. The course is a study of both trigonometric and conic functions and equations. Both rectangular and polar coordinate systems are studied. (45-0) *Equivalent to MATH-134.*

MAT-140 Finite Math (3 s.h.)
Prerequisite: MAT-102, Intermediate Algebra, with a grade of C or higher; or COMPASS Algebra score of at least 76; or ACT Math score of at least 21. This course provides a sampling of applied mathematical topics primarily in a business setting. Some topics covered include elementary functions, linear systems, matrices, linear programming, set theory, probability, and expected value. (45-0) *Equivalent to MATH-125, 40-125.*

MAT-153 Math for Elementary Teachers I (4 s.h.)
Prerequisite: MAT-102, Intermediate Algebra, with a grade of C or higher; or ACT Math score of at least 21; or COMPASS Algebra

score of at least 56. This course focuses on the fundamental concepts that all K-6 teachers will teach. Students will develop mathematical tools of reasoning, problem solving, and communication. Specific topics include rational numbers, operating with rational numbers, fractions and decimals, probability, and statistics. (60-0).

MAT-154 Math for Elementary Teachers II (4 s.h.)
Prerequisite: MAT-153, Math for Elementary Teachers I, with a grade of C or higher, or permission of instructor. This course focuses on the fundamental concepts that all K-6 teachers will teach. Students will develop mathematical tools of reasoning, problem solving, and communication. Specific topics include algebraic thinking, geometry, measurement, reasoning and proof, and technology in elementary classrooms. (60-0).

MAT-156 Introduction to Statistics (3 s.h.)
Prerequisite: MAT-102, Intermediate Algebra, with a grade of C or higher; or COMPASS Algebra score of at least 76; or ACT Math score of at least 21. This course is intended to introduce students to basic statistical concepts. It covers descriptive and inferential statistical methods, probability, hypothesis testing on the mean and proportion, and linear regression. Students are also introduced to technology as it applies to introductory statistical methods. A graphing calculator is required. (45-0) *Equivalent to STAT-104, 40-140.*

MAT-161 Business Statistics (3 s.h.)
Prerequisite: MAT-156, Introduction to Statistics, or by approval of instructor. Business Statistics looks at the use of statistical methods as an analytical tool in business situations. Data collection, sampling, data analysis, estimation, hypothesis testing, regression and correlation analysis, multinomial experiments and contingency tables, analysis of variance, and nonparametric statistics are covered. The use of calculators and statistical software is incorporated into the course. The course is intended to follow an introductory statistics course. A graphing calculator is required. (45-0) *Equivalent to 15-210, STAT-201.*

MAT-165 Calculus (Business) (3 s.h.)
Prerequisite: MAT-128, Precalculus, with a grade of C or higher; or MAT-121 College Algebra; or COMPASS College Algebra score of at least 41; or ACT Math score of at least 26. This course uses calculus techniques with an emphasis on applications to business, the social sciences, the life sciences, and also to certain career programs. Types of functions included in the course are polynomial, rational and root, exponential and logarithmic. Topics include derivatives and their uses, and integrals and their applications. A graphing calculator is required. (45-0) *Equivalent to 40-240, MATH-240.*

MAT-210 Calculus I (4 s.h.)
Prerequisite: MAT-128, Precalculus, with a grade of C or higher; or MAT-121, College Algebra and MAT-134, Trigonometry and Analytic Geometry, with grades of C or higher; or COMPASS Trigonometry score of at least 51; or ACT Math score of at least 28. Topics include analysis of functions, limits, derivatives and integrals of algebraic, logarithmic, exponential, and trigonometric functions, and applications of differentiation. (60-0) *Equivalent to 40-251, MATH-251.*

MAT-216 Calculus II (4 s.h.)
Prerequisite: MAT-210, Calculus I, with a grade of C or higher. This course is a continuation of MAT-210. Topics include applications of the definite integral; principles of integration evaluation; improper integrals; modeling with differential equations; and infinite sequences and series. (60-0) *Equivalent to 40-252, MATH-252.*

MAT-219 Calculus III (4 s.h.)
Prerequisite: MAT-216, Calculus II, with a grade of C or higher. This course is a continuation of MAT-216. Topics include graphs and analysis of the conic sections, polar coordinates and parametric equations, three dimensional space, vectors and vector-valued functions, partial derivatives, multiple integrals, and topics in vector calculus. (60-0) *Equivalent to 40-253, MATH-253.*

MAT-226 Differential Equations with Laplace Transforms (3 s.h.)
Prerequisite: MAT-216, Calculus II, with a grade of C or higher. Topics include analytic methods for solving first and second order ordinary differential equations, higher order linear differential equations (including Laplace Transforms) and systems of differential equations, numerical methods for approximating solutions of differential equations, and applications using differential equations. (45-0) *Equivalent to 40-261, MATH-261.*

MAT-710 Business and Financial Math (2 s.h.)
Mathematical applications that apply to a variety of business problems. Topics covered include mathematical fundamentals; accounting applications including banking, payroll, and taxes; figuring percentages related to commissions, discounts, and markups; business problems in credit and interest; business and personal insurance; inventory and turnover; financial statements; and employment tests. (30-0) *Equivalent to 90-105, MATH-701.*

MAT-770 Applied Math (2 s.h.)
Prerequisite: Compass Pre-Algebra score of at least 49; or ACT math score of at least 16; or MAT-053 Pre-Algebra, with a grade of C or higher. This course covers essential topics in algebra, including ratio and proportion, and basic statistics. This course is offered during the first eight weeks of the fall semester and the first eight weeks of the spring semester. (30-0) *Equivalent to MATH-710, 91-122.*

MAT-771 Applied Math II (2 s.h.)
Prerequisite: MAT-770, Applied Math, with a grade of C or higher. This course covers essential topics in geometry and trigonometry. This course is offered during the second eight weeks of the fall semester and the second eight weeks of the spring semester. (30-0) *Equivalent to MATH-711, 91-123.*

MFG-108 Computer-Aided Drafting (2 s.h.)
Prerequisite: MFG-120, Machine Trade Print Reading I; MFG-130, Machine Trade Print Reading II; or instructor's permission. Students are introduced to computer-aided drafting and design as an essential tool utilizing and enhancing the student's existing drafting skills. This is accomplished by utilizing ESPRIT through the generation of two- and three-dimensional orthographic drawings as well as pictorial techniques in the CAD environment. Operating systems commands, cursor manipulation, direct display interaction, geometry creation and manipulation, file storage and retrieval,

entity manipulation such as rotation and mirroring, and the use of printers are just a few of the hardware and software capabilities to be covered. (15-30) *Equivalent to 96-270, TLDI-804.*

MFG-110 3-D Modeling (2 s.h.)
Prerequisite: MFG-108, Computer-Aided Drafting, or instructor's permission. Students are introduced to solid modeling as an essential tool, utilizing and enhancing designing skills. This is accomplished through the generation of 3-D drawings created in Solid Works. Operating systems commands, cursor manipulation, file storage and retrieval, entity manipulation, such as rotation, mirroring, editing, dimensioning, sections, sheet metal parts, and assemblies capabilities will be covered. (15-30) *Equivalent to 96-173, TLDI-805.*

MFG-120 Machine Trade Print Reading I (1 s.h.)
An introduction to the importance of prints in industry. Covers isometric drawings, orthographic projection, auxiliary views, detail and assembly drawing, dimensions and tolerances, and sectional views. Integrates the alphabet of lines and principles of sketching. Other information covered includes title blocks, drawing change systems, drawing notes, and material lists. (0-30) *Equivalent to 96-163, TLDI-701.*

MFG-130 Machine Trade Print Reading II (1 s.h.)
Prerequisite/Corequisite: MFG-120, Machine Trade Print Reading I. Continues Machine Trade Print Reading I with emphasis on geometric dimensioning and tolerancing and the interpretation of more advanced prints used in the construction of tool and die and mold building. (0-30) *Equivalent to 96-164, TLDI-702.*

MFG-195 Manufacturing Processes I (2 s.h.)
Knowledge and skills in manufacturing materials and the procedures used to produce products in today's modern industry. Introduction to measurement and quality assurance with an emphasis on tolerance, measurement, and calibration. Final project, create a product using manual metal cutting processes. (15-30) *Equivalent to INDU-715, 91-120.*

MFG-216 Survey of Machine Tool Practices I (4 s.h.)
The student safely uses basic measuring tools, machine tools, and layout/inspection tools. Emphasis is on turning machines, drills, and hand tools. Safety is taught and enforced as it applies to each machine process. Proper terminology of the machinist trade is emphasized. The student follows blueprints to produce products within tolerances specified. (15-90) *Equivalent to 96-180, TLDI-760.*

MFG-217 Survey of Machine Tool Practices II (4 s.h.)
Prerequisite: MFG-216, Survey of Machine Tool Practices I. Continues Survey of Machine Tool Practices I. The student safely uses basic measuring tools, machine tools, and layout/inspection tools. Emphasis on basic milling machines. Safety is taught and enforced as it applies to each machine process. Proper terminology of the machinist trade is emphasized. The student follows blueprints to produce products within tolerances specified. (15-90) *Equivalent to 96-181, TLDI-761.*

MFG-218 Survey of Machine Tool Practices III (4 s.h.)
Prerequisite: MFG-216, Survey of Machine Tool Practices I; MFG-217, Survey of Machine Tool Practices II. The student safely performs cylindrical grinder and surface grinder operations. Using the grinders, the student makes round and flat surfaces to conform to the specified tolerances. Emphasis is placed on safety, proper use of tools, and using correct terminology of the machinist trade. (15-90) *Equivalent to 96-182, TLDI-762.*

MFG-219 Capstone Manufacturing Project (4 s.h.)
Prerequisite: MFG-216, Survey of Machine Tool Practices I - Pass with a C or better; MFG-217, Survey of Machine Tool Practices II - Pass with a C or better; MFG-218, Survey of Machine Tool Practices III - Pass with a C or better; MFG-302, CNC Fundamentals - Pass with a C or better. The goal is for the learner to build an approved multiple-part project using machine tools and communicate the successes and difficulties encountered in the project-building process. (15-90) *Equivalent to 96-193, TLDI-763.*

MFG-245 Machine Theory & Operations I (9 s.h.)
Corequisite: MFG-120, Machine Trade Print Reading I, MAT-770, Applied Math, and MAT-771, Applied Math II. Covers theory and lab use of basic measuring and machining tools, layout inspection tools, as well as bench work. Safety is taught and enforced as it applies to each machine process. Proper terminology of the machinist trade is emphasized as well as following blueprints and holding tolerances through the use of a variety of machining processes to produce a product. (60-225) *Equivalent to 96-165, TLDI-703.*

MFG-248 Machine Theory & Operations II (7 s.h.)
Prerequisite: MFG-245, Machine Theory and Operations I; MAT-770, Applied Math; MAT-771, Applied Math II; MFG-120, Machine Trade Print Reading I. Corequisite: MFG-130, Machine Trade Print Reading II. Continues Machine Theory and Operations I. Covers more advanced principles in setup and operation of mills, lathes, and grinders, with an introduction to carbide tooling along with a continued emphasis on shop safety, communication, and cooperation. Stresses the interrelationship of manufactured mating parts. (45-195) *Equivalent to 96-166, TLDI-704.*

MFG-302 CNC Fundamentals (3 s.h.)
Prerequisite: MFG-245, Machine Theory and Operations I. Students must obtain a grade of C or higher in MFG-248, Machine Theory and Operations II. Covers computer numerical control (CNC) as it relates to milling machines, turning lathes, microcomputers, and related software. Emphasis on input language, codes, machine set-up and operation, inspection of parts, and communication of peripherals. (30-30) *Equivalent to 96-167, TLDI-705.*

MFG-312 Advanced CNC (2 s.h.)
Prerequisite/Corequisite: MFG-459, Injection Mold Making. A continuation of CNC and EDM fundamentals as well as mold making with additional instruction and practice in the use of CAD, wire, and ram electrical discharge machines in the construction of die and mold components. (15-45) *Equivalent to TLDI-814, 96-275.*

MFG-320 Computer-Aided Manufacturing (3 s.h.)
Prerequisite/Corequisite: MFG-108, Computer-Aided Drafting, MFG-302, CNC Fundamentals, MFG-423, Jig and Fixtures, and MFG-380, EDM Fundamentals. Students must obtain a grade of C or higher in MFG-302, CNC Fundamentals. This program provides an introduction to (Process Modeling) utilizing the CNC graph-

ics programming system. Using engineering drawings, students program various parts for CNC mills, CNC lathes, and CNC EDM. Related topics include job planning, tool selection, construction of a process model, tool path verification, simulation, quality control, CAD, CAM data transfer, and CNC code generation. (15-60) *Equivalent to TLDI-811, 96-272.*

MFG-380 EDM Fundamentals (2 s.h.)
Prerequisite/Corequisite: MFG-302, CNC Fundamentals, and MFG-423, Jig and Fixtures. Students must obtain a grade of C or higher in MFG-302, CNC Fundamentals. The students are introduced to the electrical discharge machines, both wire and ram-type. Emphasis on how these tools are used in the manufacturing of punch and die components and injection mold cores and cavities. (15-45) *Equivalent to 96-172, TLDI-803.*

MFG-408 Basic Die Making (8 s.h.)
Prerequisite/Corequisite: MFG-423, Jig and Fixtures. This course is a continuation of MFG-423, Jig and Fixtures with instruction and practice in building a progressive or compound die. Emphasis is placed on the tool building procedures learned in MFG-423, Jig and Fixtures and toward fabricating dies. Instruction is given on the considerations involved in developing die components, such as calculation of die clearances, bend allowance, cutting forces, press tonnage requirements, and practice in building a complete functional die. (45-225) *Equivalent to TLDI-810, 96-271.*

MFG-423 Jig and Fixtures (5 s.h.)
Prerequisite/Corequisite: Students must obtain a grade of C or higher in MFG-302, CNC Fundamentals, and MFG-248, Machine Theory and Operations II. This course is an introduction to the design of industrial tools and machining characteristics of tool components. The student is introduced to additional machining skills that will be encountered in typical machine shops in the building of molds, dies, jigs, fixtures, and precision machine parts. (30-160) *Equivalent to 96-171, TLDI-802.*

MFG-459 Injection Mold Making (9 s.h.)
Prerequisite/Corequisite: MFG-408, Basic Die Making; MFG-460, Plastic Materials. The student is introduced to the field of mold making for plastic injection molds, blow molds, compression and transfer molds, zinc and aluminum die casting molds. Focus is placed on mold theory, mold repair, identification and correction of mold problems, standardization of mold components, mold blueprint reading, and the machine shop skills necessary for mold making, as related to thermoplastic injection molds. In addition the student develops necessary basic skills for gating, venting, heating, cooling, stoning and polishing as well as other hands-on experiences necessary to manufacture mold plates, cores, cavities, and ejection systems. The student builds a prototype injection mold. (45-285) *Equivalent to TLDI-813, 96-274.*

MFG-460 Plastic Materials (1 s.h.)
This is a survey course designed to introduce the student to the field of plastics. This overview includes thermoplastics and thermoset materials along with the major processing methods being utilized by industry today. (15-0) *Equivalent to TLDI-812, 96-273.*

MFG-500 Statistical Process Control (1 s.h.)
Covers the current transformation methods of industry and business toward a complete quality control system. Management theory on quality, productivity, and controlled charting techniques are included. (15-0) *Equivalent to 96-170, TLDI-801.*

MGT-101 Principles of Management (3 s.h.)
BUS-102, Introduction to Business, is recommended. Provides students with a general introductory management learning experience. Role of management in today's business environment; management's influence on employee productivity, employee satisfaction and organizational effectiveness; major control devices of management. (45-0) *Equivalent to 15-142, BUSN-130.*

MGT-130 Principles of Supervision (3 s.h.)
This course is designed for individuals who hold, or who will hold, supervisory positions. The course involves the study of the major managerial functions (planning, organizing, staffing, directing, and controlling) and is augmented by other pervasive areas of supervision such as communication, motivation, decision making, and human relations. (45-0) *Equivalent to 15-144, BUSN-131.*

MGT-170 Human Resource Management (3 s.h.)
Course describes the transition from personnel management to human resources management. The focus is on the systematic process of recruitment, selection, development, and appraising employees. (45-0) *Equivalent to 15-149, BUSN-132.*

MGT-220 Introduction to Sport Management (3 s.h.)
For individuals entering the sport and physical education profession, it is critical to understand the theory and practice of ethical management principles in sport/fitness organizations. Administrators need to understand marketing, financial and legal aspects regarding the management of facilities, events, and organizations. These principles are applied to organizations within interscholastic, intercollegiate, international and professional sport along with the health/fitness and community recreation industries. (45-0) *Equivalent to 15-126, SPOR-101.*

