# IOWA CENTRAL COMMUNITY COLLEGE

016

42

# 2016-2017 GENERAL CATALOG

1

in

Fort Dodge Center



Highway 169



# **Board of Trustees**

Mark Crimmins President

**Tom Chelesvig** 

Darrell Determann

Larry Hecht

Deborah Loerch

Douglas McDermott

Bennett O'Connor

**Connie Smith** 

**Terry Wessels** 

**Administration** 

Dr. Dan Kinney President

Thomas Beneke Vice President of Enrollment Management and Student Development

> Dreand Johnson, Ph.D. Vice President of Instruction

Laurie Hendricks Vice President of Development and Alumni Relations

**Jim Kersten** Vice President of Development and Government Relations

Angie Martin Vice President of Business Affairs

Fort Dodge Center

One Triton Circle Fort Dodge, Iowa 50501 (515) 576-7201 www.iowacentral.edu **Storm Lake Center** 916 North Russell Street Storm Lake, Iowa 50588 (712) 732-2991 www.iowacentral.edu Webster City Center

1725 Beach Street Webster City, Iowa 50595 (515) 832-1632 www.iowacentral.edu

It is the policy of Iowa Central Community College not to discriminate on the basis of race, creed, color, sexual orientation, gender identity, national origin, sex, disability, religion, or age in its programs, activities, or employment practices as required by the Iowa Code sections 216.9 and 256.10(2), Titles VI and VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000d and 2000e), the Equal Pay Act of 1973 (29 U.S.C. § 206, et seq.), Title IX (Educational Amendments, 20 U.S.C.§§ 1681 – 1688), Section 504 (Rehabilitation Act of 1973, 29 U.S.C. § 794), and the Americans with Disabilities Act (42 U.S.C. § 12101, et seq.).

Individuals having questions or complaints related to compliance with this policy should contact the Academic Assistance & Accomodations Coordinator, One Triton Circle, Fort Dodge, IA 50501, phone number 515-574-1045 or the Director of the Office for Civil Rights, U.S. Department of Education, Citigroup Center, 500 W. Madison, Suite 1475, Chicago, IL 60661, phone number 312-730-1560, fax 312-730-1576.

The Board of Directors of Iowa Central Community College reserves the right to change, at any time, without notice, graduation requirements, costs, curriculum course structure and content, and such other matters as may be within its control, notwithstanding any information set forth in this catalog. The costs for tuition, fees, room and board and other charges are subject to change.

Accreditation: Accredited by the Higher Learning Commission, www.ncahlc.org.

# 2016-2017 Calendar

#### **First Semester**

- Aug. 23 First Semester Classes Begin
- Aug. 29 Last Day to Register and/or Add a Course(s)
- Sept. 5 Labor Day Holiday
- Oct. 13-14 Staff Development Days
- Nov. 18 Last Day to Withdraw from a Course(s)
- Nov. 24-25 Thanksgiving Break
- Dec. 12-15 Final Examinations
- Dec. 15 End of First Semester
- Dec. 16-Jan. 4 Christmas & New Year's Break

Interim Session December 19, 20, 21, 22, 27, 28, 29, January 3, 4

#### Second Semester

- Jan. 10 Second Semester Classes Begin
- Jan. 16 Last Day to Register and/or Add a Course(s)
- March 13-17 Spring Break
  - April 7 Last Day to Withdraw from a Course(s)
  - April 13 Staff Development Day
  - April 14 Good Friday Break
  - May 1-4 Final Examinations
    - May 5 End of Second Semester
    - May 5 Commencement

#### **Summer Sessions**

- May 8 Summer Semester Classes Begin
- May 29 Memorial Day Holiday No Classes
- June 5 34 Week Applied Science and Technologies Programs End
- June 19 36 Week Applied Science and Technologies Programs End
- July 3-4 Independence Day Holiday No Classes
- July 5 38 Week Applied Science and Technologies Programs End
- July 12 39 Week Applied Science and Technologies Programs End

# Key Extensions at Iowa Central

#### 515-574-ext.# or 1-800-362-2793 or www.iowacentral.edu

Admissions ext.	1008
Business & Industrial Technology Deanext.	1284
Business Office ext. 1066, 1067, 1068, 1069,	1070
Distance Learning Dean ext.	1097
Financial Aid ext. 1030, 1031, 1032, 1033, 1034,	1035
Health Sciences Dean ext.	1301
Housingext.	1086
Liberal Arts & Sciences Dean ext.	1190
Student Records ext.	1025
Transportation Centerext. 1967, 1964, 1965, and	1966
Vice-President of Instructionext.	1149
Vice-President of Enrollment Managementext.	1050

# Table of Contents

General Information	7
Admissions	17
Academics	23
Student Life	31
Transfer Information	35
Programs of Study	39
Accounting Associate	40
Administrative Specialist	41
Agriculture	42
Agriculture Technology	42
Art	43
Athletic Training	44
Automotive Collision Technology	44
Auto Restoration Technology	45
Automotive Technology	45
Baking & Pastry Arts	46
Biotechnology	46
Business	47
Business Administration	47
Carpentry	48
Chiropractic	48
Coaching Authorization	49
Computer Integrated Fabrication Technology	50
Computer Networking Technology	51
Computer Repair	51
Criminal Justice	52
Culinary Arts & Hospitality Management	53
Dental Hygiene	54
Dentistry	55
Deisel Technology	55
Dietetics & Food Science	
Digital Mass Comunications	
Education - Early Childhood	57
Education - Elementary	57
Education - Secondary	58
Electrical Technologies	58
Electrical/Mechanical Technician	59
Emergency Medical Services	60
Engineering	61
Engineering & Design Technology	61
English/Communications	
Family & Consumer Science	
Fire Science	
Geography	
Graphics Technology	64

Health & Beauty Management64
Health Care Administration65
History
Human Services
HVAC Technology/Technician65
Industrial Business67
Industrial Mechanics67
Industrial Robotics & Automation68
Liberal Arts & Science68
Mathematics
Medical Assistant70
Medical Laboratory Technician71
Medicine72
Modern Languages72
Mortuary Science73
Music 73
Nursing - Associate Degree74
Nursing - Practical75
Optometry
Pharmacy76
Physical Education77
Physical Therapy77
Political Science/Government78
Pre-Law
Process Plant Technology79
Professional Photography80
Psychology
Radiologic Technology81
Religious Studies82
Sciences
Social Sciences83
Sociology
Supply Chain Management84
Theatre
Turfgrass Management
TV and Radio Production87
Veterinary Medicine87
Web Technology88
Welding Technology88
Course Descriptions91
Appendix 143
Administration, Faculty, and Staff 153
Index 162

# GENERAL INFORMATION

Accreditation Centers Compliances Foundation History Institutional Goals Mission Statement Philosophy Service Excellence Values Vision Statement

## Accreditation

Iowa Central is accredited by the Higher Learning Commission, www.ncahlc.org.