MGT-221 Current Issues in Sport (3 s.h.)
Prerequisite: MGT-220, Introduction to Sport Management. Sport, health/fitness, and recreation organizations have been facing many changes in recent years. These changes have exposed many problems that these organizations must solve in order to ensure future success. This class is designed to expose students to these issues in order to prepare them for management careers in the sport, health/fitness, and recreation fields. (45-0) *Equivalent to 15-127, SPOR-120.*

MKT-110 Principles of Marketing (3 s.h.)
A study of the role of marketing in society as well as a study of target market (customer) determination and selection, product strategy, channels of distribution, pricing concepts, and promotional activities that are used in business today. (45-0) *Equivalent to 15-221, MRKT-101.*

MKT-140 Principles of Selling (3 s.h.)
This course involves the study of concepts and practices used by successful professional salespeople in today's market-driven

economy. The course also includes a study of selling as a promotional strategy used by marketers. (45-0) *Equivalent to 15-223, MRKT-103.*

MKT-150 Principles of Advertising (3 s.h.)
The study of advertising process and its place in business and society. The course involves learning about the planning, creating and placement of advertising. The course also covers the topic of integrated promotion. (45-0) *Equivalent to 15-222, MRKT-102.*

MKT-160 Principles of Retailing (3 s.h.)
The study of the selling of goods and services to ultimate consumers, involving distribution, inventory control, site selection, pricing, and other topics pertinent to successful retail business operations. (45-0) *Equivalent to 90-125, RETL-701.*

MKT-170 Retail Buying (3 s.h.)
Buying duties and policies, how to buy, how much to buy, buying methods, source selection, price lines, and sales records. Product knowledge and analysis relative to the buying function and value analysis of products. (30-30) *Equivalent to RETL-801, 90-234.*

MLT-101 Introduction to Lab Science (2 s.h.)
This course introduces the basic concepts for education and career development in the field of laboratory science and the health care profession. Current health care systems and trends are emphasized along with the factors having current and future impact on medical laboratories. The organization and role of the clinical laboratory are explored, as well as medical ethics and conduct, employment opportunities, and professional organizations. (30-0) *Equivalent to PHYS-100, 70-100.*

MLT-120 Urinalysis (3 s.h.)
This course provides the foundation for the study of urine formation and its assessment along with the determination of the physical, chemical, and microscopic properties of urine in normal and abnormal states. Objectives also included are the development and evaluation of body fluids including cerebrospinal, synovial, serous, and amniotic fluids. (30-30) *Equivalent to 70-249, HEAL-105.*

MUA-130A-B Applied Voice (1-2 s.h.)
Individual instruction in vocal performance through the development of strong technical foundation and well-rounded musicianship. Previous singing experience required. Instructional materials include a repertoire of traditional Aria and Art Song literature in English and Foreign Languages. Students may register for 1 credit hour (30-minute lesson per week) or 2 credit hours (two 30-minute lessons per week). This course is repeatable one time. Must have instructor consent for 2 credit hours (music majors for 2 hours only). (7.5 to 15-15 to 30) *Equivalent to MUA-285A-B.*

MUA-131A-B Applied Voice II (1-2 s.h.)
Individual instruction in vocal performance through the development of strong technical foundation and well-rounded musicianship. Previous singing experience required. Instructional materials include a repertoire of traditional Aria and Art Song literature in English and Foreign Languages. Students may register for 1 credit hour (30-minute lesson per week) or 2 credit hours (two 30-minute lessons per week). This course is repeatable one time. Must have instructor consent for 2 credit hours (music majors for 2 hours only). (7.5 to 15-15 to 30)

MUA-132A-B Applied Voice III (1-2 s.h.)
Individual instruction in vocal performance through the development of strong technical foundation and well-rounded musicianship. Previous singing experience required. Instructional materials include a repertoire of traditional Aria and Art Song literature in English and Foreign Languages. Students may register for 1 credit hour (30-minute lesson per week) or 2 credit hours (two 30-minute lessons per week). This course is repeatable one time. Must have instructor consent for 2 credit hours (music majors for 2 hours only). (7.5 to 15-15 to 30)

MUA-120A-B Applied Piano (1-2 s.h.)
Individualized instruction in piano performance for students that are beginners. Instructional materials include a repertoire of basic piano literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30) *Equivalent to MUSI-195, 50-195.*

MUA-184A-B Applied Saxophone I (1-2 s.h.)
Individual instruction in saxophone performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-186A-B Applied Flute I (1-2 s.h.)
Individual instruction in flute performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-187A-B Applied Oboe I (1-2 s.h.)
Individual instruction in oboe performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-188A-B Applied Clarinet I (1-2 s.h.)
Individual instruction in clarinet performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-189A-B Applied Bassoon I (1-2 s.h.)
Individual instruction in bassoon performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour

(one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-191A-B Applied Trumpet I (1-2 s.h.)
Individual instruction in trumpet performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-192A-B Applied French Horn I (1-2 s.h.)
Individual instruction in french horn performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-193A-B Applied Trombone I (1-2 s.h.)
Individual instruction in trombone performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-194A-B Applied Euphonium I (1-2 s.h.)
Individual instruction in euphonium performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-195A-B Applied Tuba I (1-2 s.h.)
Individual instruction in tuba performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-196A-B Applied Percussion I (1-2 s.h.)
Individual instruction in percussion performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-197A-B Applied Drum Set I (1-2 s.h.)
Individual instruction in drum set performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-198A-B Applied Guitar I (1-2 s.h.)
Individual instruction in guitar performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUA-286A-B Applied Flute II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-186, Applied Flute I, with a final grade of C or higher. Continued instruction in flute performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-287A-B Applied Oboe II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-187, Applied Oboe I, with a final grade of C or higher. Continued instruction in oboe performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-288A-B Applied Clarinet II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-188, Applied Clarinet I, with a final grade of C or higher. Continued instruction in clarinet performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-289A-B Applied Bassoon II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-189, Applied Bassoon I, with a final grade of C or higher. Continued instruction in bassoon performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one

30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-290A-B Applied Saxophone II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-184, Applied Saxophone I, with a final grade of C or higher. Continued instruction in saxophone performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-291A-B Applied Trumpet II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-191, Applied Trumpet I, with a final grade of C or higher. Continued instruction in trumpet performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-292A-B Applied French Horn II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-192, Applied French Horn I, with a final grade of C or higher. Continued instruction in french horn performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-293A-B Applied Trombone II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-193, Applied Trombone I, with a final grade of C or higher. Continued instruction in trombone performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-294A-B Applied Euphonium II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-194, Applied Euphonium I, with a final grade of C or higher. Continued instruction in euphonium performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-295A-B Applied Tuba II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-195, Applied Tuba I, with a final grade of C or higher. Continued instruction in tuba performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-296A-B Applied Percussion II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-196, Applied Percussion I, with a final grade of C or higher. Continued instruction in percussion performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-297A-B Applied Drum Set II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-197, Applied Drum Set I, with a final grade of C or higher. Continued instruction in drum set performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-298A-B Applied Guitar II (1-2 s.h.)
Prerequisite: Must have completed 2 semesters of MUA-198, Applied Guitar I, with a final grade of C or higher. Continued instruction in guitar performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15 -15 to 30)

MUA-299A-B Applied Piano II (1-2 s.h.)
Prerequisite: 1 credit hour of MUA-120, Applied Piano, or equivalent. Individualized instruction in instrumental performance through the development of strong technical foundation and well-rounded musicianship. Instructional materials include a repertoire of traditional and contemporary literature. Students may register for 1 credit hour (one 30-minute lesson per week) or 2 credit hours (one 60-minute lesson per week). This course is repeatable one time. Must have instructor consent for 2 credit hours. (7.5 to 15-15 to 30)

MUS-100 Music Appreciation (3 s.h.)
Music Appreciation is concerned with the development of Western Classical Music that encompasses nearly 2500 years of history beginning in 400 BC and culminating in the 20th century. This course

provides the student knowledge of six commonly recognized historical eras through lectures, recordings, videotapes, digital media, and possible guest speakers. (45-0) *Equivalent to 50-113, MUSI-101.*

MUS-105 Introduction to Music Theory (2 s.h.)
Prerequisite: previous instrumental or vocal music experience. Introduction to Music Theory is designed as a precourse to any music theory sequence. The course work will emphasize the circle of fifths, major scales, all forms of the minor scales, parallel and relative scale relationships, and music vocabulary. This course will also introduce the aural skills of scale identification, rhythmic dictation, and interval identification. (22.5-15) *Equivalent to 50-120, MUSI-120.*

MUS-120 Music Theory I (3 s.h.)
Prerequisite: Previous instrumental or vocal experience. Music Theory I examines all the basic materials of music which include notation, scales, intervals, chords, melody, harmony, rhythm and texture. Other areas of analysis take in cadence types, chord inversions, figured bass harmonization and principles of part writing based on 18th century models. Students will meet three days a week for one hour. (45-0)

MUS-121 Music Theory II (3 s.h.)
Prerequisite: MUS-120, Music Theory I, with final grade of C or higher, or instructor consent. This course will examine in more detail the harmonic element of music. Discussions will include the harmonic progression, modulation, and specific types of seventh chords as they relate to 18th century counterpoint. Students will meet three days a week for one hour. (45-0)

MUS-130 Aural Skills I (2 s.h.)
Prerequisite: Previous instrumental or vocal music experience. This course introduces fundamentals of the aural skills, ear training, and sight singing. Students will meet two days a week for one hour. (15-30)

MUS-131 Aural Skills II (2 s.h.)
Prerequisite: MUS-130, Aural Skills I, with final grade of C or higher. This course will provide continued development of ear training and sight singing skills. Students will meet two days a week for one hour. (15-30)

MUS-132 Aural Skills III (2 s.h.)
Prerequisite: MUS-131, Aural Skills II, with final grade of C or higher. This course will provide continued development of ear training and sight singing skills. Students will meet two days a week for one hour. (15-30)

MUS-133 Aural Skills IV (2 s.h.)
Prerequisite: MUS-132, Aural Skills III, with final grade of C or higher. This course will provide continued development of ear training and sight singing skills. Students will meet two days a week for one hour. (15-30)

MUS-140 Concert Choir (1 s.h.)
Concert Choir is open to all students interested in vocal music. If needed, auditions will be held to achieve proper ensemble balance. The group performs one formal concert on campus each semester, as well as community performances, area high school assemblies, and community meetings. (45-90) *Equivalent to 50-150, MUSI-150.*

MUS-141 Concert Choir II (1 s.h.)
Concert Choir II is open to all students interested in vocal music. If needed, auditions will be held to achieve proper ensemble balance. The group performs one formal concert on campus each semester, as well as community performances, area high school assemblies, and community meetings. (45-90)

MUS-142 Concert Choir III (1 s.h.)
Concert Choir III is open to all students interested in vocal music. If needed, auditions will be held to achieve proper ensemble balance. The group performs one formal concert on campus each semester, as well as community performances, area high school assemblies, and community meetings. (45-90)

MUS-144 Orchestra (1 s.h.)
The North Iowa Symphony Orchestra, sponsored by North Iowa Area Community College, rehearses one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa area. Some sections of the orchestra require an audition. This course is repeatable one time. (35-0) *Equivalent to 50-153, MUSI-153.*

MUS-145 Concert Band (1 s.h.)
Performance in the North Iowa Concert Band, sponsored by North Iowa Area Community College, with rehearsals one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa area. This course is repeatable one time. (35-0) *Equivalent to 50-152, MUSI-152.*

MUS-150 Chamber Ensemble (1 s.h.)
Course is designed to provide an opportunity to study and perform chamber literature of the last three centuries. Groups may vary in size from duets to sextets for brass, woodwind, string, or percussion instrumentalists. Also includes jazz combos. Time arranged. Course is repeatable for credit to a maximum of 4 credit hours. (15-0) *Equivalent to MUSI-155, 50-155.*

MUS-152 Vocal Ensemble--NIACC Singers (1 s.h.)
Corequisite: MUS-140, Concert Choir. NIACC Singers is an auditioned group for students with a high level of competency in vocal music. Auditions may be completed individually by contacting the professor. The group performs one formal concert on campus each semester, as well as community performances, area high school assemblies, and community meetings. This course may be repeated one time. (0-60) *Equivalent to 50-151, MUSI-151.*

MUS-174 North Iowa Choral Society (1 s.h.)
Prerequisite: Audition or recommendation of Vocal Director. The North Iowa Choral Society, sponsored by North Iowa Area Community College, rehearses one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa Area. This course is repeatable one time. This course has been designated as a pass/no pass course. (20-0)

MUS-179 Jazz Band (1 s.h.)
The NIACC Jazz Band rehearses twice each week in preparation for concerts on campus, for area high school assemblies, festivals, and community events. Concentration on jazz repertoire from

1930 to the present. Open to all interested NIACC students by audition. This course is repeatable one time. (45-0) *Equivalent to MUS-163)*

MUS-212 American Musical Heritage (3 s.h.)
Prerequisite: MUS-100, Music Appreciation. This course is a scholarly examination of the history and roots of many vernacular genres inherent to contemporary American music. Students will obtain increased awareness of popular music's heritage: to appreciate its diversity; to perceive the underlying kinship of its many styles, to discover the cultural influences of North America, South America, Central America, Mexico, and Africa; and to sense its evolutionary momentum. (45-0)

MUS-220 Music Theory III (3 s.h.)
Prerequisite: Final grade of C or higher in MUS-121, Music Theory II, or instructor consent. Students will develop analytical and written skills in music covering the Renaissance through the early Classical period. Students will meet three days a week for one hour. (45-0)

MUS-221 Music Theory IV (3 s.h.)
Prerequisite: Final grade of C or higher in MUS-220, Music Theory III, or instructor consent. Students will develop analytical and written skills in music covering the late Classical through the 20th Century. Students will meet three days a week for one hour. (45-0)

MUS-244 Orchestra II (1 s.h.)
Prerequisite: Must have completed 2 semesters of MUS-144, Orchestra, with a final grade of C or higher. Continued performance in the North Iowa Symphony Orchestra, sponsored by North Iowa Area Community College, rehearses one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa area. This course is repeatable one time. (35-0)

MUS-245 Concert Band II (1 s.h.)
Prerequisite: Must have completed 2 semesters of MUS-145, Concert Band, with a final grade of C or higher. Continued performance in the North Iowa Concert Band, sponsored by North Iowa Area Community College, with rehearsals one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa area. Course is repeatable one time. (35-0)

MUS-252 Vocal Ensemble II--NIACC Singers (1 s.h.)
Corequisite: MUS-141, Concert Choir II. NIACC Singers is an auditioned group for students with a high level of competency in vocal music. Auditions may be completed individually by contacting the professor. The group performs one formal concert on campus each semester, as well as community performances, area high school assemblies, and community meetings. (0-60)

MUS-274 North Iowa Choral Society II (1 s.h.)
Prerequisite: Audition or recommendation of Vocal Director. Continued performance in the North Iowa Choral Society, sponsored by North Iowa Area Community College, with rehearsals one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa Area. This course is repeatable one time. This course has been designated as a pass/no pass course. (20-0)

MUS-279 Jazz Band II (1 s.h.)
Prerequisite: Must have completed 2 semesters of MUS-179, Jazz Band, with a final grade of C or higher. Continued performance in the NIACC Jazz Band, with rehearsals twice each week in preparation for concerts on campus, for area high school assemblies, festivals, and community events. Concentration on jazz repertoire from 1930 to the present. Open to all interested NIACC students by audition. This course is repeatable one time. (45-0)

MUS-344 Orchestra III (1 s.h.)
Prerequisite: Must have completed 2 semesters of MUS-244, Orchestra II, with a final grade of C or higher. Continued performance in the North Iowa Symphony Orchestra, sponsored by North Iowa Area Community College, with rehearsals one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa area. This course is repeatable one time. (35-0)

MUS-345 Concert Band III (1 s.h.)
Prerequisite: Must have completed 2 semesters of MUS-245, Concert Band II, with a final grade of C or higher. Continued performance in the North Iowa Concert Band, sponsored by North Iowa Area Community College, with rehearsals one night each week in preparation for concerts and programs. Open to all interested NIACC students and adults in the North Iowa area. This course is repeatable one time. (35-0)

MUS-379 Jazz Band III (1 s.h.)
Prerequisite: Must have completed 2 semesters of MUS-279, Jazz Band II, with a grade of C or higher. Continued performance in the NIACC Jazz Band, with rehearsals twice each week in preparation for concerts on campus, for area high school assemblies, festivals, and community events. Concentration on jazz repertoire from 1930 to the present. Open to all interested NIACC students by audition. This course is repeatable one time. (45-0)

NET-112 Home/Office Computer Management (3 s.h.)
In this easy-tech, hands-on course, computer users perform and record practical, specific steps and procedures for setting up, configuring, and maintaining Small Office or Home Office (SOHO) PCs and networks. Learn to identify, install, and configure disk drives, RAM, CD/DVD drives, and peripherals such as scanners, cameras, and PDAs. Upgrade or update your operating system (OS) to keep current with capabilities and security. Setup, configure, and maintain secure wired and wireless consumer routers to connect local equipment and the Internet. Learn to setup, maintain, and navigate an organized file and folder structure along with downloading and/or installing software applications. (45-0) *Equivalent to 15-143, ISTS-100.*