- August 1967 College granted Federal Fund Eligibility August 1969 College granted Correspondent Status
- March 1971 College granted Correspondent Status March 1971 College granted Recognized Candidate for Accreditation Status
  - July 1973 College became Candidate for Accreditation under the new policy
  - March 1974 College granted Accredited Status
  - July 1979 Accreditation reaffirmed
- June 1984 Accreditation reaffirmed
- June 2001 Accreditation reaffirmed
- September 2002
   College granted Associate of Arts Degree Online

   July 2005
   College granted Associate of Science &

   Associate of Applied Sciences Degrees Online

   November 2011
   Accreditation reaffirmed for ten years

### Centers

#### Fort Dodge Center

Instructional services at the Fort Dodge Center include a comprehensive Arts and Science program and several Applied Science and Technology programs. Eighteen collegiate athletic programs and many extra-curricular programs are also offered.

The Fort Dodge Center houses complete library services, the Academic Resource Center, gymnasium, auditorium, student activities center, cafeteria, computer labs, and fifteen resident apartment buildings. The Fort Dodge Center is located on the southwest edge of Fort Dodge off Highways 20 & 169.

#### Storm Lake Center

Instructional services at the Storm Lake Center include a comprehensive Arts and Science transfer program and two Applied Science and Technology programs -- Practical Nursing and Associate Degree Nursing. Courses in the Career Option programs of Human Services, Business Administration and Criminal Justice are also offered at the Storm Lake Center. Support services are provided through the Academic Resource Center. The Storm Lake Center also offers a wide range of continuing education classes in such areas as real estate and insurance, cosmetology, computer technology, industry training, business management and recreation. The Storm Lake Center is located at 916 North Russell Street.

#### Webster City Center

Instructional services at the Webster City Campus include a comprehensive Arts and Science program and several Applied Science and Technology programs including Aviation Science/Professional Pilot, Practical Nursing and Associate Degree Nursing. Student Services and an Academic Resource Center provide supportive services. Student organizations and extracurricular activities are available.

The Campus is located on the west edge of Webster City at the corner of Beach and Ohio Streets. This location provides easy access to local eating establishments and recreational facilities, including a walking trail, fitness center, indoor/outdoor pools, tennis courts and ball diamonds. The small but personable campus consists of three buildings. An Administration/Academic center provides classrooms, student technology area, faculty offices and the administrative offices. The Science building provides classrooms and a conference/training room for local business and industry. The third building houses offices for Prairie Lakes AEA.

# Compliances

#### **Alcohol & Drug Abuse Prevention**

lowa Central's goal is to provide a safe and healthy environment for students, employees, and visitors. As part of the Drug-Free Schools and Communities Act, the college aims to educate our community regarding health risks associated with drug and alcohol abuse. Appropriate referral to counseling and health agencies will be made for individuals as needed and sanctions will be imposed on students who violate policy. Sanctions could include written reprimand, suspension or dismissal, and referral for prosecution under local, state, and federal law.

#### **Resources for Substance Prevention and Referral**

lowa Central Community College recognizes drug abuse as a potential health, safety and security problem. The College provides free resources that are available on a confidential basis to help students with substance abuse treatment information and referrals.

#### Standards of Conduct

It is the policy of Iowa Central Community College that illegal drug use, including the possession, use and sale of alcoholic beverages will not be tolerated and action will be taken. Alcoholic beverages are not permitted on campus nor at any on- or off-campus activity subsidized by the College. This includes off-campus athletic contests. In addition, Iowa Central Community College enforces all state underage drinking laws and laws prohibiting the possession and sale of controlled substances.

#### More Information

For more specific information on Iowa Central's drug and alcohol abuse prevention information, please visit iowacentral.edu/consumer\_info.

#### **Campus Crime**

lowa Central Community College realizes and understands the importance of providing a safe and secure environment for students and employees. The College is supportive of the Federal Student-Right-To-Know and Campus Security Act, Public Law 101-542, and is committed to taking the necessary actions to increase safety on campus.

Under the Act, by September 1 of each year, institutions must publish and distribute to current and prospective students and employees an annual security report that includes statistics concerning the occurrence on campus of certain criminal offenses reported to campus officials. The Act also requires institutions to provide a timely warning to the campus community about crimes that are considered to represent a continuing threat to students and employees. This warning must be done in a manner that will aid in the prevention of similar crimes.

A Campus Security Report will be published annually for the College community and posted on the Campus Security webpage at www.iowacentral.edu/ security/2015\_Campus\_Security\_Report\_v2.pdf. The College is committed to reviewing these statistics annually and taking the necessary steps to develop and implement additional safety practices or procedures needed to ensure an optimum safe environment for its students and employees.

#### **College Networking Policy**

Students who are employed by Iowa Central are expected to comply with Iowa Central employee policies, including the College Networking and Social Networking policy, while so employed. A copy of that policy is found in the Board of Directors' Social Media Policy, Board Policy that can be obtained from the Board Secretary located in the Administrative Offices.

#### **Discrimination Complaint Procedures Policy Statement**

It is the policy of Iowa Central Community College to provide for the prompt, fair and impartial consideration and disposition of complaints involving issues of discrimination on grounds of race, religion, sex, age, national origin or disability without fear of reprisal or sanctions. For this purpose, the following complaint procedures are instituted for all Iowa Central Community College employees, students and all persons who have submitted application for employment or admission. Iowa Central Community College assures that full cooperation will be provided to any individual who files a complaint of discrimination. Further, the College is committed to a program of Affirmative Action (AA) and will carry out, as appropriate in each individual case, the terms of the complaint adjustment. Persons wishing to file a complaint may decide to resolve the matter through the informal complaint procedure, the formal complaint procedure, or both, following the steps outlined in the Student Discrimination Complaint Process section. The complainant may contact the AA/EEO Officer at any time for advice. The AA/EEO Officer at lowa Central is Kim Whitmore, Ext. 1138.