NET-113 IT Essentials I (4 s.h.)
Presents an in-depth exposure to computer hardware and operating systems. Students learn the functionality of hardware and software components as well as suggested best practices for maintenance and safety issues. Students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. Students also learn basic networking concepts, security as well as professionalism and communication techniques when working with people. This course

helps students prepare for CompTIA's A+ Certification Essentials exam (220-701) which covers the knowledge and skills essential for becoming a successful computer technician. (45-30)

NET-117 Home/Office Network Management (3 s.h.)
The goal of this course is to introduce students to fundamental networking concepts and technologies. This course provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in the home and small business environment. Students will develop the skills necessary to plan and implement small networks across a range of applications (45-0)

NET-133 IT Essentials II (4 s.h.)
Prerequisite: NET-113, IT Essentials I, or permission of instructor. This course expands on concepts and skills learned in NET-113, IT Essentials I, and provides the knowledge, skills, and abilities essential for a successful computer service technician at the advanced level. Students are provided theoretical information and hands-on experiences in advanced topics of computer troubleshooting and repair. Students will be presented with opportunities to identify and diagnose hardware and software problems; implement and test solution(s); and prepare appropriate documentation. (45-30) *Equivalent to 15-209, ISTS-131.*

NET-136 Operating Systems II (3 s.h.)
Prerequisite: NET-113, IT Essentials I, or permission of the instructor. This course addresses advanced topics such as file management, shell programming, security, network and service administration, fault tolerance, recovery, troubleshooting, and operating system structure. This will be accomplished by studying the Unix or Linux operating systems. (45-0) *Equivalent to 15-177, ISTS-111.*

NET-149 Business Network Management (3 s.h.)
Prerequisite: NET-117, Home/Office Network Management. The goal of this course is to assist students in developing the skills necessary to provide customer support to users of small- to medium-sized networks and across a range of applications. The course provides an introduction to routing and remote access, addressing and network services. It will also familiarize students with servers providing e-mail services, web space, and Authenticated Access. This course prepares students with the skills required for entry-level Help Desk Technician and entry-level Network Technician jobs. (45-0)

NET-201 Network LANs and WANs (5 s.h.)
Prerequisite: NET-223, CISCO Routers or permission of instructor. This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WLAN in a small-to-medium network. This course in the second part discusses the WAN technologies and network services required by converged applications in enterprise networks. The course uses the Cisco Network Architecture to introduce integrated network services and explains how to select the appropriate devices and technologies to meet network requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principles of traffic, access control, and addressing services. Finally, students learn how to detect, troubleshoot, and correct common enterprise network implementation issues. (75-0)

NET-213 CISCO Networking (4 s.h.)
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. It uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Labs use a "model Internet" to allow students to analyze real data without affecting production networks. Packet Tracer (PT) activities help students analyze protocol and network operation and build small networks in a simulated environment. At the end of the course, students build simple LAN topologies by applying basic principles of cabling, performing basic configurations of network devices such as routers and switches, and implementing IP addressing schemes. (60-0) *Equivalent to 15-156, ISTS-101.*

NET-215 CISCO Network Security (CCNA Security) (4 s.h.)
Prerequisite: NET-201, Network LANs and WANs, and NET-613, Information Data Assurance, or permission of the instructor. Network Security (CCNA Security) equips students with knowledge and skills that can be applied toward entry-level specialist careers in network security. CCNA Security is a blended curriculum with both online and classroom learning. CCNA Security aims to develop an in-depth understanding of network security principles, as well as the tools and configurations available. The following tools are covered: 1) Protocol sniffers/analyzers; 2) TCP/IP and common desktop utilities; 3) Cisco IOS software, Cisco VPN client; 4) Packet Tracer (PT); 5) Web-based resources. The predominant lab types are procedural, skills integration challenges, troubleshooting, and model building. The course goal is to prepare students to be able to implement, monitor and maintain a secure network. (60-0)

NET-223 CISCO Routers (4 s.h.)
Prerequisite: NET-213, CISCO Networking, or permission of the instructor; OR NET-117, Home/Office Network Management AND NET-149, Business Network Management. This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems. Students complete a basic procedural lab, followed by basic configuration, implementation, and troubleshooting labs in each chapter. Packet Tracer activities reinforce new concepts, and allow students to model and analyze routing processes that may be difficult to visualize or understand. (60-0) *Equivalent to 15-157, ISTS-102.*

NET-233 CISCO Switches (4 s.h.)
Prerequisite: NET-223, CISCO Routers, or permission of the instructor. This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and

how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WLAN in a small-to-medium network. (60-0) *Equivalent to 15-158, ISTS-201.*

NET-243 CISCO Wide Area Network (WAN) (4 s.h.)
Prerequisite: NET-233, CISCO Switches, or permission of the instructor. This course discusses the WAN technologies and network services required by converged applications in enterprise networks. The course uses the Cisco Network Architecture to introduce integrated network services and explains how to select the appropriate devices and technologies to meet network requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principles of traffic, access control, and addressing services. Finally, students learn how to detect, troubleshoot, and correct common enterprise network implementation issues. (60-0) *Equivalent to 15-159, ISTS-202.*

NET-261 Virtualization/Cloud Operations (3 s.h.)
Prerequisites: CFR-100, Computer Forensics I, NET-113, IT Essentials I, NET-304, Windows Workstation Operating Systems, or permission of instructor. This course deals with the capabilities of virtualization using ESXi and Windows Hyper-V and Windows XP Mode virtualization. During the course the student will learn to implement virtualization and establish cloud operations using Google Docs, Sharepoint Server and services such as Windows Skydrive, Endnote and Apple iCloud. Students will learn about securing the information and systems so that data stored is not easily compromised. (30-30)

NET-262 Hardening the Infrastructure (4 s.h.)
Prerequisites: NET-133, IT Essentials I, NET-136, Operating Systems II, NET-304, Windows Workstation Operating Systems, or permission of the instructor. This course focuses on understanding security policies, risk analysis, penetration testing, patching and upgrading systems, capturing and analyzing packets, cryptography, and hardening operating systems focusing on internal systems, the interaction between them, and the pathways that lead them outside the security perimeter. This course prepares students to take the Strategic Infrastructure Security exam (SCO-471) for the Security Certified Network Professional (SCNP) certification. (30-60)

NET-290 Information Technology Specialist Capstone (5 s.h.)
Prerequisites: CFR-110, Ethics and the Information Age, NET-113, IT Essentials I, NET-133, IT Essentials II, NET-136, Operating Systems II, NET-201, Network LANs and WANs, NET-213, CISCO Networking, NET-223, CISCO Routers, NET-304, Windows Workstation Operating System, NET-314, Windows Server, NET-324, Windows Network Management, NET-613, Information Data Assurance, and NET-782, Computer Users Support. This course is the capstone for all the courses that are taught for the IT Specialist program. The student will design, implement, monitor, and fix any issues that arise during the course. The student is responsible to ensure that the network developed is properly protected, and remains functional for the duration of the semester. If an issue arises, the student must troubleshoot the problem, come with a viable solution and implement the solution to get the network back into operation. The student will work with the Capstone students from the Information Assurance and Security program to ensure that proper hardening, identification of malicious activity and proper investigation is conducted to ensure that the issues are not caused by an intruder or that any data has been taken. The student will use an array of operating systems from Windows Server, Windows Workstation, Linux and Apple MAC Systems. (30-90)

NET-295 Information Assurance and Security Capstone(5 s.h.)
Prerequisites: CFR-100, Computer Forensics I, CFR-110, Ethics and the Information Age, CFR-150, Computer Forensics II, NET-113, IT Essentials I, NET-136, Operating Systems II, NET-201, Network LANs and WANs, NET-213, CISCO Networking, NET-223, Cisco Routers, NET-262, Hardening the Infrastructure, NET-304, Windows Workstation Operating Systems, NET-324, Windows Network Management, and NET-613 Information Data Assurance. This course is the capstone for all the courses that are taught for the Information Assurance and Security Program. The student will design, implement, monitor and fix any issues that arise during the course. The student is responsible to ensure that the network developed is properly protected, and remains functional for the duration of the semester. If an issue arises, the student must troubleshoot the problem, come with a viable solution and implement the solution to get the network back into operation. The student will work with the Capstone students from the IT Specialist program to ensure that proper hardening, identification of malicious activity and proper investigation is conducted to ensure that the issues are not caused by an intruder or that any data has been taken. The student will use an array of operating systems from Windows Server, Windows Workstation, Linux and Apple MAC Systems. (30-90)

NET-304 Windows Workstation Operating Systems (4 s.h.)
This course prepares the student to properly install, configure, upgrade, troubleshoot, and repair personal computer operating systems using Microsoft Windows 7. This course also addresses operating system interface controls, file system management, application management, network client configuration, and operating system security. Concepts learned in this course lead toward the Microsoft Certified Technology Specialist Exam 70-680 Windows 7 Configuration. (45-30) *Equivalent to 15-182, ISTS-120.*

NET-314 Windows Server (4 s.h.)
Prerequisite: NET-324, Windows Network Management, or permission of instructor. This course applies the student's knowledge of computer networking, client operating systems, and server operating systems to the management of a complete Microsoft Windows network environment. Students will learn to manage client and server computers, storage resources, NTFS permissions, shared drives and printers, server performance and security, Active Directory objects, group policies, the Active Directory service, TCP/IP, name resolution protocols, applications, IIS, remote access, disaster recovery, and security. Concepts learned in this course lead toward the Microsoft Certified Technology Specialist Exam #70-640 Windows Server 2008 Active Directory Configuration. (45-30) *Equivalent to 15-163, ISTS-205.*

NET-324 Windows Network Management (4 s.h.)
Prerequisite: NET-304, Windows Workstation Operating Systems. This course goes into detail on topics of network operating system

such as design, planning, installation, configuration, security, performance, administration, troubleshooting, fault tolerance, and disaster recovery. Client setup, file and print sharing, directory services, remote access, along with other network services will be explored. Concepts learned in this course lead toward the Microsoft Certified Technology Specialist Exam #70-642 Windows Server Network Infrastructure Configuration. (45-30) *Equivalent to 15-184, ISTS-121.*

NET-613 Information Data Assurance (3 s.h.)
Prerequisite: NET-113, IT Essentials I, or permission of instructor. This course offers in-depth coverage of the current risks and threats to an organization's data, combined with a structured way of addressing the safeguarding of these critical electronic assets. The course provides a foundation for those responsible for protecting network services, devices, traffic, and data. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized security fields. It is also intended to serve the needs of individuals seeking to pass the Computing Technology Industry Association's (CompTIA) Security+ certification exam. (30-30) *Equivalent to 15-167, ISTS-210.*

NET-635 Ethical Hacking (3 s.h.)
Prerequisite: NET-613, Information Data Assurance, or permission of instructor. This course will go into more depth using the tools and concepts students were exposed to in Information "Data" Assurance. The student will be introduced to the concepts, principles, and techniques supplemented by hands-on exercises for defending from an attack. These methodologies are presented within the context of properly securing the network. The course will emphasize network attack defense methodologies with the emphasis on student use of network attack techniques and tools. The concept of Systems Security Certified Practitioner (SSCP) will be strongly emphasized in this course along with several of the CISSP CBK domains. (Certified Information Systems Security Professional - Common Body of Knowledge). (45-0)

NET-743 Fundamental Project Management (4 s.h.)
Fundamental Project Management defines a project and the role of projects in business. Students identify and demonstrate the basic knowledge areas of Project Management and the Project Management Framework. These knowledge areas focus on managing project components including: Integration, Scope, Time (scheduling), Cost, Quality, Human Resource, Communications, Risk, and Procurement. Fundamental Project Management clarifies the relationship between Project Management and other management disciplines including general management knowledge and practice, and application-area knowledge and practice. Students learn to apply the breakdown of project phases and processes and construct project plans that employ project phasing and knowledge areas. Students also learn to identify the aspects of project-based organizational systems and classify business organizations by type and project characteristics. Critical Path Method (CPM) project scheduling is learned and utilized to coordinate project planning, execution and analysis throughout a project life cycle. (60-0) *Equivalent to 15-290, ISTS-150.*

NET-782 Computer Users Support (3 s.h.)
Prerequisite: NET-113, IT Essentials I; or permission of instructor. Introduces the concept of supporting personal computers as a career. Designed to help students target their customers and develop appropriate service skills. The course provides an introduction to end-user computing, computer user support, customer service skills, skills required to troubleshooting computer problems, common support problems, help desk operation user support management, product evaluation strategies and standards, user needs analysis and assessment, installing end-user computer systems, training computer users, technical writing skills, and computer facilities management. (30-30) *Equivalent to 15-193, ISTS-230.*

PEA-100 Aerobics/Tae-Bo I (1 s.h.)
A one-hour lab class designed to increase the students' level of physical fitness and confidence through participating in three levels of Tae-Bo. Tae-Bo is an aerobic form of exercise using basic self-defense techniques of punching and kicking to develop cardiovascular strength, flexibility, and muscular endurance. The class is set up to be progressive with three levels of Tae-Bo included. The three levels are: a basic level, an intermediate level, and an advanced level of Tae-Bo. Class activity will follow the "Billy Blanks Instructional Tae-Bo" videotapes. Class will meet twice each week for one hour. The course is repeatable for up to four credits. (2-28) *Equivalent to PHYE-132, 60-108.*

PEA-107 Aerobic Circuit Training (1 s.h.)
This is an activity course designed to improve personal physical fitness through a combination of aerobic exercises and weight training. Students will learn a variety of aerobic activities along with proper use of different weight machines. This course will cater to individuals of all ages and fitness levels. (0-30)

PEA-113 Flatwater and River Canoeing (1 s.h.)
This course is an introductory course to teach beginning paddlers to safely and enjoyably canoe on lakes and gentle rivers. The course will focus on three areas: paddling skills, safety awareness, and technical rescue skill. The course will include a required extended river trip on a weekend. (4-22)

PEA-127 Beginning Jogging (1 s.h.)
A self-paced physical conditioning course that emphasizes cardiovascular fitness through walking and jogging. The primary purpose is to introduce novice exercisers to the benefits of walking and jogging for the enhancement of health and fitness. Information on new trends and topics of fitness will be covered and a walking/jogging program will be performed throughout the term. This course is a physical activity-based course. By the end of the term, a student should be able to jog 30 minutes. (8-15)

PEA-129 Spinning (1 s.h.)
This course introduces students to a fun, low-impact, cardiovascular workout using spin bicycles to improve current health and fitness levels. Music will motivate you while you enjoy hills, flats, intervals, sprints, and more. Make sure to bring a towel and water bottle. This course is designed for men and women of all ages. (0-30)

PEA-130 Downhill Skiing (1 s.h.)
Fundamentals of downhill (alpine) skiing with a combination of classroom discussion, demonstration, and on-the-slope skiing lessons and evaluation. The class meets for nine hours of classroom instruction and will have twelve hours of ski instruction. Students will be required to sign up for two one-day, weekend ski trips with

the class during the semester, and will ski with the class during the lesson time. Equipment rental may be required. This course will not cover snowboarding, nor cross country (Nordic) skiing. This course is repeatable up to 2 semester hours of credit. (9-12)

PEA-146 Physical Fitness I (1 s.h.)
A lecture course designed to teach the student about the importance of being physically fit. The course material will provide insight into various methods of testing physical fitness as well as identifying what good physical fitness is. The student will be able to assess his/her own level of physical fitness. (15-0) *Equivalent to PHYE-113, 60-113.*

PEA-147 Physical Fitness I Lab (1 s.h.)
Prerequisite/Corequisite: PEA-146, Physical Fitness I. A lab course designed to increase a person's interest of his/her own level of physical fitness. The course provides activities with which the student can improve his/her level of physical fitness in the areas of strength, flexibility, and endurance. The student will be required to participate in class activities twice a week. (0-30) *Equivalent to PHYE-114, 60-114.*

PEA-158 Scuba Diving I (1 s.h.)
Upon completion of this course, the student will demonstrate knowledge of skills and concepts related to beginning scuba diving. The course will include lecture and lab (pool and open water dives). An assessment of swimming abilities will be conducted at the first session. Upon completion of this course, the student will also be eligible for NAUI (National Association of Underwater Instructors) certification for an additional fee. Assessed fees for this course include equipment rental, textbook and pool rent. (17-20)

PEA-174 Tennis I (1 s.h.)
This class will involve learning the basic tennis skills, rules, and strategies for singles and doubles play. Students will be encouraged to observe match play from the Australian Open on television or videotape. Attendance at a high school AA tennis meet will also be included in the course. A written examination will be given at the end of class. (0-30)

PEA-187 Weight Training I (1 s.h.)
Lecture and laboratory course designed to cover the basic principles and skill techniques involved in weight training. This course will provide an overview of strength training principles, types of strength, systems of resistance training as well as core training principles, and postural considerations. (8-15)

PEA-190 Yoga/Stretching I (1 s.h.)
A lab course designed to increase the student's awareness and appreciation of yoga and its effect on physical and mental well being. The course provides a structured environment for the student to learn proper body alignment in the yoga poses and an awareness of the benefits associated with the different poses. This course is repeatable for up to 2 semester hours of credit. (0-30) *Equivalent to PHYE-133.*

PEA-191 Pilates (1 s.h.)
Pilates is an activity-based course designed to improve one's core strength, tone muscles, increase flexibility, and reduce stress. Mats and stability balls are provided. This course is designed for men and women of all ages. (0-30)

PEA-287 Weight Training II (1 s.h.)
Prerequisite: PEA-187, Weight Training I. Lecture and laboratory course designed to increase knowledge, understanding, and skill techniques involved in weight training. This course is a continuation of Weight Training I, and will incorporate flexibility training, balance and coordination, and speed and agility training. (8-15)

PEC-110 Coaching Ethics Techniques & Theory (1 s.h.)
Guiding principles and techniques of coaching interscholastic athletics. Discussion of theory, ethics, and professional responsibilities as they relate to coaching interscholastic athletes. (20-0) *Equivalent to PHYE-150, 60-150.*

PEC-115 Athletic Development & Human Growth (1 s.h.)
A one-semester course with emphasis on human growth and development and relationship to physical activity, with special attention to children and adolescents. (15-0) *Equivalent to PHYE-153, 60-153.*

PEC-122 Introduction to Anatomy & Physiology for Coaching (1 s.h.)
An introduction to anatomy and physiology with stress on the relationship to athletic actions. This course is designed as an introductory course for prospective coaches with little or no background in anatomy and physiology. (15-0) *Equivalent to 60-152, PHYE-152.*

PEC-127 Care and Prevention of Athletic Injuries (2 s.h.)
Recommended: one semester course in anatomy and physiology. Introductory preparation in athletic training, injury, treatment techniques, taping, wrapping, etc. Preventative measures to reduce athletic injuries. Course may be used to fulfill partial requirement for Iowa Coaching Certification. (30-0) *Equivalent to PHYE-151, 60-118.*

PEC-161 Sports Officiating (3 s.h.)
Designed to teach the student the rules of officiating interscholastic sports. Emphasis will be upon rule interpretation and proper mechanics of officiating. (45-0)

PEH-111 Personal Wellness (3 s.h.)
Concepts of exercise science, nutrition, stress management, contemporary health issues and decision making. Assessment, application, and participation in lifetime fitness and skill activities. (45-0)

PEH-140 First Aid (1 s.h.)
Lecture-type course designed to give the layperson adequate first aid knowledge and skills with emphasis on accident prevention and recognition and treatment of common medical emergencies. (15-0) *Equivalent to PHYE-117, 60-232.*

PEH-144 Human Movement Science (3 s.h.)
The content of this course will cover anatomy and physiology of the human body focusing on the muscular, skeletal, and the cardiovascular systems. This course focuses on the application of the skeletal and neuromuscular systems to human movement, with special attention to the attachments and actions of the muscles.

This course is for students interested in a field in exercise science such as: personal training, strength and conditioning, athletic training, fitness, wellness, and physical education. (45-0)

PEH-161 Introduction to Physical Education (2 s.h.)
Designed to provide career information concerning opportunities in physical education, coaching, and recreational activities. (30-0) *Equivalent to PHYE-101, 60-117.*

PEH-180 Rape Education & Self Defense (2 s.h.)
Rape Education and Self Defense is a course of study designed to introduce the participant to basic self-defense concepts and techniques, to heighten the participant's level of awareness and alertness in her environment, to provide participant with information about violent contexts, and to provide the participant with basic physical methods of self-defense. In general, this course cannot offer absolutes; however, the theory behind such a course rests in the concept that those armed with information and a few operational options stand a better chance of avoiding and, when avoidance fails, surviving violence. (30-0) *Equivalent to PHYE-110, 60-175.*

PEH-191 Sports Nutrition (3 s.h.)
This course will focus on basic human nutrition along with nutritional needs for athletes and/or physically active individuals. Areas of focus will be on carbohydrate loading, hydration, supplement use, fad diets, eating disorders, maintaining healthy body weight, and ergogenic aids. (45-0)

PEH-221 Introduction to Leisure Services (3 s.h.)
Introduction to leisure services professions. Examination of the components of leisure services delivery systems, focusing on programs and services, facilities, populations served, and sources of funding. (45-0)

PEH-261 Physical Activity for Health and Fitness (3 s.h.)
Prerequisite: PEH-111, Personal Wellness. Identification and programming of physical activities and nutrition lifestyle practices. Emphasis on the role of physical activity and nutrition in the enhancement of health and fitness in others. Integration of experiential learning activities with cognitive subject matter. (45-0)

PEH-908A-C Cooperative Education (1-3 s.h.)
Prerequisite: permission of Cooperative Education instructor. Cooperative Education provides work experience related to wellness, exercise science, leisure service, and/or physical education. This course is primarily designed to provide students with supervised work experience within their field of interest. Work experience hours are arranged, the number of hours are determined on the basis of one credit hour equals 60 hours of supervised work experience. (0-60 to 180))

PET-110 Introduction to Athletic Training (2 s.h.)
Introduction to the field of athletic training with emphasis on the history of the National Athletic Training Association, certification guidelines, policies and procedures, risk management, roles and responsibilities of athletic trainers, and common illnesses and injuries. (30-0)

PET-135 Personal Trainer (3 s.h.)
This course is designed to provide knowledge and prepare the student to become a nationally certified personal trainer. The focus of this course will be on the components of personal training. Students will also have the opportunity to train clients throughout the semester. Upon completion of this course, the student will have the necessary knowledge to apply for the ACE personal trainer certification exam. (45-0)

PEV-115 Varsity Baseball (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Baseball (Freshman Level). (40-160) *Equivalent to PHYE-120, 60-120.*

PEV-120 Varsity Basketball (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Basketball (Freshman Level). (40-160) *Equivalent to PHYE-121, 60-121.*

PEV-130 Varsity Cross Country (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Cross Country (Freshman Level). (40-160) *Equivalent to PHYE-124, 60-124.*

PEV-133 Varsity Track and Field (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Track and Field (Freshman Level). (40-160) *Equivalent to PHYE-134.*

PEV-140 Varsity Golf (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Golf (Freshman Level). (40-160) *Equivalent to PHYE-123, 60-123.*

PEV-150 Varsity Soccer (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Soccer (Freshman Level). (40-160) *Equivalent to PHYE-129, 60-129.*

PEV-160 Varsity Softball (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Softball (Freshman Level). (40-160) *Equivalent to PHYE-127, 60-127.*

PEV-170 Varsity Volleyball (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Volleyball (Freshman Level). (40-160) *Equivalent to PHYE-128, 60-128.*

PEV-180 Varsity Wrestling (1 s.h.)
Perequisite: High school diploma or equivalent. Intercollegiate Wrestling (Freshman Level). (40-160)

PEV-215 Varsity Baseball II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Baseball (Sophomore Level). (40-160)

PEV-220 Varsity Basketball II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Basketball (Sophomore Level). (40-160)

PEV-230 Varsity Cross Country II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Cross Country (Sophomore Level). (40-160)

PEV-233 Varsity Track and Field II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Track and Field (Sophomore Level). (40-160)

PEV-240 Varsity Golf II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Golf (Sophomore Level). (40-160)

PEV-250 Varsity Soccer II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Soccer (Sophomore Level). (40-160)

PEV-260 Varsity Softball II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Softball (Sophomore Level). (40-160)

PEV-270 Varsity Volleyball II (1 s.h.)
Prerequisite: High school diploma or equivalent. Intercollegiate Volleyball (Sophomore Level). (40-160)

PEV-280 Varsity Wrestling II (1 s.h.)
Perequisite: High school diploma or equivalent. Intercollegiate Wrestling (Sophomore Level). (40-160)

PHI-101 Introduction to Philosophy (3 s.h.)
Introduces the student to the study of philosophy and teaches skills of critical thinking. The course examines the meaning and value of philosophy; human nature and the self, axiology-ethics and values (In search of the Good Life); social philosophy; freedom; individualism; philosophy and art; epistemology-the nature of knowledge; truth; philosophy and religion; the meaning of suffering and death; examination of decision making and self-discovery. (45-0) *Equivalent to PHIL-101, 80-210.*

PHI-105 Introduction to Ethics (3 s.h.)
This course is designed to develop objective thinking skills. The goal is to create a balance between moral principles when considering a variety of ethical issues. The emphasis will be on developing a moral stance that is workable in today's society. Issues include poverty, environment, animal rights, business, preferences in hiring, war, death penalty, abortion, euthanasia, parent-child relationships, sex, love, and marriage. (45-0) *Equivalent to PHIL-102, 80-212.*

PHR-105 Introduction to Pharmacy Technician (3 s.h.)
Corequisite: HSC-120, Medical Terminology I. This course is designed to provide the student with basic knowledge about community and institutional pharmacy practice. Topics include: orientation to technician duties, medical terminology, introduction to institutional pharmacy practice, introduction to community/ambulatory pharmacy practice, and pharmacy calculations. Students taking this course must have met pre-admission math requirements. Students must attain a C or higher grade to proceed with other pharmacy courses. (45-0)

PHR-120 Pharmacology for Pharmacy Technicians (3 s.h.)
Prerequisites: HSC-120, Medical Terminology I, and PHR-105, Introduction to Pharmacy Technician, with a grade of C or higher, or permission of Division Chair. This course is designed to introduce the student to the basic concept of pharmacology, as well as the biological factors affecting the actions of drugs for each pharmacological classification. This course is designed for the pharmacy technician and is the second of three courses in the Pharmacy Technician Certificate program. The course is also appropriate to update the knowledge of health care professionals who participate in the delivery of medications in a variety of settings. (45-0)

PHR-125 Advanced Pharmacy Technician (3 s.h.)
Prerequisites: PHR-105, Introduction to Pharmacy Technician, PHR-120, Pharmacology for Pharmacy Technicians, PHR-941, Pharmacy Technician Practicum I, and PHR-942, Pharmacy Technician Practicum II, all with a grade of "C" or higher, and all support courses listed for fall and spring terms. Upon completion of this course, the student will identify the roles and responsibilities of the Pharmacy Technician in the hospital setting as compared with other settings of employments. The student will identify legislation, reference materials, safety precautions, ethical and legal principles, mathematical computation and drug theory as it relates to the Pharmacy Tech in the hospital setting. Criminal Background Checks, current Immunizations and General Orientation to the Agency may be required prior to placement in the hospital setting. (45-0)

PHR-941 Pharmacy Technician Practicum (1 s.h.)
Prerequisites: Compliance with math requirements or concurrent enrollment in MAT-063, Elementary Algebra. Corequisites: HSC-120, Medical Terminology I, and PHR-105, Introduction to Pharmacy Technician, with a grade of C or higher. Must have satisfactory completion of college lab portion of PHR-941 prior to placement in practicum hours. This course will expose the student to the pharmacy environment and allow hands on experience with computer skills required to fill prescriptions in a pharmacy setting. This experience will expose the students to the equipment normally found in the pharmacy. The student will learn how to correctly measure and weigh out pharmaceutical ingredients used in extemporaneously compounding prescriptions using pharmacy graduates and Class A and electronic balances. The student will use their knowledge of pharmacy math in making calculations to assist in these procedures. The student will use the pharmacy lab to simulate the prescription filling process. Lab experience will include receiving the prescription from a patient, inputting the information into the computer, pulling the drugs from the inventory, counting or measuring the ingredients and labeling the container. The student will become familiar with the reference materials available in a pharmacy and how to use these resources to obtain necessary drug information. After completion of the lab portion, the student will be assigned to a community or long term care pharmacy and required to satisfactorily complete a check-list of duties that normally performed by a technician. This course has been designated as a pass/no pass course. (0-16-24)

PHR-942 Pharmacy Technician Practicum II (1 s.h.)
Prerequisites: PHR-105, Introduction to Pharmacy Technician, with a grade of C or higher; PHR-941, Pharmacy Technician Practicum I, with a pass grade; HSC-120, Medical Terminology I; and compliance with math requirements. Corequisite: PHR-120, Pharmacology for Pharmacy Technicians. This course will offer additional exposure to skills in the college lab setting and the role of the Pharmacy Technician in various clinical sites. Following completion of the college lab portion, the student will be assigned to a community or long term care pharmacy and will be required to

satisfactorily complete a checklist of duties performed by a technician. The student must have a grade of C or higher in PHR-120, Pharmacology for Pharmacy Technicians, and a satisfactory grade in the college lab portion of this course prior to placement in the practicum setting. This course has been designated as a pass/no pass course. (0-16-24)

PHS-125 Physical Science (4 s.h.)
Prerequisite: High school Algebra or equivalent. An introductory, college-level, one-semester transfer course intended to meet general education and elementary education certification requirements. At present, this course uses the Physical Science & Everyday Thinking curriculum by Goldberg, et al. This course, like other general education science division courses, addresses the general education skills of scientific literacy and critical thinking. (45-30) *Equivalent to 70-114, PHYS-101.*

PHY-106 Survey of Physics (4 s.h.)
Corequisite: MAT-102, Intermediate Algebra, or equivalent. This is an introductory, one-semester transfer course treating a selection of important topics in physics. The current offering emphasizes light, electricity and magnetism, the wave-particle duality of quantum mechanics, and the Special Theory of Relativity. In connection with these themes, topics such as force and the motion of particles; the concept of energy; the nature and properties of waves; and the history of physics, are also considered. In this version of the course, laboratory work emphasizes optics and electricity but may touch on other areas. This course, like other general education science division courses, addresses the general education skills of scientific literacy and critical thinking. A previous physics course is not required. (45-30) *Equivalent to 70-122, PHYS-110.*

PHY-162 College Physics I (4 s.h.)
Prerequisite: MAT-134, Trigonometry and Analytic Geometry, or equivalent. First semester of a two-semester physics sequence relying on algebra, trigonometry, and analytic geometry, but not employing calculus. Intended for students whose program requirements may be satisfied by a physics course of this level. Emphasizes kinematics, vectors, dynamics, conservation laws, simple harmonic motion, and rotational motion. This course, like other general education science division courses, addresses the general education skills of scientific literacy and critical thinking. A previous physics course may be helpful but is not required. (45-30) *Equivalent to 70-280, PHYS-120.*

PHY-172 College Physics II (4 s.h.)
Prerequisite: PHY-162, College Physics I, or equivalent, or permission of instructor. Second semester of a two-semester physics sequence relying on algebra, trigonometry, and analytic geometry, but not employing calculus. Intended for students whose program requirements may be satisfied by a physics course of this level. Emphasizes electric fields and electricity, electric circuits, and magnetic fields and magnetism; also includes material on waves and optics, and on additional topics as time allows. This course, like other general education science division courses, addresses the general education skills of scientific literacy and critical thinking. (45-30) *Equivalent to 70-281, PHYS-121.*

PHY-212 Classical Physics I (5 s.h.)
Corequisite: MAT-210, Calculus I, or prior completion of MAT-210 Calculus I, or high school physics, or permission of instructor. First semester of a two-semester calculus-based sequence intended for students majoring in engineering, physics, chemistry, or other sciences. Emphasizes kinematics, vectors, dynamics, conservation laws, simple harmonic motion, and rotational motion. This course, like other general education science division courses, addresses the general education skills of scientific literacy and critical thinking. (60-30) *Equivalent to 70-282, PHYS-220.*

PHY-222 Classical Physics II (5 s.h.)
Prerequisite: PHY-212, Classical Physics I, or equivalent, with a grade of C or higher, or permission of instructor. Corequisite: MAT-216, Calculus II, or prior completion of MAT-216, Calculus II. Second semester of two-semester calculus-based sequence intended for students majoring in engineering, physics, chemistry, or other sciences. Emphasizes electric fields and electricity, electric circuits, and magnetic fields and magnetism. It also includes material on waves and optics, and on additional topics as time allows. This course, like other general education science division courses, addresses the general education skills of scientific literacy and critical thinking. (60-30) *Equivalent to 70-283, PHYS-221.*

PHY-720 Career Physics (4 s.h.)
Prerequisite: MAT-770, Applied Math I, and MAT-771, Applied Math II. An introduction to the physics of mechanical, fluid, electrical and thermal systems with emphasis on application in the technical careers. (45-30) *Equivalent to 96-150, PHYS-701.*