#### **Emergency Procedures**

lowa Central maintains an emergency management plan to guide it through a sensitive or dangerous situation. Examples include, but are not limited to, fires, explosions, natural disasters, and violent criminal events. When a significant incident is discovered or reported, the College will immediately investigate the situation to confirm there is a significant emergency that is causing or could cause a threat to the safety and health of students and/or employees. Law enforcement and other emergency management organizations, as applicable, will be called immediately. If necessary the President will declare an emergency and the college Emergency Incident Command will be established to resolve the situation and support any non-campus organizations called in to resolve the situation. Campus-wide notification will then be made immediately by Triton Alert, which will make notifications via text message, and e-mail. Other notification procedures, such as phone calls and messengers, will be made as time and personnel are available. Action will be taken immediately to isolate the affected area, remove those in the affected area, and stabilize the area pending arrival of emergency response organizations. Based on the specific situation, the College may issue media releases to inform the surrounding community. If law enforcement or emergency management has taken control of the situation, they will make their necessary media releases. When the College determines the emergency has ended and it is safe to return to campus or resume regular activities, another Triton Alert notice will be made. Depending on the duration of an emergency, interim notices via Triton Alert and media releases will be given as information is received. Triton Alert will be tested yearly. A test of the emergency management plan will be conducted at least once a year, usually in coordination with a Triton Alert test.

#### Family Education Right and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act of 1974 helps protect the privacy of student education records. The Act provides for the right to inspect and review education records, the right to seek to amend those records and to limit disclosure of information from the records. The intent of the legislation is to protect the rights of students and to ensure the privacy and accuracy of education records. The Act applies to all institutions that are the recipients of federal aid administered by the Secretary of Education.

#### What rights does FERPA afford students with respect to their education records?

- The right to inspect and review their education records within 45 days of the day the college receives a request for access. Students should submit written requests to the registrar's office and identify the record(s) they wish to inspect. The staff of the office will make arrangements for access and notify the student of the time and place where the records may be inspected. If the requested records are not maintained by the registrar's office, the student will be notified of the correct official to whom the request should be addressed.
- The right to request an amendment to the student's education records that the student believes are inaccurate or misleading. Students may ask the college to amend a record that they believe is inaccurate or misleading. They should submit the request in writing to the registrar's office and clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the college decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing will be provided to the student when notified of the hearing.
- The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the college in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the college has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.
- The right to file a complaint with the U.S. Department of Education concerning alleged failures by the college to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Ave., SW, Washington, D.C. 20202-5920

#### What is an education record?

An "education record" is any record that is:

- 1. directly related to a student; and
- 2. maintained by an educational agency or institution, or by a party acting for the agency or institution.

This includes any information recorded in any way including, but not limited to, handwriting, print, computer media, video or audio tape, film, microfilm, and microfiche.

#### What is not considered an education record?

- Sole possession records or private notes held by a school official that are not accessible or released to other personnel;
- law enforcement or campus security records that are solely for law enforcement purposes and maintained solely by the law enforcement unit;
- records relating to individuals who are employed by the institution (unless the employment is contingent on their status as a student);
- records relating to treatment provided by a physician, psychiatrist, psychologist; or other recognized professional and disclosed only to individuals providing treatment; and
- records of an institution that contain information about an individual obtained only after that person is no longer a student at that institution.

#### Who is protected under FERPA?

An "eligible" student under FERPA is a student who is 18 years of age or who attends a postsecondary institution (regardless of parental dependency). These rights begin on the day the student begins attending classes. Formerly enrolled students are also protected under FERPA. Students who have applied but have not attended an institution and deceased students do not come under FERPA guidelines.

#### When is a student's consent not required to disclose information?

When the disclosure is:

- to school officials who have legitimate educational interest,
  to federal, state, and local authorities involving an audit or evaluation of compliance with educational programs,
- in connection with financial aid; this includes Veterans' benefits,
- to organizations conducting studies for or on behalf of educational institutions,
- to accrediting organizations,
- to comply with a judicial order or subpoena,
- in a health or safety emergency,
- releasing of directory information,
- releasing the results of a disciplinary hearing to an alleged victim of a crime of violence.

#### What is directory information?

"Directory Information" may be released to third parties without the consent of the student, unless the student has signed and submitted a written request to the Registrar's office to restrict the release of directory information. At Iowa Central directory information includes:

- name
- home and school address and phone number
- e-mail address, both home and school
- date of birth
- major, degrees, honors and awards
- weight and height for athletic team members
- dates of attendance
- enrollment status (e.g. full time or half time)
- participation in recognized activities and sports
- previous education institutions attended

#### What if I want my directory information held?

lowa Central will provide a form to be completed by students who want their directory information held. The "Nondisclosure of Directory Information" form must be completed and submitted to the Registrar's Office by the end of the first 10 class days of the term. The "Nondisclosure of Directory Information" will be in effect until the student requests in writing that it be revoked. Students requesting non-disclosure understand that their name will not appear in the graduation program, in sports bulletins, music & theater brochures, honor rolls, home town papers, etc. This form can be obtained at the Registrar's Office.

#### Can I allow others access to my non-directory information?

lowa Central also provides a form to be completed by students that want their nondirectory information released to others. The "Release of Confidential Information" form is often completed by students to give permission for Iowa Central to speak to their parents regarding, financial aid information, billing information, grades, GPA, class schedules, class attendance, housing information, health information, veteran's information and academic accommodation information. This form is available to students via WebAdvisor or a paper copy can be picked up at the Registrar's Office and is good for one year, so it must be completed each year.

#### HIPPA & FERPA

HIPPA applies to Health Care Providers, private benefit plans, and health care clearinghouses. It does not apply to other types of organizations whose receipt or maintenance of health records is incidental to their normal course of business. FERPA does not limit what records a schools may obtain, create, or maintain. It provides safeguards for education records.