PNN-603 Practical Nursing I (4 s.h.)
Corequisite: HSC-150, Body Structure and Function, and ENG-105, Composition I. This course provides an orientation of the history of nursing, ethical and legal principles, dosage calculation, and the role of the practical nurse in the health community. Introduction to basic nursing assessments relating to safety and comfort while utilizing the nursing process to identify and meet client needs throughout the life span. Students will be instructed in documentation and communication skills. Instruction in implementation of medical asepsis and safety when performing basic nursing skills. Students will apply, practice, and demonstrate the skills taught in the college laboratory. (45-30) *Equivalent to 94-101, LPNS-701.*

PNN-604 Practical Nursing II (13 s.h.)
Corequisite: PSY-111, Introduction to Psychology. A continuation of PNN-603, Practical Nursing I. Practical Nursing II continues to utilize the nursing process with emphasis on implementation in meeting client needs resulting from physical and psychological impairments. Pharmacology, diet modification, psychosocial concepts, disease process, and health maintenance are incorporated into the student's knowledge and skills. Introduction of concepts and care of the obstetric, newborn, and pediatric client. The student will continue to practice advanced skills in the college lab as well as clinical experiences in long-term care, pediatrics, medical-surgical, maternal-newborn, and community settings. (135-165) *Equivalent to LPNS-705.*

PNN-607 Practical Nursing III (13 s.h.)
Corequisite: PSY-121, Developmental Psychology. Practical Nursing III emphasizes utilization of all components of the nursing process to meet client needs resulting from impairments related to disease processes affecting physical and psychological status of the client. Student's knowledge and skills continue to be enhanced in areas of pharmacology, nutrition, mobility, psychosocial concepts,

and health maintenance. Concepts of management, legal, and ethical aspects of the nursing profession are presented. A supervised management experience in the long-term care setting allows the student an opportunity to care for a group of clients and apply basic skills in leadership and conflict management. Clinical experiences include medical-surgical, long-term care, mental health, and community setting. (105-270) *Equivalent to 94-110, LPNS-704.*

POL-111 American National Government (3 s.h.)
A survey of the American federal system of government including a description and analysis of the Constitution; the legislative, executive, and judicial branches of government; and the American political process. (45-0) *Equivalent to 80-120, POLS-101.*

POL-112 American State and Local Government (3 s.h.)
A survey of state and local governments in the United States including an analysis of federal-state relations; state constitutions; state and local legislative, executive, and judicial systems; and major issues in state and local politics. (45-0) *Equivalent to 80-121, POLS-102.*

POL-121 International Relations (3 s.h.)
An introductory course in international relations which offers an analysis of the structure and processes of world politics. Topics covered include the study of foreign policies, a survey of major problems in contemporary world affairs, and an examination of selected global issues. (45-0) *Equivalent to 80-122, POLS-110.*

PSY-102 Human and Work Relations (3 s.h.)
Human and Work Relations is the study of self and social behavior. Emphasis is placed on the understanding and application of social theories and research for the development of effective and organizational relationships. Attention is also devoted to individual and group dynamics in context with feelings, attitudes, and perceptions of self along with the work organization. (45-0)

PSY-111 Introduction to Psychology (3 s.h.)
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. (45-0) *Equivalent to 80-101, PSYC-101.*

PSY-121 Developmental Psychology (3 s.h.)
A topical approach to studying the physical, cognitive, social, and emotional domains of human development from conception to death. A variety of psychological issues including learning, personality, moral behavior, and psychological well-being and life satisfaction across the lifespan are discussed. Examining the research in these areas allows students to understand and appreciate different perspectives on cultural, ethnic, and gender issues. (45-0) *Equivalent to PSYC-110, 80-230.*

PSY-211 Psychology of Adjustment (3 s.h.)
This course will examine psychological theories and current research on positive mental health. Emphasis will be given to models of adjustment as they apply to the student's life. We all have to adjust to changes throughout the course of our lives, and this course will help students learn about and apply psychological concepts to help them meet such life challenges as time management, developing a self-identity, building and maintaining friendships and romantic relationships, adopting healthier behaviors and lifestyles, developing interpersonal skills, coping with stress, dealing with emotional problems, adjusting to the changes made in our lives as a result of technological advances, and dealing with psychological disorders. (45-0)

PSY-223 Child and Adolescent Psychology (3 s.h.)
This course covers information relevant to the development of humans from the prenatal stages through adolescence providing an introduction to and survey of behavioral characteristics of individual development. Interwoven into each stage of development (infancy/toddlerhood, early childhood, middle childhood, and adolescence) are the affects of community, family, and school in the development of children and adolescence. (45-0) *Equivalent to 80-104, PSYC-204.*

PSY-241 Abnormal Psychology (3 s.h.)
Prerequisite: PSY-111, Introduction to Psychology. An introduction to the study of psychological disorders, with an emphasis on anxiety, mood, schizophrenia, personality, and substance-related disorders. The course includes understanding the personal dynamics of mental disorders and biopsychosocial factors involved in the assessment, etiology, and treatment. (45-0)

PSY-281 Educational Psychology (3 s.h.)
Prerequisite: PSY-121, Developmental Psychology, or PSY-223, Child and Adolescent Psychology, (Education students must take PSY-223). Educational psychology applies the accumulated knowledge of human cognition and behavior from the field of psychology to the theory and practice of teaching. This course will be taught from a research perspective to facilitate student comprehension of teaching theories and how they can be applied in the classroom. (45-0) *Equivalent to 80-103, PSYC-205.*

PTA-100 PTA Terminology (1 s.h.)
Includes an orientation to the vocabulary of medicine with emphasis on terminology related to physical therapy. (15-0) *Equivalent to 90-145, PTAS-703.*

PTA-101 Introduction to PTA (2 s.h.)
Prerequisite: Acceptance into the PTA program. This course provides an overview of the physical therapy profession and the role of the physical therapist assistant, including legal and ethical aspects of practice. Students will be informed in how to research physical therapy topics, on the importance of confidentiality and patient's rights, and will have an understanding of how to report abuse in the workplace. Students will develop an understanding of the impact an illness or disability has on the individual, will be instructed in documentation, and given much opportunity to work on their communication skills. Includes a unit on managing stress, how culture impacts patient care, and an introduction to the Clinical Education component of the program. (30-0) *Equivalent to 90-149, PTAS-701.*

PTA-110 Fundamentals for PTA (3 s.h.)
Prerequisite: Acceptance into the PTA program. This course provides a foundation in physical therapy interventions by covering techniques that the PTA can utilize to monitor patients as well as basic treatment interventions such as range of motion and

transfers. Purposes of all skills, proper techniques, and safety considerations will be addressed. Students will have lab time to apply, practice, and demonstrate skills they are taught. (30-30) *Equivalent to 90-144, PTAS-702.*

PTA-120 Kinesiology (3 s.h.)
Prerequisite: BIO-206, Anatomy and Physiology I (and lab), with a grade of C- or higher. This course provides a basic understanding of normal human body movement as related to skeletal, articular, neurological, and muscular systems. Levers, torques, center of gravity, base of support, and their relationship to balance, posture, and movement will be addressed. The student will learn anatomical palpations and the basics of human gait. (30-30) *Equivalent to 70-149, BIOL-222.*

PTA-141 Developmental Processes (3 s.h.)
Prerequisite: PTA-110, Fundamentals for PTA, with a grade of C or higher. This course presents overview of normal physical, cognitive, social, and emotional developmental processes which affect an individual throughout the life span. The course focus and emphasis is on normal physical development and the application of physical processes to the field of physical therapy. (45-0) *Equivalent to 90-146, PTAS-711.*

PTA-150 Pathophysiology (3 s.h.)
Prerequisite: PTA-190, Physical Agents. This course presents clinical disorders and diseases commonly treated in physical therapy. Pathology, etiology, diagnosis, signs, symptoms, treatment, prognosis and implications for rehabilitation will be covered. (45-0) *Equivalent to 90-147, PTAS-801.*

PTA-162 PTA Assessment Procedures (3 s.h.)
Prerequisites: PTA-190, Physical Agents. The course provides an in-depth look at various assessment skills performed and utilized by the PTA. Special emphasis will be on theory, application procedures, and documentation of findings when utilizing goniometry and manual muscle testing in the clinic setting. Students will have an opportunity in the lab portion to apply, practice, and demonstrate techniques they are taught. (30-30) *Equivalent to 90-150, PTAS-802.*

PTA-190 Physical Agents (4 s.h.)
Prerequisite: PTA-110, Fundamentals for PTA. Prerequisite/ Corequisite: PTA-120, Kinesiology. This course prepares the student to use physical agents for patient treatment. Mechanisms of action, indications, precautions, contraindications and treatment procedures will be covered for the following: superficial heat, deep heat, electromagnetic radiation, cold, external compression, massage, biofeedback, whirlpool, wound care, traction, and electrical stimulation. Pain rating and skin assessment procedures will also be included. Students will practice applications in lab. (37.5-45) *Equivalent to 90-159, PTAS-712.*

PTA-210 Orthopedics (3 s.h.)
Prerequisite: PTA-500, PTA Clinic I. Principles of fracture and soft tissue healing are applied to musculoskeletal injuries and disorders. Injuries, disorders, and function specific to each joint are covered. Physical therapy treatment for specific joint injuries are presented. Students will practice techniques in lab. (30-30) *Equivalent to 90-213, PTAS-811.*

PTA-231 Therapeutic Exercise for PTA (3 s.h.)
Prerequisite: PTA-500, PTA Clinic I. This course studies the physiological effect of exercise on the musculoskeletal, cardiovascular, and pulmonary systems. Physical therapy treatment techniques to improve strength, flexibility, cardiovascular and pulmonary function are presented. Special topics discussed are diabetes, pregnancy, amputation, women's health issues, and aquatic therapy. Students will practice techniques in lab. (30-30) *Equivalent to 90-212, PTAS-810.*

PTA-241 Neurology for PTA (4 s.h.)
Prerequisite: PTA-500, PTA Clinic I. This course will provide information, discussion, and treatment considerations with neurologically-based diagnoses. Clinical manifestations and treatment considerations will be addressed with common neurological disorders with special emphasis on strokes or CVA. To enhance the students' understanding, typical treatment techniques, exercise programs, and treatment progression will be applied to lab scenarios with diagnoses covered. Students will have an opportunity in the lab portion to apply, practice, and demonstrate techniques they are taught. (45-30) *Equivalent to 90-214, PTAS-812.*

PTA-250 PTA Career Essentials (2 s.h.)
Prerequisite: PTA-500, PTA Clinic I. This course includes the basic principles of management including levels of authority and responsibility, supervisory process, performance appraisals, and policies and procedures. The process of quality assurance and chart audits are discussed. Varieties of reimbursement systems and their impact on health care delivery are discussed. Resume writing, interviewing, and employability skills will be covered. Ethical and legal issues in the practice of physical therapy will also be examined. (30-0) *Equivalent to 90-215, PTAS-813.*

PTA-280 PTA Seminar (1 s.h.)
Prerequisite: PTA-502, PTA Clinic III, or permission of instructor. The course will address all aspects of patient care in a physical therapy setting, including what is expected of a PTA at entry level practice. Discussion based, this 15-hour course will incorporate students' experiences from Clinic III so that each student has time to process and consider these learning experiences. All aspects of patient care will be addressed and case studies will be reviewed to assist with problem solving skills. (15-0) *Equivalent to 90-217, PTAS-823.*

PTA-500 PTA Clinic I (2 s.h.)
Prerequisites: PTA-150, Pathophysiology, and PTA-162, PTA Assessment Procedures. This clinical occurs in the final two weeks of the third term and extends one week outside the term. Skills, knowledge, and attitudes learned in all completed PTA course work will be applied to direct patient care in selected clinical settings. Includes application/integration of current and previous PTA course work with goal of student providing quality care with uncomplicated to complex patients and a degree of supervision/guidance that will vary with the complexity of the patient or the environment. This course has been designated as a pass/no pass course. (0-0-112) *Equivalent to 90-138, PTAS-803.*

PTA-501 PTA Clinic II (7 s.h.)
Prerequisite: PTA-500, PTA Clinic I. Eight week, full-time clinical experience. Skills, knowledge, and attitudes learned in all com-

pleted PTA course work will be applied to direct patient care in selected clinical settings. Includes application/integration of all PTA course work with goal of student consistently and efficiently providing quality care with uncomplicated to complex patients and a moderate to low degree of supervision/guidance except when addressing new and highly complex situations. This course has been designated as a pass/no pass course. (0-0-320) *Equivalent to 90-218, PTAS-821.*

PTA-502 PTA Clinic III (5 s.h.)
Prerequisite: PTA-501, PTA Clinic II. Six week, full-time clinical experience. Skills, knowledge, and attitudes learned in all PTA courses will be applied to direct patient care in selected clinical settings. Includes application/integration of all PTA course work with goal of student consistently and efficiently providing quality care with uncomplicated to complex patients. The student usually needs no further guidance or supervision except when addressing new and highly complex situations. This course has been designated as a pass/no pass course. (0-0-240) *Equivalent to 90-219, PTAS-822.*

RAD-574 Clinical V (8 s.h.)
Prerequisites: All courses as listed by the School of Radiologic Technology. This course provides the necessary clinical education needed in the performance of an entry-level radiographer. The student is exposed to patient contact when completing CBCE and is evaluated for clinical objectives by the staff radiographers. Clinical competency is evaluated by the Program Director, Clinical Coordinator, Clinical Instructor, or named staff radiographers. (0-0-360)

RAD-744 Radiographic Pathology (2 s.h.)
Prerequisites: All courses as listed by the School of Radiologic Technology. This course will cover the signs and symptoms of diseases commonly seen in Imaging, how diseases affect the body, and the radiographic routines and images. (30-0)

RAD-764 Pharmacology for Radiographers (1 s.h.)
Prerequisites: All courses as listed by the School of Radiologic Technology. We do not use or administer most drugs; therefore, this is an introductory course to the basic classifications of drugs. The student will learn Venipuncture, the classes of drugs, the drugs they will most often encounter in the department, and how contrast media is used. Also included will be the various reactions that may be caused by drugs or contrast media, the classifications and interventions. (15-0)

RAD-765 Radiographic Anatomy and Positioning IV (2 s.h.)
Prerequisites: Successful completion of Radiographic Positioning and Anatomy and Labs I-III. In this course the student will learn the basic information of special areas of the Imaging Department and more specialized procedures in Radiography. (15-30)

RAD-900 Registry Review (3 s.h.)
Prerequisites: All courses as listed by the School of Radiologic Technology. This course prepares the student to take the ARRT examination. Various topics are selected and reviewed during the last semester of the second year. Mock registry exams are given to prepare the student to take the national examination. (45-0)

RDG-125 College Reading Strategies (3 s.h.)
Designed to help students become more efficient and effective in reading college textbooks, required materials, leisure articles, and books. Course adapts to the style and needs of each individual to improve vocabulary, comprehension, rate, and study skills. (45-0) *Equivalent to ENGL-120, 30-120.*

RDG-161 Speed Reading (1 s.h.)
Are you struggling to keep up with a flood of e-mail, articles, reports, books, and other printed matter? Save yourself oodles of time by learning to read faster and with better comprehension from acclaimed speed reading expert, Dr. Merrill Ream. This course is a complete speed reading experience. Topics are presented in a logical progression with plenty of time to help you master the skills and techniques you'll need for lasting proficiency as a speed reader. This course has been designated as a pass/no pass course. (5-20) *Equivalent to 89-146, SDEV-251.*

SDV-065 Personal Management (3 s.h.)
Prerequisite: Consent of instructor or college placement. This Enrich course will examine concerns faced by students as members of modern society. It is designed to assist students in making sound decisions concerning physical, mental, and financial health, and to use nonworking 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 the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (45-0) *Equivalent to ENRI-049, 89-030.*

SDV-066 Career Decisions (3 s.h.)
Prerequisite: Consent of instructor or college placement. This Enrich course is designed to assist the student in examining a variety of careers, looking at educational, physical, and mental requirements. Students will develop a personal profile and will match career areas to their personal interests and strengths. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (45-0) *Equivalent to ENRI-051, 89-041.*

SDV-068 Skills for Job Seekers (3 s.h.)
Prerequisite: Consent of instructor, and suggest SDV-066, Career Decisions. This Enrich course is designed to assist the student in structuring a job search. Written materials will include applications, resumes, and cover letters. Interviewing skills will be developed. Job-keeping skills will be emphasized. Credit earned will not satisfy the requirements for an Associate Degree and will not be used in calculating the cumulative grade point average for graduation. This course has been designated as a pass/no pass course. (45-0) *Equivalent to ENRI-050, 89-040.*

SDV-111 Success Seminar (1 s.h.)
Prerequisite/Corequisite: For participants in the TRiO Student Support Services Program. Success Seminar cultivates a positive attitude and gives students the motivation to help themselves in a college setting. The goal is to instill confidence, eagerness, and enthusiasm toward obtaining a college degree. (15-0) *Equivalent to SDEV-101, 89-153.*

SDV-113 Strategies for Academic Success (2 s.h.)
This course is useful to any student in either semester. The focus is assisting in the development of effective study techniques and comprehensive skills necessary for independent learning and academic success. This course satisfies 2 credit hours of transferable elective credits toward an Associate degree. (30-0) *Equivalent to 89-151, SDEV-105.*

SDV-120 ICBE (1 s.h.)
Prerequisite: Students must have the consent of the instructor. The introductory and required beginning course for the Individualized Competency Based Education program (ICBE). It is designed to teach personal educational assessment and evaluation, goal setting, degree pact writing and individualized educational planning. (15-0) *Equivalent to 89-120, SDEV-125.*

SDV-135 Job Seeking Skills (1 s.h.)
Develop skills necessary to enter the job market and experience long-term career growth. Students learn basic job seeking techniques, job keeping skills, and strategies for continued growth. (15-0) *Equivalent to 89-150, SDEV-110.*

SDV-144 Introduction to STEM Careers (1 s.h.)
Introduction to STEM Careers is a one-hour seminar that gives students an opportunity to hear from professionals in Science, Technology, Engineering and Math (STEM) careers in North Iowa. The course will introduce students to different career options in the STEM fields and students will learn about various pathways to prepare for those professions. Students will also gain first hand experience by visiting a STEM industry. This course has been designated as a pass/no pass course. (15-0)

SDV-160 Career Decision Making (2 s.h.)
Introduction to a structured career decision-making process, including self-awareness, career and educational information, economic information, and related activities/projects. (30-0) *Equivalent to 89-152, SDEV-106.*

SDV-177 Listen to Your Heart and Success Will Follow (1 s.h.)
Intelligently facilitated and fast-paced, Listen to Your Heart and Success Will Follow will help you enjoy the rewards that come from doing what really makes you happy! Your instructor and a caring community of students will help you begin designing a life that really works for you. With a complete understanding of your own interests, values, needs and abilities, you'll learn how you can use work to express yourself and share your interests and talents. Your every day will be filled with joy and inspiration, and a greater depth of meaning will be added to everything you do. This course program is skillfully crafted to weave experiential learning with the conceptual presentation, giving you time to experience, understand, and implement each new strategy as it is introduced. This course has been designated as a pass/no pass course. (5-20) *Equivalent to 89-145, SDEV-250.*

SDV-195 Student Senate (1 s.h.)
Students will develop increased organizational and leadership skills through involvement in planning campus activities and entertainment, participating in community service projects, organizing community college advocacy efforts and helping to get students involved at North Iowa Area Community College. Additional leadership opportunities may include attending a conference, becoming a Student Senate representative on a student or college committee, or assisting with Fine Arts events. Course may be repeatable for a maximum of four credits. (0-30) *Equivalent to 80-125, POLS-125.*

SDV-199 College Essentials (1 s.h.)
This course is designed for first-time college students and/or transfer students with less than 12 hours of credit. Areas included in this course are uses of Web Advisor, uses of NIACC e-mail, availability of campus resources, and strategies to deal with navigating the college experience. (15-0)

SDV-210A-E Cooperative Education Internship (1-5 s.h.)
Practical training on the job under the cooperative supervision of the college and work supervisor. Designed primarily for the college transfer students to provide an experience that: (1) is directly related to their college program and career objectives; or (2) will help them test out career interest and/or discover new career possibilities. Credit is determined on the basis of one semester of credit for each 60 hours of approved employment to be completed in a term. Appropriateness of learning objectives is an essential factor in the approval process. 1-5 credits per semester, 12 credits maximum. (0-60 to 300) Instructor's consent required. *Equivalent to 89-100, SDEV-120A-E.*

SDV-287 PTK Leadership Development Studies (2 s.h.)
This course will help students develop the necessary skills to be an effective leader. Topics covered include developing a leadership philosophy, articulating a vision, decision making, time management, team building, empowering and delegating, initiating change, managing conflict, and ethics. Class time will primarily consist of discussion and small-group activities. (15-30) *Equivalent to 80-127, SDEV-111.*

SDV-901B Special Topics Enrich (2 s.h.)
Prerequisite: Consent of instructor/college recommendation. Fall semester: In this Enrich course, students focus on improved decision making in work and personal situations. Emphasis is placed on civic responsibility and the importance of being an informed citizen. Spring semester: This Enrich course focuses on the student in a global society. Students work to develop critical thinking skills which will assist them to look past biases and prejudices in order to become responsible citizens. The class stresses both written and verbal communication skills. (30-0) *Equivalent to 89-299, ENRI-900B.*

SOC-110 Introduction to Sociology (3 s.h.)
An introductory survey course, sociology is the scientific study of society. Inquires into what holds societies together, what causes societies to change, and how social forces affect our daily lives. Topics covered include: culture and society, socialization, social research, groups, organizations, institutions, deviance, gender, race, and ethnicity. An emphasis is placed on cultural diversity. (45-0) *Equivalent to SOCS-101, 80-110.*

SOC-115 Social Problems (3 s.h.)
Prerequisite: SOC-110, Introduction to Sociology, is recommended. An introduction to the study of contemporary social problems. The course examines how social problems are identified, explores underlying conditions and causes of social problems, and considers possible solutions and policy implications. Emphasis is on

sociological and critical thinking frameworks. Topics of exploration include: mental illness, substance abuse, crime, prejudice and discrimination, prostitution, poverty, and more. (45-0) *Equivalent to 80-111, SOCS-103.*

SOC-120 Marriage and Family (3 s.h.)
A survey of the family as a social unit in the modern American culture. A study is made regarding the creation of the American family from various cultures as well as the problems the family is subjected to such as sex relations, social roles, communication, finance, and divorce. (45-0) *Equivalent to 80-112, SOCS-112.*

SOC-150 Introduction to Human Services (3 s.h.)
This course is designed to familiarize the student with the human services arena. Various employment opportunities are explored, as well as ethical, legal, political, and economic forces. (45-0) *Equivalent to 80-114, SOCS-100.*

SOC-215 Prime for Life: Substance Abuse (1 s.h.)
Requirements: Students must be enrolled prior to the start of the first night of class. No late enrollments. Attendance is mandatory. Each lesson builds on the other, therefore, all 6 sessions must be attended or the student cannot satisfactorily complete the course. Prime for Life risk reduction program is a research-based curriculum that focuses on the reduction of problems associated with high risk drinking. The ultimate goal is to impact drinking choices by using a collection of strategies designed to facilitate behavior change. The program integrates knowledge from over 1,200 scientific studies from biological, psychological, and social research that supports the content of the program. Students will gain an increased knowledge regarding the subject matter, as well as gain personal knowledge about their own drinking patterns through a self reflection process. Knowledge of the subject matter and self knowledge are both critical prerequisites for those who are considering employment in the human services fields. Open to all students. Required for the Human Services certificate. (15-0)

SOC-881 Social Responsibility and Community Service (2 s.h.)
This course is grounded in an appreciation for the health of the community and the potential of the individual to positively impact the well being of the community through direct and active participation. Socially responsible individuals initiate change by transforming their social interests into personal advocacy and social participation in their respective community. This advocacy and participation is actualized through a lifelong commitment to addressing social problems through community service. (15-30)

SPC-111 Public Speaking (2 s.h.)
Public speaking as an intellectual tool for use in argumentation and persuasion in a democratic society. (Offered each term.) (30-0) *Equivalent to SPCH-101, 85-101.*

SPC-131 Group Communication (2 s.h.)
Principles and techniques of group discussion methods and procedures. (30-0) *Equivalent to SPCH-102, 85-105.*

WEL-108 Oxy-acetylene Welding and Cutting and Shielded Metal Arc Welding (2 s.h.)
This course gives students basic knowledge and skill in oxy-acetylene welding and cutting and shielded metal arc welding (stick welding). Students will learn proper welding safety practices and procedures. Oxy-acetylene welding and SMAW welding of mild steel will be performed in the flat, horizontal, and vertical positions. Students will also learn how to properly set up, maintain, and troubleshoot welding and cutting equipment. (15-30)

WEL-109 Gas Metal Arc Welding and Gas Tungsten Arc Welding (2 s.h.)
This course gives students basic knowledge in Gas Metal Arc Welding (wire feed) and Gas Tungsten Arc Welding (TIG). Students will learn proper welding safety practices and procedures. GMAW and GTAW welding of mild steel will be performed in the flat, horizontal, and vertical positions. Students will also learn how to properly set up, maintain, and troubleshoot welding equipment. (15-30)

WEL-110 Welding Blueprint Reading (2 s.h.)
Prerequisite: None. This course provides instruction in the fundamentals of reading and interpreting blueprints. A student learns to interpret and apply welding symbols along with identifying proper assembly procedures. (30-0) *Equivalent to WELD-701, 98-110.*

WEL-138 Oxy-acetylene Welding and Cutting (2 s.h.)
Fusion joining of mild steel and cutting processes. Selection of proper torch tip sizes, filler rods, angles, and travel speeds for O.A.W. processes. The set-up and adjustment of oxy-acetylene welding equipment, along with practical experience using both ferrous and non-ferrous metals. (15-30) *Equivalent to WELD-703, 98-190.*

WEL-222 Arc Welding I (9 s.h.)
Flat and horizontal shielded arc, vertical and overhead shielded arc welding. The operation of AC and DC transformer arc welders and motor driven DC welders. The effects of amperage, polarity, and characteristics of various electrodes. Butt, fillet, corner, and lap welds are made in various positions. Application of techniques required for equipment repair. (45-180)

WEL-223 Arc Welding II (9 s.h.)
Prerequisite: WEL-222, Arc Welding I. This course is a continuation of Arc Welding I with emphasis on vertical, horizontal, overhead, and pipe fitting welds. Students will be introduced to welding stainless steel, aluminum, and various alloys. (45-180)

WEL-240 Welding Fabrication/Certification (3 s.h.)
Prerequisites: WEL-222, Arc Welding I, and must have completed or be currently enrolled in WEL-223, Arc Welding II. This course is designed to allow students to incorporate all previous welding skills in an effort to fabricate a group project. The student will also utilize this course time to work towards AWS certification. (0-90)

WEL-250 Welding Automation (2 s.h.)
Prerequisites: WEL-222, Arc Welding I, and must have completed or be currently enrolled in WEL-223, Arc Welding II. This course is designed to introduce individuals to the automation used in the welding industry. The student will learn the automation process through the use of a robotic welding arm and a CNC plasma CAM. (15-30)

WEL-335 Ag and Industry Welding (2 s.h.)
This is a basic arc/oxy-fuel welding and cutting course. The students will perform introductory skills in SMAW, GTAW, and GMAW welding, oxy-acetylene welding, and oxy-fuel cutting. The student learns safety procedures relating to welding subjects and general shop safety. (15-30)

WTT-103 Introduction to Wind Energy (3 s.h.)
A basic study of the many facets of the wind industry. Study includes the history and development of the wind industry, wind industry terminology, types of wind turbines, economic and environmental impact of wind energy, future of wind energy, and other relevant topics. Students will have the opportunity to tour a wind farm. (45-0)

Staff

PRESIDENT

Debra Derr, *President;* 2008
B.A. Linfield College; M.S. Portland State University; Ed.D., Oregon State University

Ronda Smith, *Assistant to the President;* 1995
Diploma, Spencer School of Business; A.A., North Iowa Area Community College; additional course work at Mankato State University and Buena Vista University

Joshua Byrnes, *Executive Assistant to the President for Corporate and Community Relations;* 2005
B.A., Luther College; M.S., Winona State University; additional course work at Iowa State University

Performing Arts

Elizabeth Gales, *Director of Performing Arts and Leadership Series;* 1990
B.A., College of St. Catherine

Merlin Schafer, *Auditorium Technician;* 2002
A.S. and A.S.B., North Iowa Area Community College

ACADEMIC AFFAIRS

Lyn Brodersen, *Vice President for Academic and Student Affairs*
B.A., Coe College; M.A., University of Notre Dame; Ph.D., Iowa State University

Karo Brattrud, *Administrative Assistant;* 2008
A.S.B., North Iowa Area Community College

Academic Faculty

Agricultural Technology

Kevin Muhlenbruch, CPAg, *Agriculture Division Chair/Agriculture Instructor;* 1988
B.S., Iowa State University

Abbie Johnson, *Agriculture Instructor;* 2010
B.S. and M.S., Iowa State University

Arts and Sciences

William Backlin, *Arts and Sciences Division Chair;* 2008
A.A., North Iowa Area Community College; B.M.E., Drake University; M.M., University of Northern Iowa; Ph.D., Iowa State University

Angie DeVries, *Administrative Assistant-Arts and Sciences;* 1998
A.S.B., North Iowa Area Community College

Communication

Sally Becker, *Writing Lab Specialist;* 1975
Course work at North Iowa Area Community College

Diana Cameron, *Composition and Speech Instructor;* 1997
B.A., Georgetown College; M.A., Tulane University; M.A., Comparative Literature, University of Chicago; additional course work at Iowa State University.

Joe Davis, *Communication Instructor;* 2000
B.A., Mount Mercy College; M.A., Northern Michigan University; additional course work at Iowa State University

Sethanne DeGabriele, *Composition and Speech Instructor;* 2001
A.A., North Iowa Area Community College; B.A., University of Northern Iowa; M.A., University of Northern Iowa

Nancy Fallis, *Reading and Education Media Instructor;* 1998
B.A. and M.A., University of Northern Iowa; additional course work at Mankato State University, University of Iowa, Drake University, and Indiana University

Doreen Lechner, *Developmental Writing Instructor;* 2008
B.A., University of Northern Iowa; M.A.E., University of Northern Iowa; additional course work at University of Northern Iowa

Chad McLane, *Composition and Speech Instructor;* 2008
B.A., Brigham Young University; M.A., Marquette University

Mark Messer, *Composition and Speech Instructor;* 1988
B.A., Central College; M.A., University of Northern Iowa; additional course work at Iowa State University and Northwest Missouri State University

Paul Peterson, *Composition and Speech/Journalism Instructor, Logos Advisor;* 1990
B.A. and M.E.A., University of Northern Iowa; additional course work at University of Iowa, University of Northern Iowa, and University of Minnesota

Borden Plunkett, *Composition and Speech Instructor;* 1993
B.S., Southern Illinois University; M.S., Southern Illinois University

Karen Regal, *Composition and Speech/Children's Literature Instructor;* 1991
B.A., Central College; M.A., Mankato State University; additional course work at University of Iowa, Drake University, Minnesota State - Mankato, University of Northern Iowa, Iowa State University, and Western Michigan-Kalamazoo

Geraldine Schwarz, *Reading and Literature Instructor;* 1986
B.A. and M.A., University of Northern Iowa; additional course work at University of Northern Iowa and University of Iowa

Arlo Stoltenberg, *Composition and Speech/Literature Instructor;* 1967
B.A., Central College; M.A., Northeast Missouri State University; Ed.D., Nova University; additional course work at Drake University, University of Iowa, University of Northern Iowa, and Iowa State University

Fine Arts and Humanities

H. Wayne Allison, *Visual Arts Instructor/Gallery Director;* 2005
B.A., Graceland College; M.F.A., Syracuse University; additional course work at University of Kansas, Kent State University, and University of Northern Iowa.

John Klemas, *Instrumental Music Instructor/Director;* 1987
B.M.E. and B.M., Drake University; M.A., Washington State University

Melissa Lovingood, *Visual Arts Instructor;* 2010
B.F.A., East Carolina University; M.F.A., San Diego State University

Jayson Ryner, *Vocal Music Instructor/Director;* 2001
A.A., North Iowa Area Community College; B.M.E., University of Northern Iowa; M.A., University of Northern Iowa; M.B.A., Ellis College; additional course work at University of Northern Iowa

Charles Schroeder, *Spanish Instructor,* 2000
B.A. and M.A., University of Northern Iowa; additional course work at Iowa State University

Timothy Slaven, *Speech and Theatre Instructor;* 1992
A.A., Iowa Central Community College; B.A. and M.A., University of Northern Iowa

Mathematics

Allan Alcock, *Mathematics Instructor;* 2003
B.A., Wartburg College; M.A., Purdue University

David Bernemann, *Engineering/Mathematics Instructor;* 1999
B.S., University of Iowa; M.S., West Virginia University; additional course work at Iowa State University

Christine Brandt, *Developmental Math Instructor;* 2007
B.A., University of Northern Iowa; M.A., Morningside College; additional course work at Drake University

Brent Hamilton, *Mathematics Instructor;* 1998
B.S., University of Dubuque; M.S., Iowa State University; additional course work at Garrett-Evangelical Theological Seminary

Paul Hertzel, *Mathematics Instructor;* 1998
B.S., Mankato State University; M.S., Iowa State University

Rachel Lamp, *Mathematics Instructor;* 1990
B.A., Marycrest College; M.S., Iowa State University; additional course work at University of Iowa and St. Ambrose University

James Maltas, *Mathematics Instructor;* 2012
B.A. and M.A., University of Northern Iowa

Kathy Rogotzke, *Mathematics Instructor;* 1994
B.A., St. Olaf College; M.S., Iowa State University; Ph.D., Iowa State University; additional course work at Kansas State University

Robin Shine, *Mathematics Instructor;* 2012
B.A., Northern Illinois University; M.A., DePaul University

Rodney Zehr, *Developmental Math Instructor;* 2010
A.A., Iowa Central Community College; B.A., University of Northern Iowa; M.A., University of Northern Iowa; additional course work at Portland State University, Viterbo University, Drake University, and Iowa State University

Natural Science

Edward Dobrzynski, *Chemistry Instructor;* 1986
B.S., Villanova University; Ph.D., Iowa State University; NIH Postdoctoral Fellow, Johns Hopkins University

Ryan Dorland, *Physics Instructor;* 2012
B.S., Minnseota State University; M.S., University of Minnesota-Duluth; Ph.D., University of Massachusetts

Jason Friday, *Natural Science/Biological Science Instructor;* 2003
B.A., University of Iowa; M.A., Quinnipiac University; additional course work at Drake University, Harvard University, University of Montana, Iowa State University, and University of Texas.