The receipt and maintenance of health records is well established. If a health records is used to make a decision in regard to a student's education program (e.g., whether a student should receive extended time for testing; or be exempt from an academic requirement, such as SAP) the health records may be construed to be an education record. In that case the normal FERPA provisions for safeguarding the records would apply. Iowa Central follows requirements for the privacy of health records (HIPPA).

#### Harassment and Violence The following section is from Iowa Central Community College Board Policy #223

**1. Introduction:** As an educational institution, Iowa Central Community College strives to provide a respectful, safe, and non-threating environment for students and employees. The mission of the College is to promote intellectual discovery, physical development, social and ethical awareness, and economic opportunities for all through an education that transforms lives, strengthens community, and inspires progress. Harassment and violence against students, faculty, and staff subverts this mission and will not be tolerated. This policy describes prohibited conduct, establishes procedures for reporting and addressing complainants of incidents of prohibited conduct, and describes educational programs to be conducted by the College to heighten awareness of prohibited conduct described below.

**2. Prohibitions:** It is the policy of Iowa Central Community College to maintain a learning and working environment that is free from harassment or violence based on race, color, religion, creed, sex, sexual orientation, gender identity, sex stereotyping, marital status, socioeconomic status, military service, national origin, age, disability, and/or any other status protected by federal, state, or local law. The College prohibits any form of harassment or violence against an employee or student based on race, color, religion, creed, sex, sexual orientation, gender identity, sex stereotyping, marital status, socioeconomic status, military service, national origin, age, disability, and/or any other status protected by federal, state, or local law and/or because the person opposed unlawful discrimination and/or participated in an investigation or complaint concerning unlawful discrimination. For purposes of this policy, these prohibitions also apply to Iowa Central Community College trustees, agents, volunteers, contractors, or persons subject to the supervision and control of Iowa Central Community College.

It is a violation of College policy for any student, faculty member, staff member, administrator or other employee to harass any student, faculty member, administrator, or other College employee based on sex stereotyping and/or because of that person's race, color, religion, creed, sex, sexual orientation, gender identity, marital status, socioeconomic status, military service, national origin, age, disability, and/or any other status protected by federal, state, or local law.

It is a violation of College policy for any student, faculty member, staff member, or administrator or other College employee to inflict, threaten to inflict, attempt to inflict, and/or to aid in inflicting violence upon any student, faculty member, staff member, administrator or other College employee based on sex stereotyping and/or because of that person's race, color, religion, creed, sex, sexual orientation, gender identity, marital status, socioeconomic status, military service, national origin, age, disability, and/or any other status protected by federal, state, or local law. Further prohibited conduct applicable to students is described in Board Policy 416, Violence Prevention and Threat Assessment. Also, other prohibited conduct applicable to students, administrators, or other College employees is described in Board Policy Number 313, Technology and Board Policy Number 315, Social Media.

This policy covers prohibited conduct occurring both on-campus/center and off-campus:

- On-campus/center violations: prohibited conduct that occurs on property owned or controlled by the College;
- b. Off-campus violations: prohibited conduct that occurs during College sponsored events or during a College affiliated organization's sponsored event (e.g. field trips, social and educational functions, College related travel, athletic related events and travel, and student recruitment activities and travel); and
- c. At any location, including through electronic media such as e-mail or social networking websites, and involving any College faculty, staff, or student, provided that:
  - The incident occurs at a College-sponsored activity or during an event sponsored by an organization affiliated with the College, including a student organization;
  - The accused or the complainant was acting in an official capacity for the College during the incident,
  - The accused or the complainant was conducting College business during the incident;
  - The conduct has the purpose or reasonably foreseeable effect of substantially interfering with the work or educational performance of College students, faculty, or staff;
  - The conduct creates an intimidating or hostile environment for anyone who is involved in or seeks to participate in College employment, education, on-campus living, or other College-sponsored activities; or
  - 6. The conduct demonstrates that the individual poses a reasonable threat to College campus/center safety and security.

**3. Definitions:** Harassment is conduct or speech which is offensive or shows malice toward an individual based on sex stereotyping and/or because of a person's race, color, religion, creed, sex, sexual orientation, gender identity, marital status, socioeconomic status, military service, national origin, age,

disability, and/or any other status protected by federal, state, or local law.

Violence as it relates to the content of oral, written, or symbolic speech falls within prohibited activity if:

- a. The content consists of those personally abusive epithets which are inherently likely to provoke a violent reaction,
- b. The content is a serious expression of an intent to commit an act of unlawful violence to a particular individual or group of individuals, or
- c. The content is a threat to a person or group of persons with the intent of placing the victim in fear of bodily harm or death.

Conduct that constitutes a protected exercise of an individual's rights under the First Amendment to the United States Constitution (and related principles of academic freedom) shall not be deemed a violation of this policy.

Harassment as it relates to conduct is intentional conduct directed toward an identifiable person or persons based on sex stereotyping and/or because of the person's race, color, religion, creed, sex, sexual orientation, gender identity, marital status, socioeconomic status, military service, national origin, age, disability, and/or any other status protected by federal, state, or local law that is sufficiently severe, pervasive, or persistent that it interferes with work, educational performance, on-campus living, or participation in a College activity on or off campus.

**4. Sexual Harassment:** Sexual harassment is a form of sexual discrimination that violates Title VII of the Civil Rights Act of 1964 and/or Title IX of the Education Amendments of 1972. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute sexual harassment when:

- a. Submission to that conduct or communication is made a term or condition, either explicitly or implicitly, of obtaining or retaining employment or of obtaining the College's program (academic course) and/or other College sponsored activities;
- Submission to or rejection of that conduct or communication by an individual is a factor in decisions affecting that individual's employment or education; or
- c. That conduct or communication has the purpose or effect of substantially or unreasonably interfering with an individual's employment or a student's ability to participate in or benefit from a College program (academic course) or activity sponsored by the College or creating an intimidating, hostile, or offensive employment environment or educational or on-campus living environment.

Sexual harassment subverts the mission of the College and threatens the careers, educational experience, and well-being of students, faculty, and staff. The College will not tolerate sexual harassment, nor will it tolerate unwelcomed behavior of a sexual nature toward members of the College community when that behavior creates an intimidating or hostile environment for employment, education, on-campus living, or participation in a College sponsored activity.

Sexual harassment is especially serious when an instructor harasses a student or a supervisor harasses a subordinate. In such situations, sexual harassment unfairly exploits the power inherent in an instructor's or supervisor's position. However, while sexual harassment often takes place in situations where there is an abuse of a power differential between the persons involved, the College recognizes that sexual harassment is not limited to such situations. Sexual harassment can occur when a student harasses an instructor, when a subordinate harasses a supervisor, or between persons of the same status as students or employees.

Sexual harassment may also include, but is not limited to, conduct described below:

- Gender Harassment is generalized sexist statements and behavior that convey insulting or degrading attitudes including acts of verbal, nonverbal, or physical aggression, intimidation, or hostility based on sex or sex-stereotyping or a person's failure to conform to stereotypical notions of masculinity or femininity even if those acts do not involve conduct of a sexual nature. Examples include suggestive or sexually explicit posters, calendars, photographs, graffiti, cartoons, e-mail, voicemail, and social media including but not limited to Facebook and twitter; and sexually explicit jokes or humor focused toward a particular gender.
- Seductive Behavior is unwanted, inappropriate and offensive sexual advances.
   Examples include repeated unwanted sexual invitations, insistent requests for dinner, drinks or dates, persistent letters, phone calls and other invitations.
- Sexual Bribery is solicitation of sexual activity or other sex-linked behavior by promising a reward (a better grade, promotion, etc.) for performing the activity or behavior. The proposition may be either overt or subtle.
- Sexual Coercion is sexual activity or other sex-linked behavior by threat of punishment. Examples include negative performance evaluations, withholding promotions, threats of termination, or threats of a failing or lower grade.
- Sexual Imposition includes deliberate assaults or molestation, or unwanted physical contact such as patting, pinching, "friendly" arms around the shoulder or intentionally brushing against another person's body. This includes any intentional sexual touching, however slight, with any object, by a man or a woman upon a man or a woman, that is without consent and/or by force such as intentional contact with the breasts, buttock, groin, or genitals, or touching

another person with any of these body parts, or making another touch you or themselves with or on any of these body parts; and any intentional bodily contact in a sexual manner, though not involving contact with/of/by breasts, buttocks, groin, genitals, mouth or other orifice.

 Other conduct or behavior of a sexual nature deemed inappropriate by a College employee and/or student.

#### 5. Evidence of Sexual Harassment: Behavior that may constitute, or be evidence

of, prohibited sexual harassment includes, but is not limited to, the following: a. Physical assault;

- Direct or implied threats that submission to sexual advances will be a condition of, or that failure to submit to such advances will adversely affect, employment, work status, promotion, grades, letters of recommendation, or participation in a College sponsored activity;
- c. Direct propositions of a sexual nature or persistent unwelcomed efforts to pursue a romantic or sexual relationship, including subtle pressure for sexual activity, an element of which may be repeated staring;
- d. A pattern of unwelcomed sexually explicit gestures, statements, questions, jokes, or anecdotes, whether made physically, orally, in writing, or through electronic media (see Board Policy Number 313 Technology and Board Policy Number 315 Social Media Policy);
- e. A pattern of unwelcomed conduct involving:
  - 1. Unnecessary touching;
  - 2. Remarks of a sexual nature about a person's clothing or body;
  - 3. Remarks relating to sexual activity or speculations concerning previous sexual experience; or
  - 4. Stalking another person who reasonably perceives the stalker is pursuing a romantic and/or sexual relationship, and stalking of a sexual nature that is directed at a specific person that would cause a reasonable person to feel fear; or
- f. A display of graphic sexual material (not legitimately related to the subject matter of an academic course, if one is involved, or to job requirements) in a context where others are not free to avoid the display because of an employment or educational requirement or without surrendering a privilege or opportunity that others may reasonably expect to enjoy in that location.

In determining whether alleged conduct constitutes sexual harassment, the College will consider all available information and will review the totality of the evidence, including the context in which the alleged incident(s) occurred, to determine whether it is more probably true than not that the harassment in violation of this policy occurred. Although repeated incidents generally create a stronger claim of sexual harassment, a single serious incident can be sufficient. Determinations will be made on a case-by-case basis.

Expression that constitutes a protected exercise of an individual's free speech rights under the First and Fourteenth Amendments to the United States Constitution shall not be deemed a violation of this policy.

Isolated behavior of the kind described above that does not rise to the level of sexual harassment but that, if repeated, could rise to that level, demonstrates insensitivity that may warrant remedial measures. Academic or administrative personnel who become aware of such behavior in the College environment should counsel those who have engaged in the behavior. Such counsel should include a clear statement that the behavior is not acceptable and should cease, information about the potential consequences if such behavior persists, and a recommendation, as appropriate, to undertake an educational program designed to help the person(s) understand the harm caused by the behavior.

#### 6. Courses of Action:

- a. Students who feel that they have been the subjects of such harassment should advise the Vice President of Enrollment Management and Student Development or the College's Director, Human Resources/Equal Employment Opportunity (EEO) Coordinator.
- b. Staff members should advise one of the following: their immediate supervisor, the appropriate Vice President, or the College's Director, Human Resources / EEO Coordinator.
- c. When the College is informed or made aware of a possible harassment situation, an investigation will be conducted as described in the procedure for a Formal Complaint in this policy.

7. Sexual Violence: Sexual violence is prohibited and as specifically addressed in the Violence Against Women Reauthorization Act of 2013, Section 304, Campus Sexual Violence Act provisions amending Section 485(f) of the Higher Education Act of 1965 (the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act). Sexual violence refers to physical sexual acts perpetrated against a person's consent or where a person is incapable of giving consent due to the victim's use of drugs or alcohol or due to an intellectual or other disability. A number of different acts fall into the category of sexual violence, including rape, acquaintance rape, domestic violence, dating violence, sexual assault, stalking, and acts as defined below, as well as aiding acts of sexual violence.