Patrick Galliart, *Biological Science Instructor;* 1993
B.S., Loras College; M.S. and Ph.D., Iowa State University; additional course work at University of Iowa, and University of Northern Iowa

Mark Kabele, *Natural Science Associate;* 1998
B.S., University of Wisconsin; additional course work at North Iowa Area Community College

Paul Pistek, *Biological Science Instructor;* 1996
B.S. and M.S., Iowa State University

Ravi Lala, *Biological Science Instructor;* 2012
B.S. and M.S., Andhra University; M.S., Texas A&M University.

Douglas Schumacher, *Chemistry Instructor;* 2012
B.A., Wartburg College; M.S., Iowa State University

Craig Zoellner, *Biological Science Instructor;* 1992
B.A., Wartburg College; M.A., University of Northern Iowa; additional course work at University of Iowa, Iowa State University, Drake University, Carleton College, University of Illinois, Northwest Missouri State, and University of Minnesota - Duluth

Social Science

John Brietzke, *Economics Instructor;* 1980
B.S., University of Minnesota; M.B.A., University of Wisconsin; additional course work at University of Minnesota, University of Iowa, and Iowa State University

Autumn Cartagena, *Psychology/Human Relations Instructor;* 2012
B.A. and M.S., Iowa State University.

Nancy Fallis, *Education Instructor;* 1998
B.A. and M.A., University of Northern Iowa; additional course work at Mankato State University, University of Iowa, Drake University, and Indiana University

Helen Karamitros, *Sociology Instructor;* 1994
A.A., North Iowa Area Community College; B.A. and M.A., University of Northern Iowa, M.A., Mankato State University, Ph.D., Capella University; additional course work at Keene State College, NH, University of Northern Iowa, Iowa State University, and Drake University

Larry Kollman, *Psychology Instructor;* 2005
A.A., North Iowa Area Community College; B.A., Buena Vista University, M.S.W., Augsburg College; M.S., Capella University

Kacy Larson, *Education Instructor;* 1993
A.A., North Iowa Area Community College; B.A., University of Northern Iowa; M.S., Winona State University

Steven Long, *Sociology/Marriage and Family Instructor;* 1990
B.A. and M.A., University of South Dakota; additional course work at Kearney State College (Nebraska)

Joseph (Fred) McCurnin, *Economics Instructor;* 1990
B.A., Augustana College; M.A., University of South Dakota; additional course work at North Dakota State University and University of Pennsylvania

George O'Donnell, *Criminal Justice Instructor;* 2010
B.A., Mount Mercy College; M.S., University of Alabama

Jeff Platt, *Social Science and Psychology Instructor;* 1997
B.A., St. Ambrose University; M.S., Iowa State University; Ph.D., Iowa State University

John Schmaltz, *Political Science/History Instructor;* 2012
B.S., Minot State University; M.S., Southern Illinois University-Edwardsville; additional course work at Arizona State University, University of Nebraska, George Washington University, State University of New York at Stony Brook, University of Northern Iowa, Kearney State College, Wayne State College, Marycrest College, Dickinson State College, and Drake University

Business

Laura Merfeld, *Business Division Chair/Business Instructor/ Business Internship Coordinator;* 1990
A.A.S., North Iowa Area Community College; B.A., Buena Vista University; M.S., Drake University ; additional course work at Iowa State University

Wendy Demaray, *Business Division Office Assistant;* 1991
Diploma, North Iowa Area Community College

Michael Dirksen, *Information Technology Instructor,* 1988
B.A., Augustana College; B.S. and M.S., University of Minnesota at Mankato

Sheryl Fitzpatrick, CMA, *Business Instructor;* 2010
A.A.S., Iowa Lakes Community College; B.A., Buena Vista University; M.B.A., University of Northern Iowa

Michael Fossey, *Business Instructor;* 2010
B.A., University of Northern Iowa; M.S., Winona State University

Diane Frank, *Professional Administrative Services Instructor;* 2003
B.A., University of Northern Iowa; M.A., Morningside College; additional course work at Buena Vista University, University of Northern Iowa, Upper Iowa University, and American Military University

Greg Lauer, *Accounting Instructor,* 1999
A.A., North Iowa Area Community College; Diploma, Hamilton Business College; B.A., Upper Iowa University; M.S., Iowa State University; E.A., Internal Revenue Service; additional course work at University of Phoenix; Jones International University

Jeanne McCurnin, *Professional Administrative Services Instructor;* 1990
A.A., North Dakota State College of Science; B.S., Minnesota State University-Moorhead; M.A., Morningside College; additional course work at University of Iowa and Drake University

Douglas Morse, *Business Instructor;* 2010
B.A., Luther College; M.B.A., University of Iowa; M.A., University of Iowa; additional course work at University of Iowa

Tracy Purchase, A+, MCP, MCDST, MCITP, MCTS, GCFA, IC^3, *Information Technology Instructor;* 2003
B.S., Capella University; M.I.S.M., Keller Graduate School of Management; A.B.D., Capella University

Linda "Toby" VanDenBosch, *Business/Medical Office Instructor;* 2005
A.A., North Iowa Area Community College; A.D.N., North Iowa Area Community College; B.S.N., University of Iowa; M.A., Morningside College; additional course work at Buena Vista University and Drake University

Health

Donna Orton, *Health Division Chair;* 1977
B.A., Augustana College; R.N., M.S.N., University of Dubuque; additional course work at Iowa State University, University of Northern Iowa, University of South Dakota, Marycrest College, Drake University, and Morningside College

Terri Tell, *Health Division Office Assistant;* 1975
A.A., North Iowa Area Community College

Kristi Aschenbrenner, *Associate Degree Nursing Instructor;* 2005
B.S.N., Allen College; M.S.N., University of Phoenix; additional course work at University of Northern Iowa

Susan Callanan, *Physical Therapist Assistant Instructor;* 2000
B.S., Iowa State University; D.P.T., Creighton University; additional course work at Iowa State University and University of Iowa

Laurie DeGroot, *Associate Degree Nursing Instructor;* 1988
A.A., North Iowa Area Community College; B.S.N., University of Iowa; M.S.N., Winona State University; Certified Clinical Nurse Specialist in Gerontological Nursing; A.R.N.P.; additional course work at University of Iowa and University of Northern Iowa

Shannon Dodd, *Associate Degree Nursing Instructor;* 2010
A.D.N., North Iowa Area Community College; B.S.N., University of Iowa; M.S.N., University of Iowa

Jean Evenson, *Associate Degree Nursing Instructor;* 1985
R.N., B.S.N., University of Iowa; F.N.P., M.S.N., Mankato State University; additional course work at Iowa State University, University of Iowa, and Mankato State University

Brandi Hiscocks, *Practical Nursing Instructor;* 2004
A.D.N., North Iowa Area Community College; B.S.N., Winona State University; additional course work at University of Iowa and University of Northern Iowa

Julie Kolker, *Associate Degree Nursing Instructor;* 2004
A.D.N., North Iowa Area Community College; B.S., Iowa State University; M.S.N., University of Iowa; additional course work at University of Iowa and Iowa State University

Mary Medinnus, *Associate Degree Nursing Instructor;* 2011
A.D.N., Riverland Community College; B.S.N. and M.S.N., Winona State University

Suzanne Murphy, *Practical Nursing Instructor;* 2001
A.D.N., North Iowa Area Community College; B.S.N., University of Iowa; additional course work at University of Iowa, Iowa State University, and University of Northern Iowa; certified in Gerontology by American Nursing Credentialing Center

Carol Patnode, *Physical Therapist Assistant Instructor;* 1996
A.S., St. Mary's Junior College; P.T.A., B.A., Metropolitan State University; M.A., St. Mary's University of MN; additional course work at University of Iowa and University of Northern Iowa; Credentialed Clinical Instructor, American Physical Therapy Association

Deb Stockberger, *Medical Assistant Instructor;* 1997
Diploma, Medical Assistant and A.D.N., North Iowa Area Community College; B.S.N., University of Iowa; M.S.N., University of Phoenix; additional course work at Morningside College, Drake University, and University of Iowa

Industrial

Kevin Muhlenbruch, CPAg, *Industrial Division Chair;* 1988
B.S., Iowa State University

Diane Dohlman, *Office Assistant, Murphy Manufacturing Technology Center;* 2002
Diploma, Hamilton Business College; additional course work at North Iowa Area Community College

Ryan Bochmann, *Welding Instructor; 2010*
Diplomas, North Iowa Area Community College; B.A., University of Northern Iowa

Randy Bonde, *Tool and Die Technology Instructor; 2008*
Machine Shop Technology Certification, Iowa Central Community College; Journeyman Tool & Die Maker, U.S. DOL

Tom Crowley, *Climate Control (HVAC) Instructor;* 1993
Electronics, Austin Vocational Technical Institute; additional course work at Iowa State University

Robert Franken, *Industrial Systems Technology Instructor;* 2008
Alloy Fusion, Machine, and Industrial Service Technology Training, Hawkeye Community College

Robert Heimbuch, *Automotive Services Technology Instructor;* 1999
A.A.S., North Iowa Area Community College, A.S.E. Certified Automobile Technician; additional course work at Iowa State University

Gregg Helmich, *Building Trades Instructor;* 2007
B.S., Murray State University; additional coursework at Western Kentucky University, Central Southeastern Missouri State University, and Drake University

Kevin Losee, *Tool and Die Technology Instructor;* 2006
A.A.S., Southeastern Community College; A.A.S., North Iowa Area Community College; Journeyman Tool & Die Maker, U.S. DOL; additional course work at University of Northern Iowa.

Brian Mason, *Industrial Maintenance Instructor;* 2009
Journeyman Tool & Die Maker, U.S. DOL; additional course work at Waldorf and North Iowa Area Community College

Jason Ott, *Climate Control (HVAC) Instructor;* 2007
A.A.S., North Iowa Area Community College; additional course work at University of Northern Iowa

Jack Rohde, *Automotive Services Technology Instructor;* 2002
A.A.S., Montcalm Community College; A.S.E. Certified Master Automobile Technician

Wellness, Exercise Science and Leisure Services

Dan Mason, *Wellness, Exercise Science and Leisure Services Director, 2006*
B.A., North Park University; M.A. Minnesota State University-Mankato

Heather DeWaard-Flickinger, *Wellness, Exercise Science and Leisure Services Instructor;* 2010
B.A. and M.A., University of Northern Iowa

Athletics

Dan Mason, *Director of Athletics;* 2006
B.A., North Park University; M.A., Minnesota State University-Mankato

Christine Brandt, *Head Volleyball Coach;* 2007
B.A., University of Northern Iowa; M.A., Morningside College; additional course work at Drake University

Chris Frenz, *Head Men's and Women's Golf Coach;* 2006
Broadcasting Certification, Brown Institute

Steve Kelly, *Head Wrestling Coach;* 2009
A.A., Iowa Central Community College; B.S., Iowa State University

Mark Mohl, *Head Men's Basketball Coach;* 2008
A.A., Kirkwood Community College; B.S., Morningside College

Todd Rima, *Head Baseball Coach;* 2001
B.A., University of Northern Iowa

Emily Ruehlow, *Administrative Office Assistant, Athletics;* 2007
A.A., Marshalltown Community College; B.A., University of Northern Iowa

Tyler Sisco, *Head Softball Coach; 2003*
A.A., Ellsworth Community College; B.A., University of Northern Iowa; M.A., Livingston University

Kelli Terrell, *Head Women's Basketball Coach;* 2011
A.A., North Iowa Area Community College; B.A., University of Iowa

Curtis Vais, *Head Track and Cross Country Coach/Assistant to the Athletic Director;* 2004
B.A., Mount Saint Claire College

Mark Vrba, *Athletic Trainer;* 2008
B.A., University of Northern Iowa; M.S., California University of Pennsylvania

Continuing Education

Terry Schumaker, *Dean of Continuing Education;* 2000
A.A., North Iowa Area Community College; B.S., Mankato State University; M.B.A., Drake University; additional course work at Buena Vista University and Iowa State University

Community Education

Barb Eisenmenger, *Community Education Director;* 1989
B.A., Buena Vista University; M.S., Iowa State University; Wind and Water School of Feng Shui, FSIM

Pam Durrwachter, *Program Coordinator/Charles City Center;* 2011
A.A., Hill Junior College; B.A., Corpus Christi State University; M.A., Texas A&M University; additional course work at Stephen F. Austin State University

Susan Nagle, *Director of Lifelong Learning Institute;* 2008
B.S., University of Wisconsin-Eau Claire; B.S., University of Wisconsin-Madison; M.B.A., Notre Dame

Health

Dena Ketelsen, *Health Program Specialist;* 2007
Paraeducator Certification, Hawkeye Community College

Adam Wedmore, *Emergency Medical Services Program Manager, 2012*
A.A., North Iowa Area Community College; NREMT-P, Critical Care Paramedic, University of Iowa; additional course work at Waldorf College

Lorna Zrostlik, *Long Term Care Program Manager;* 2010
A.A., North Iowa Area Community College; B.A., University of Northern Iowa

Operations

Connie Glandon, *Operations Director;* 2000
B.A., Wartburg College; M.S., Capella University

Kathleen Borman, *Office Assistant; 2010*
A.A., Ellsworth Community College; Diploma, Hamilton Business College

Kathy Clemens, *Office Manager;* 1993
Course work at Northwestern College

Pat O'Banion, *Office Assistant;* 1975
Diploma, Hamilton Business College; additional course work at North Iowa Area Community College

Programming and Sales - Business and Industry

Jody East, *Sales/Program Director;* 1992
B.S., Iowa State University; M.S., Drake University; and Jonah, the Goldratt Institute

Eric Neitzke, *Business and Industry Program Manager;* 2010
B.S., James Madison University

John Sjolinder, *Industry and AQIP Coordinator;* 2000
A.A.S., North Iowa Area Community College; B.S., Iowa State University; M.B.A., Iowa State University

Retired Senior Volunteer Program

Molly Anderegg, *RSVP Project Director; 2008*
B.A., University of Iowa; additional course work at Cottey College and North Iowa Area Community College

Economic Development

Terry Schumaker, *Dean of Continuing Education;* 2000
A.A., North Iowa Area Community College; B.S., Mankato State University; M.B.A., Drake University; additional course work at Buena Vista University and Iowa State University

Learning Support

Jessica Putnam, *Director of Learning Support;* 1988
B.A., University of Northern Iowa; M.A., Iowa State University; M.Ed., Iowa State University; additional course work at University of Northern Iowa, Marycrest College, Drake University, and University of Iowa

Karen Dole, *Librarian;* 1980
B.A. and M.A., University of Northern Iowa; additional course work at Morningside College, Iowa State University, Drake, and University of Iowa

Cindy Eyberg, *Library Interlibrary Loan/Government Documents Assistant;* 1999
A.A., North Iowa Area Community College

Senora Gilley, *Title III Supplemental Instruction/Early Alert Coordinator; 2006*
Diploma, Hawkeye Community College; A.A., Hamilton College; B.A., Hamilton College; additional course work at University of Phoenix and Capella University

Deborah Kolb-Jackson, *Library Circulation Assistant;* 2007
A.A., Bethany Lutheran Junior College; B.S., Mankato State College; M.S., Mankato State University

Kim Kraus, *Library Serials Associate;* 1984
Clerical Diploma, Hamilton Business College; additional course work at North Iowa Area Community College

Doreen Lechner, *Developmental Writing Instructor;* 2008
B.A., University of Northern Iowa; M.A.E., University of Northern Iowa; additional course work at University of Northern Iowa

Lori Quinlan, *Student Learning Center Instructor;* 1985
B.A., University of Northern Iowa; M.S., Iowa State University; additional course work at Drake University

Mary Schultz, *Adult Literacy Coordinator;* 2010
A.A., North Iowa Area Community College; B.A., Iowa State University

Gary Show, *Assessment/GED Records Specialist;* 2003
B.S., Greenville College

Rodney Zehr, *Developmental Math Instructor;* 2010
A.A., Iowa Central Community College; B.A., University of Northern Iowa; M.A., University of Northern Iowa