#### Definitions:

- Consent: Clear, knowing and voluntary participation in sexual conduct by person of the age and intellectual capacity to give lawful consent, and may be given by

words or actions, as long as words or actions create mutually understandable clear permission regarding willingness to engage in (and the conditions of) the sexual activity. Consent must be active, not passive. Silence, in and of itself, cannot be interpreted as consent. Lack of protest or resistance does not constitute consent. Consent to any one form of sexual activity cannot be automatically implied to be consent to any other form of sexual activity. Previous relationships or prior consent connot imply consent to future sexual acts. Persons who want to engage in the sexual activity are responsible for obtaining consent and the clearly giving of consent. Consent should never be assumed.

- lowa Code provides that the following persons are unable to give consent:
- Persons who are asleep or unconscious (lowa Code Section 709.1A);
   Persons who are incapacitated due to the influence of drugs, alcohol, or medication (lowa Code Section 709.1A);
- Persons who are unable to communicate consent due to a mental or physical condition (lowa Code Section 709.1A); or
- Generally, minors under the age of 16 (Iowa Code Section 709.4).
- Domestic Violence: Includes felony or misdemeanor crimes of violence committed by a current or former spouse or intimate partner of the victim, by a person with whom the victim shares a child in common, by a person who is cohabitating with or has cohabitated with the victim as a spouse or intimate partner, by a person similarly situated to a spouse of the victim, or by any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of lowa.
- Dating Violence: Violence committed by a person:
- Who is or has been in a social relationship of a romantic or intimate nature with the victim; and
- Where the existence of such a relationship is determined based on a consideration of the following factors:
  - The length of the relationship,
  - The type of relationship.
  - The frequency of interaction between the persons involved in the relationship; and
- May occur any time even it first and only date.
- Non-Consensual Sexual Intercourse: Any sexual intercourse however slight, with any object, by a man or woman upon a man or a woman, which is without consent and/or by force. Intercourse includes vaginal penetration by a penis, object, tongue or finger, anal penetration by a penis, object, tongue, or finger, and oral copulation (mouth to genital contact or genital to mouth contact), no matter how slight the penetration or contact.
- Sexual Assault: Subjecting another person to sexual touching that is unwanted.
- Stalking: Engaging in a course of conduct directed at a specific person that would cause a reasonable person to:
  - Fear for his or her safety or the safety of others; or o Suffer substantial emotional distress.
- Sexual Exploitation: Occurs when a person takes non-consensual and abusive sexual advantage of another for his or her own advantage or benefit, or to benefit or advantage anyone other than the one being exploited, and that behavior does not otherwise fall in one of other definitions sexual misconduct offenses, such as, but not limited to, non-consensual video or audio-taping of sexual activity, engaging in voyeurism, prostituting another person, engaging in indecent exposure, or knowingly transmitting a STI or HIV to another person.
- Substantial Threat: reported conduct that by its nature causes a person to reasonably believe that a high risk exist that violent acts and physical harm against another person or persons may occur.

Racial, religious, national origin, marital status, socioeconomic status, military service, age, and disability harassment: Physical or verbal conduct relating to an individual's race, color, creed, religion, national origin, marital status, socioeconomic status, military service, age, and/or disability when the conduct:

- a. Has the purpose or effect of creating an intimidating, hostile, or offensive working or academic environment; or
- b. Has the purpose or effect of substantially or unreasonably interfering with an individual's work or academic performance; or
- c. Otherwise unlawfully and adversely effects an individual's employment or ability to participate in or benefits from the College's programs (academic courses) and/or College sponsored activities.

The use of alcohol and/or drugs will not excuse any behavior that violates this policy.

8. Reporting Sexual Violence: Iowa Central Community College strongly encourages all members of the College community to report incidents of sexual violence to any of the following resources:

- a. In the event of an immediate threat, danger, or injury, the reporting person should contact the local authorities by dialing 911 and then contact Campus Security by dialing 515-574-1000;
- b. For non-emergencies, the reporting person is encouraged to contact College Campus Security by telephone at 515-574-1000 or by e-mail at security@ iowacentral.edu or to contact the Vice President of Enrollment Management

& Student Development by dialing 515-574-1050 or by the e-mail address provided in the College directory. Both the Campus Security and the Vice President of Enrollment Management & Student Development will notify the Director, Human Resources / Equal Employment Opportunity (EEO) Coordinator of the report. This notification does not require that the reporting person file a formal complaint.

c. Students are also encouraged to speak to any member of the College full-time faculty, the Campus nurse whose telephone number is 515-574-1047, or to the College mental health counselor whose telephone number is 515-574-1051. The faculty member or other professional staff member receiving the report should notify the College's Director, Human Resources / EEO Coordinator, by the e-mail address provided in the College directory or other written form immediately.

Confidentiality: Certain College officials have a duty to report sexual assault, domestic violence, dating violence and stalking for federal statistical reporting purposes (such as pursuant to the Clery Act, 20 U.S.C. § 1092). All personally identifiable information is kept confidential, but statistical information must be reported to College Campus Security regarding the type of incident, date, and the location of the incident (using Clery Act location categories and crime category as described in the College's Annual Campus Security Report).

As is a function of any educational institution, Iowa Central Community College must balance the needs of the individual student or the individual employee with the obligation to strive to protect the safety and well-being of the college community at large. Therefore, depending on the seriousness of the reported incident, further action may be necessary, including a campus security alert concerning a reported incident confirmed to pose a substantial threat to members at large of the campus community. The College will make every effort to ensure that a victim or the reporting person's name and other identifying information is not disclosed, while still providing enough information for community members to make safety decisions in light of the danger.

9. Procedure for Filing and Investigating a Formal Complaint of Harassment or Violence: The following procedure is established for processing and investigating formal complaints of harassment or violence by a student, faculty member, staff member, administrator, or other College employee because of on race, color, religion, creed, sex, sexual orientation, gender identity, sex stereotyping, marital status, socioeconomic status, military service, national origin, age, disability, and/ or any other status protected by federal, state, or local law, including but not limited to cases of alleged domestic violence, dating violence, sexual assault, or stalking and for determining appropriate disciplinary action.

It is the College's intent that this procedure will provide a prompt, fair, and impartial investigation and resolution process, will treat the complainant with sensitivity and fairness, will be conducted by College officials who receive annual training on the issues related to domestic violence, dating violence, sexual assault, and stalking and how to conduct an investigation process that protects the safety of victims and promotes accountability, and will provide due process to the accused individual if any disciplinary action is to be imposed. In situations where an accused individual faces a relating criminal charge, the College reserves the right to proceed with this procedure as to a formal complaint, including any disciplinary action that may be imposed, at the same time that a criminal process may be proceeding.

lowa Central Community College will act to investigate all formal complaints, to take appropriate action based on the weight of the totality of the evidence, against any student, faculty member, staff member, administrator, or other College employee when it is determined that it is more probably true than not that harassment or violence in violation of this policy has occurred.

Filing a Formal Complaint - Any person who believes he or she has been the victim of harassment or violence by a student, faculty member, staff member, administrator, or other College employee because of race, color, religion, creed, sex, sexual orientation, gender identity, sex stereotyping, marital status, socioeconomic status, military service, national origin, age, disability, and/or any other status protected by federal, state, or local law may file a written formal complaint with the College's Director, Human Resources / EEO Coordinator.

Confidentiality - As the College's procedure for handling formal complaints is initiated and completed, all involved parties will be expected to respect the sensitive nature of the matter and to protect, to the extent possible consistent with the College's legal obligations, the confidentiality of the complainant, the person accused, and all those involved in the investigation. Iowa Central Community College will respect the privacy of the complainant, the individual(s) against whom the complaint is filed, and the witnesses as much as possible, consistent with the College's legal obligations to investigate and to take appropriate action. Unless otherwise required pursuant to a legal obligation, only people who need to know will be told and information will be shared only as necessary with investigators, the complainant, the accused individual, witnesses, appropriate Administrators, and the Title IX Appeal Team (as applicable).

Complaint Investigation Procedure - It is the College's intent that this procedure will provide a prompt, fair, and impartial investigation and resolution process. The College recognizes that time is of the essence in the investigation, decision

making, and appeal processes. The College will make every reasonable effort to conclude its full investigation of a formal complaint, decision by the College's Director, Human Resources / Equal Employment Opportunity (EEO) Coordinator, and processing of any appeal within sixty (60) calendar days from its receipt of a complaint. The time periods specified in paragraphs numbered 1, 2, and 3 below and in paragraph numbered 2 in the Appeal section are institutional expectations. The College's Director, Human Resources / EEO Coordinator will document the reason for extending any specified time period and will provide to the complainant and to the person accused (respondent) periodic written notice of any extension of a specified time period and of the status of the investigation.

The College's Director, Human Resources / EEO Coordinator may appoint an assistant to act in her absence and/or to facilitate the timely resolution of a formal complaint.

- a. Within two (2) calendar days (excluding weekends and federal holidays) of the receipt of the formal complaint, the College's Director, Human Resources / EEO Coordinator shall designate the incident investigating official or officials who will investigate the formal complaint (such individual or individuals shall not be the party charged with having committed the alleged harassment and/or violence). If the College's investigator determines to interview the complainant and/ or of the accused individual, the person so interviewed may elect to have another person present during the interview, including the opportunity to be accompanied by an advisor of his or her choice and at his or her expense. But in no event may such election interfere with the interview or disrupt the complaint procedure process provided herein.
- b. A written statement from the complainant shall be obtained by the designated investigating official(s) within two (2) calendar days (excluding weekends and federal holidays) of their designation and request complainant have no contact with the respondent pending the investigation. The investigating official will then immediately contact the respondent, inform the person of the basis of the complaint and provide the person an opportunity to respond with a written statement. The investigating official shall specifically request that the respondent have no contact with the complainant pending the investigation. The respondent will then have two (2) calendar days (excluding weekends and federal holidays) from the date of notification to make a written response to the investigating official.
- c. Upon receipt of the response(s), the investigating official shall report in writing to the College's Director, Human Resources / EEO Coordinator the fact findings of the investigation and shall in writing notify the complainant and the respondent of said written fact finding report within fourteen (14) calendar days (excluding weekends and federal holidays) of the appointment of the investigating official. The College's Director, Human Resources / EEO Coordinator shall review the written fact finding report to determine, by the weight of the evidence, taking into account the totality of all reported evidence, if it is more probably true than not that harassment or violence in violation of this policy has occurred. Upon completion of the review and determination by the College's Director, Human Resources / EEO Coordinator, both the complainant and the respondent shall be notified separately in person and in writing by the College's Director, Human Resources / EEO Coordinator of her decision within seven (7) calendar days (excluding weekends and federal holidays) of receiving the investigating officer's written report. The complainant and the respondent shall be notified if the College's Director, Human Resources / EEO Coordinator is unable to meet with them in person within seven (7) calendar days (excluding weekends and federal holidays) and a meeting will be scheduled as soon as possible. The College's Director, Human Resources / EEO Coordinator will meet separately with the complainant and with the respondent and will address any questions concerning the determination or resolution with each individual during the respective meeting.
- d. If it is determined it is more probably true than not that a violation of College policy has occurred, the College's Director, Human Resources / EEO Coordinator will forward her written decision to the administrator with authority discipline or to make recommendations concerning discipline and who will take or recommend appropriate disciplinary action.

Retaliation Prohibited - Iowa Central Community College will discipline or take appropriate action against any student, faculty member, staff member, administrator, or other College employee who retaliates against any person who reports harassment or violence under this policy.

Any student or employee of the College who retaliates against another for testifying, assisting, or participating in any investigation or proceeding relating to harassment or violence under this policy will be subject to discipline. Retaliation includes, but is not limited to, any form of intimidation, reprisal, or harassment.

**10. Disciplinary Action:** The College reserves the right to take whatever measures it deems necessary in response to a complaint of harassment or violence by a student, faculty member, staff member, administrator, or other College employee because of race, color, religion, creed, sex, sexual orientation, gender identity, sex stereotyping, marital status, socioeconomic status, military service, national origin, age, disability, and/or any other status protected by federal, state, or local law. Such measures include as to employees discipline up to and including recommending termination of employment and as to students include, but are not limited to, modification of on-campus housing arrangements, interim suspension

from campus pending a decision, and expulsion, and as to employees and students reporting the matter to local law enforcement agency in Fort Dodge, lowa or in the community where another center/campus of the College is located. Not all forms of sexual misconduct will be deemed to be equally serious offenses and the College reserves the right to impose different sanctions, ranging from verbal warning to expulsion of enrollment or to termination of employment, depending on the severity of the offense. The College will consider the concerns and rights of both the complainant and the respondent.