ADMINISTRATIVE SERVICES

Kathy Grove, *Vice President for Administrative Services;* 1977
A.A., North Iowa Area Community College; B.A., Buena Vista University; additional course work at Iowa State University

Mary Cole, *Administrative Services Office Manager;* 1988
Diploma, American Institute of Business; additional course work at Des Moines Area Community College

Ann Fisher, *Office Assistant-Administrative Services/Human Resources;* 1994
A.A. and A.S., North Iowa Area Community College; additional course work at University of Northern Iowa and University of Iowa

Lana Miller, *Copy Center Supervisor;* 1986
Course work at North Iowa Area Community College

Bookstore

Rhonda Nesheim-Kauffman, *Bookstore Manager;* 1996
A.S.B., North Iowa Area Community College; B.A., Buena Vista University

Business Office

Mindy Eastman, *Accountant/Business Office Manager;* 1990
A.A., North Iowa Area Community College; B.A., Buena Vista University

Valerie Borseth, *Accounts Payable Clerk;* 1989
A.S.B., Accounting Diploma, Accounting Clerk Diploma, North Iowa Area Community College

Denise Brooks, *Business Office Clerk;* 1987
Diploma, Hamilton Business College

Beth Forbes, *Payroll Clerk/Bookkeeper;* 1977
A.A., North Iowa Area Community College.; additional course work at University of Northern Iowa

Tammy Hain, *Financial Aid/Bookkeeper;* 1985
A.A., North Iowa Area Community College

Shannon Love, *Cashier;* 2009
A.A.S., Legal Office Administration, Hamilton Business College

Hanna Ries, *Accounts Receivable Clerk;* 2010
A.A., North Iowa Area Community College; B.A., Buena Vista University

Jennifer Rosauer, *Office Assistant/Bookkeeper;* 2006
A.A., North Iowa Area Community College; B.S., Iowa State University

Dining Services

Ken Webber, *Food Service Director;* 2004

Stephen Metz, *Food Service Manager;* 2004

Facilities Management

Tony Pappas, *Director, Facilities Management;* 1983
Licensed Master Electrician, I.B.E.W.; A.A., North Iowa Area Community College; additional course work at Iowa State University

Mitchell Olson, *Buildings Supervisor;* 1995
A.A.S., North Iowa Area Community College

David Trunkhill, *Custodial Supervisor;* 2009
E.M.T. and National Certified Fire Fighter I, North Iowa Area Community College; Boiler Operator Level I and II, Iowa Central Community College

Bill Beach, *Custodian;* 1981
Dan Erickson, *Groundskeeper;* 2003

Dennis Felland, *Custodial Maintenance;* 1995
Course work at Mesa Community College and Arizona State University

Kathy Foster, *Facilities Event Manager;* 1998
A.A., North Iowa Area Community College; B.A., Buena Vista University

Dan Hicok, *Building Maintenance;* 2003

Roberta Hugi, *Administrative Assistant;* 2010
A.A.S., Hamilton College

Brandon "BJ" Krull, *Building Maintenance;* 2011
A.S.B., North Iowa Area Community College; B.A., Buena Vista University

David Lief, *Custodian;* 2005

Kevin Petersen, *Building Maintenance;* 2001
A.A., North Iowa Area Community College; B.S., Northwest Missouri State University; course work at Waldorf College

David Pope, *Mechanic;* 2008

Stan Rick, *Custodian;* 2010

Deb Smith, *Campus Facility-ICN Scheduler/Housing Office Assistant;* 1997
Diploma, North Iowa Area Community College

Cheryl West, *Custodial Maintenance-Student Housing;* 1976

Timothy Winter, *Electrical Maintenance;* 1999
State Licensed Journeyman Electrician, I.B.E.W.; course work at North Iowa Area Community College

Housing

Travis Hergert, *Director of Housing/Assistant Baseball Coach/ Intramural Coordinator;* 2004
A.A., Kirkwood Community College; B.A., Mount Mercy College

Daniel Juhl, *Housing Head Resident/Intramural Coordinator;* 2007
A.A.S., North Iowa Area Community College

Deb Smith, *Housing Office Assistant/Campus Facility-ICN Scheduler;* 1997
Diploma, North Iowa Area Community College

INSTITUTIONAL ADVANCEMENT

Jamie T. Zanios, *Director, John Pappajohn Entrepreneurial Center; and Director, Institutional Advancement;* 2003
B.B.A., University of Iowa

Jana Barracks, *Grant Writer/Fund Development Specialist;* 2010
B.S., University of Colorado at Boulder; additional course work at Metropolitan State College

Lisa Feldman, *Administrative Office Assistant-Institutional Advancement; 2011*
B.A., Loras College; additional course work at Luther College

Molly Knoll, *Assistant Director of Institutional Advancement;* 2003
A.A., North Iowa Area Community College; B.A., University of Northern Iowa

INSTITUTIONAL EFFECTIVENESS AND ORGANIZATIONAL DEVELOPMENT

Shelly Schmit, *Vice President of Institutional Effectiveness and Organizational Development;* 1998
A.A., Des Moines Area Community College; B.S., Iowa State University; M.S. and Ph.D., Iowa State University

Admissions

Rachel McGuire, *Director of Admissions;* 1993
A.A., North Iowa Area Community College; B.A., University of Northern Iowa; M.F.C.S., Iowa State University; additional course work at Mankato State University

Tanya Dadisman, *Administrative Assistant, Admissions;* 2007
A.A., North Iowa Area Community College; B.A., University of Northern Iowa

Chris Frenz, *Adult Student Recruiter;* 2006
Broadcasting Certification, Brown Institute; additional course work at North Iowa Area Community College

Steve Hall, *Associate Director of Admissions;* 2009
A.A., Waldorf College; B.A., Concordia College; M.Ed., Iowa State University; additional course work at Iowa State University

Steve Kelly, *Enrollment Specialist;* 2009
A.A., Iowa Central Community College; B.S., Iowa State University

Cindy Lind, *Financial Management Advisor;* 2005
A.A., North Iowa Area Community College; B.A., Iowa State University; additional course work at Drake University, Iowa State University, and North Iowa Area Community College

Mark Mohl, *Enrollment Specialist;* 2008
A.A., Kirkwood Community College; B.S., Morningside College

Mary Jo Vrba, *Enrollment Specialist; 2003*
A.A. and A.S., North Iowa Area Community College; B.A., Wartburg College; additional course work at University of Northern Iowa

Financial Aid

Mary Bloomingdale, *Director of Financial Aid;* 1991
B.A., University of Iowa; additional course work at Iowa State University; additional course work at Iowa State University

Colleen Sisco, *Associate Director of Financial Aid; 2004*
B.S. and M.A., University of South Dakota

Rhonda Groshens, *Office Assistant, Financial Aid;* 2007
A.A., North Iowa Area Community College

Denise Petersen, *Office Assistant; 2010*
A.S. and Diploma, North Iowa Area Community College

Human Resources

Shelly Schmit, *Vice President of Institutional Effectiveness and Organizational Development;* 1998
A.A., Des Moines Area Community College; B.S., Iowa State University; M.S. and Ph.D., Iowa State University

Ann Fisher, *Office Assistant Administrative Services/Human Resources;* 1994
A.A. and A.S., North Iowa Area Community College; additional course work at University of Northern Iowa and University of Iowa

Tammie (TJ) Hirv, *Human Resources Assistant;* 1991
A.S.B. and A.A., North Iowa Area Community College; B.A., Buena Vista University; additional course work at University of Northern Iowa, University of Iowa, and Upper Iowa University

Registration

Michelle Petznick, *Registrar;* 1996
A.A., North Iowa Area Community College; B.A., University of Northern Iowa

Mary Wendt, *Assistant Registrar/Student Records Research Coordinator;* 1976
A.A., North Iowa Area Community College

Terri Beland, *Records Office Assistant;* 2010
A.S. and Diploma, North Iowa Area Community College

Connie Notermann, *Records Office Assistant;* 2010

JOHN PAPPAJOHN ENTREPRENEURIAL CENTER

Jamie T. Zanios, *Vice President, John Pappajohn Entrepreneurial Center, and Director, Institutional Advancement;* 2003
B.B.A., University of Iowa

Kelley Crane, *School Partnership Entrepreneurial Coordinator,* 2006
B.S., Northwest Missouri State University

Mark Olchefske, *Director of Regional Business Development Services;* 2006
Diploma, Anoka Tech College; B.S., University of Minnesota; M.B.A., University of St. Thomas

Tim Putnam, *Associate Director, John Pappajohn Entrepreneurial Center;* 2000
B.S., Kansas State University; M.P.A., Drake University

Mary Spitz, *Administrative Assistant, John Pappajohn Entrepreneurial Center;* 2008
B.A., Campbell University, NC

Small Business Development Center

Ted Bair, *Director of Small Business Development Center;* 2006
A.A., North Iowa Area Community College, B.A., Buena Vista University; additional course work at the University of Iowa

MARKETING, PUBLIC RELATIONS AND GOVERNMENTAL AFFAIRS

Michele Appelgate, *Director of Marketing, Public Relations and Governmental Affairs; 2010*
B.A., Iowa State University

James Zach, *Graphic Artist;* 1995
A.A., North Iowa Area Community College; B.A., Iowa State University

STUDENT DEVELOPMENT

Terri Bonner Ewers, *Dean of Student Development;* 1988
A.A., North Iowa Area Community College; B.A., University of Northern Iowa; M.S., Iowa State University; Ed.S., Ed.D., Drake University

Sandra Harrington, *Office Manager;* 1981
Diploma, North Iowa Area Community College

Counseling/Academic Advising/Career Services

Kay Field, *Counselor/Cooperative Education;* 1990
A.A., Rochester Junior College; B.S., St. Cloud State University; M.Ed., Iowa State University; additional course work at Drake University, Marycrest College, and the University of Iowa

Jody Fink, *Administrative Assistant-Disability and Career Services;* 1985
A.S.B., North Iowa Area Community College

Laura Holtz, *Counseling/Advising Office Assistant;* 2012
A.S.B., North Iowa Area Community College; Graduate of La James College

Tina Kunzman, *Career Services Coordinator;* 2002
A.A., North Iowa Area Community College; B.S., Iowa State University; additional course work at Mankato State University

Trudy LaBarr, *Counselor;* 1998
B.S.E., Arkansas State University; M.R.C., Arkansas State University; Ed.S., Arkansas State University; additional course work at Peabody College and Vanderbilt University

Kathryn Long, *Counselor/Student Conduct Liason;* 2002
B.A., Clarke College; M.P.S., Loyola University; L.M.S.W.

Lisa Vance, *Disability Services Counselor;* 2006
A.A., Iowa Central Community College; B.S., University of Iowa; M.A., University of Iowa

Student Support Services

Jennifer Patterson, *Director of Student Support Services/Tutorial Coordinator/Instructor;* 2000
A.A.S., North Iowa Area Community College; B.A., Buena Vista University; additional course work at Capella University

Gary Herrig, *Student Support Services Counselor;* 2007
B.S., University of Iowa; M.S., Drake University; additional course work at Iowa State University

Lisa Jahnel, *Supplemental Instruction Coordinator;* 2010
A.A., North Iowa Area Community College; B.A. and M.S.W., University of Northern Iowa

Andrea Watters, *Administrative Office Assistant - Student Support Services;* 2007
A.S., A.S.B., A.A., North Iowa Area Community College

School Partnerships

Jean Ostrander, *Director of School Partnerships;* 1993
B.A., University of Iowa; M.S., Iowa State University

Fran DeGroote, *School Partnership Coordinator;* 1998
B.A., University of Northern Iowa; M.E., Iowa State University

Barbara Erickson, *Administrative Office Assistant;* 2007

Cindy Lind, *School Partnership Coordinator;* 2005
A.A., North Iowa Area Community College; B.A., Iowa State University; additional course work at Drake University, Iowa State University, and North Iowa Area Community College

Deb Throne, *School Partnership Coordinator;* 2007
A.A., Waldorf College; B.A., Buena Vista University; M.A., University of Wisconsin-Stout; Secondary Business Education Certification/ English Endorsement, Buena Vista University

Vocational Rehabilitation

Colleen Dahle, *Rehabilitation Associate*

TECHNOLOGY SERVICES

Janice Ward, *Chief Information Officer/NIACC (Ellucian);* 2010
B.A., University of Northern Iowa; M.B.A., Viterbo University

Mark Greenwood, *Associate Chief Information Officer;* 1989
B.A., Central College

Greg Bailey, *Director of Enterprise Applications;* 2010

Diane Bissig, *Programmer-Analyst/Web System Administrator;* 1995
Diploma, Indian Hills Community College

Brian Charlton, *Computer Lab Technician Supervisor;* 1999
A.A.S. Degree, Hamilton Business College; A.A. Degree, Iowa Central Community College

Jim Degen, *Applications Programmer/Network Manager;* 1989
A.A., North Iowa Area Community College; B.S., Iowa State University; additional course work at North Iowa Area Community College

Alan Haight, *Media Technician;* 2000
AST, United Electronics Institute

Dennis Klemas, *Computer Technician Coordinator;* 1998
A.A.S., North Iowa Area Community College

Lisa Ludwig, *Computer Technician;* 1999
A.A., Waldorf College; Microsoft Network Engineer Certificate, Hamilton College; B.A., Buena Vista University; additional course work at Mankato State University

Bruce McKee, *Instructional Technology Coordinator;* 1991
B.F.A., University of Minnesota; M.A., University of Northern Iowa

Beckie Minear, *System Administrator/Programmer-Analyst; 2007*
Diploma, A.S.B., and A.A., North Iowa Area Community College

Lois Spieker, *Help Desk/Media Technician;* 1989
A.A., North Iowa Area Community College

WORKFORCE DEVELOPMENT PARTNERSHIP

Angie Konig, *Director of Workforce Development;* 2010
A.A.S., North Iowa Area Community College; B.A., Buena Vista University; additional course work at Iowa State University

Kristi Dunn, *Office Manager;* 2010
Diploma, Anoka-Hennepin Technical College; additional course work at Kaplan University

Promise Jobs

Heather Wright, *Workforce Program Supervisor;* 2000
B.A., University of Northern Iowa

Nicole Charlson, *Workforce Advisor;* 2010
B.A., University of Northern Iowa

Heather Stubbe, *Workforce Advisor;* 2007
B.A., Morningside College

Workforce Investment Act

Angela Backhaus, *Employment Training Specialist;* 2009
A.A., Waldorf College; B.A., Augustana College; additional course work at Riverland Community College and North Iowa Area Community College

David Bird, *Employment Training Specialist;* 2009
B.A., University of Northern Iowa

Heather DeGroote, *Employment Training Youth Specialist;* 2011
B.A., Waldorf College

DeAnn Halligan, *Employment Training Youth Specialist;* 2011
A.A., North Iowa Area Community College; B.A., University of Northern Iowa

Mistie Johnson, *Employment Training Youth Specialist, Employment Network (Ticket to Work);* 2009
B.S., Kaplan University

Judy Pedelty, *Employment Training Specialist;* 2009
A.A., North Iowa Area Community College; B.S., Mankato State University

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Building Trades Program
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North Iowa Business Incubator/Accelerator

Pappajohn Business Center (PC)
Business Division
Pappajohn Entrepreneurial Center
Small Business Development Center
University of Iowa Transfer Office

Farm Lab
Cattle Barn
Cow/Calf Operation
Farrowing House
Machine Shed
No-Till Demonstration Fields
Office Center
Swine Finishing
Swine Nursery

Murphy Manufacturing Technology Center (MT)
Electromechanical Systems Technology Program
Tool and Die Technology Program
Wind Turbine Technician

Student Apartments

Student Union
Student Activities

Student Housing

North Iowa Community Auditorium & Gallery

Fine Arts (FA)
Art Department
Humanities Division
Music Department
Theatre Department

12TH STREET N.E.

Muse-Norris Conference Center (NC)
Meeting Facilities
Fitness Center

Recreation Center
Athletics

Gymnasium

Activity Center (AC)
Admissions
BookZone *(Book Store)*
Buena Vista University Center
Cafeteria
Career Link
ICN Classroom 1
Institutional Advancement
Logos Student Newspaper
RSVP Office

Pierce Administration Building (AB)
Academic Affairs
Business Office
Board Room
Box Office
Career & Internship Center
Continuing Education
Financial Aid
Governmental Affairs
Human Resources
Lifelong Learning Institute
Marketing & Community Relations
President's Office
Student Development
Technology Services

Beem Center (BC)
Beem Forum
Cafe Bean
Communication Division
Social Science Division
Library
Student Learning Center
Writer's Workbench

McAllister Hall (MH)
Business Division
Computer Labs
Copy Center
Health Programs
Math Division
Outdoor Classroom
Science Division
University of Iowa BSN Transfer

COLLEGE DRIVE

HIGHWAY 122 (OLD US HWY 18)