#### 11. Appeal:

- a. The individual, in accordance with Board policy, the Master Agreement, the Collective Bargaining Agreement, the Student Handbook, or Employee Handbook, whichever applies, may appeal any disciplinary action resulting from this procedure.
- b. In the event the complainant and/or the respondent is dissatisfied with the Director, Human Resources/EEO Coordinator's decision, the individual may appeal in writing to the Title IX Appeal Team within five (5) calendar days (excluding weekends and federal holidays) of the receipt of College's Director, Human Resources / EEO Coordinator decision. The Title IX Appeal Team will consider the appeal within fourteen (14) calendar days (excluding weekends and federal holidays) of its receipt of the written appeal. The Title IX Appeal Team's decision will be the College's final determination. Within five (5) calendar days (excluding weekends and federal holidays) of its determination, the Title IX Appeal Team will provide written notification of its decision to the individual who made the appeal and to the other party (either the complaint or the respondent).

Title IX requires notification be made to the College's designated Title IX Coordinator of the resolution of any potential sexual harassment issues involving students.

#### Photography and Film Rights Policy

Iowa Central Community College reserves the right to film or take photographs of faculty, staff, and students engaged in teaching, research, clinical practices, sports, and other activities, as well as casual and portrait photography or film. These photographs, films, video's, pod casts will be used in such promotions or publications as catalogs, brochures, posters, advertisements, recruitment, and development materials as well as on the national media for promotional purposes serving Iowa Central Community College. Classes will be photographed only with the permission of the faculty member and students. Release agreements will be produced in writing prior to filming. They will then be signed and kept on file by the Director, Public Information, Website Technology Specialist, Sports Information, or Communications for each respective production project. Such photographs and film-including digital media-which will be kept in the files and archives of Iowa Central Community College, will remain available for use by the College without time limitations or restrictions. Faculty, students, and staff are made aware by virtue of this policy that the College reserves the right to alter photography and film for creative purposes. Faculty, students, and staff who do not want their photographs used in the manner(s) described in this policy statement should contact the Director, Public Information. Faculty and students are advised that photographs taken in public places do not require signatures or authorization for publication. Iowa Central Community College has no control over the use of photographs or film taken by third parties, including without limitation the news media covering College activities.

#### **Social Networking Policy**

Academic studies have shown a positive relationship between the use of social networking websites and student engagement in course work, campus organizations, face-to-face interaction with close friends, and in the transition and adjustment to college. In contrast, using online technology at high rates and in certain ways has been shown to have a relationship to poor academic and psychosocial outcomes. Reported dangerous uses of social networking have arisen from miscommunication as it is not possible to perceive the "tone" in online communication, use of words that propagate rumors with a harassing content, and cyber bullying where someone purposely embarrasses, harasses, or torments another.

lowa Central acknowledges the importance of students using technology to connect, collaborate, and communicate with each other and that online forms of expression are as important to student development as traditional oral and written expression. While engaging in social networking, students should conduct themselves in a respectful, responsible, and accountable manner and in compliance with the Technology at Iowa Central Community College policy, Statement of Nondiscrimination, and the Student Conduct Code published by Iowa Central. Bloggers and commenters can be held personally liable for commentary that is considered defamatory, obscene, proprietary, or libelous by any offended party and for conduct that violates federal, state, or local law such as laws against hate crimes.

Students enrolled in the Iowa Central Health Care Practicum also have the responsibility to safeguard the privacy, security, and confidentiality of all individually identifiable health information transmitted or received in connection participation in the Practicum in accordance with the applicable provisions of the Health Insurance portability and Accountability Act of 1996 ("HIPAA"), as amended, and in accordance with all applicable federal, state and local statutes, regulations and policies regarding the confidentiality of patient health information. Accordingly, students enrolled in that program should not post any confidential or legally protected information.

If a student's concern arising from another student's social networking communication is one of perceived discrimination, abuse, and/or harassment based on age, race, creed, color, sex, sexual orientation, gender identity, national origin, religion, disability, or military service, the student may use the informal or formal complaint procedure described in this Handbook.

#### Student Conduct Code

#### **All Students**

Students are expected to conduct themselves in a responsible manner. Students who enroll accept our policies, regulations and operational procedures. Student behavior, which after due process is found to be disruptive to classes or to destroy the rights of others or property, may result in disciplinary probation or suspension.

#### Iowa Central Athletes and Students

Each athlete and student participating in Iowa Central activities is expected to attend all classes, to stay free of drugs, and to conduct themselves in a mature and responsible manner while representing Iowa Central Community College. All athletes and activity students are required to sign a Conduct Code before participating in Iowa Central athletics and activities.

#### **Student Rights and Responsibilities**

Students of the College have both rights and responsibilities as described in the lowa Central Community College Student Handbook and in Board Policy. Iowa Central's mission is to promote intellectual discovery, physical development, social and ethical awareness, and economic opportunities for all through an education that transforms lives, strengthens community, and inspires progress. This can occur in an environment that fosters intellectual inquiry within a climate of academic freedom and integrity. Students and instructors are expected to promote these goals in the context of inclusiveness, mutual respect, and tolerance of others, as ideas are explored, facts gathered, opinions weighed, and conclusions drawn.

#### Process for Student to Express Academic Concerns and Complaints

From time to time, a student may have concerns about such issues as scholastic dishonesty, discrimination, disability accommodations, or grading grievance. If the student's concern relates to:

- Educational records, the student should follow the review/grievance procedures in Board Policy Number 404, Access to Educational Records;
- A finding of scholastic dishonesty, the student should follow the appeal process in Board Policy Number 407, Scholastic Dishonesty;
- A student grade, the student should follow the review procedure in Board Policy Number 408, Student Grade Appeal;
- Conduct by the instructor perceived by the student to be a violation of the College's non-discrimination/harassment policy, the student should follow the complaint procedure in Board Policy Number 414, Discrimination Process; or
- A student may have other academic concerns and complaints about a particular classroom experience, specific curricular matters, instructor conduct in the classroom or in another instructional setting that adversely affects the learning environment, misuse of instructor authority to promote a political or social course within an instructional setting, inequities in assignments, scheduling of examinations at other than published times. If such concerns arise, the student should follow the procedure in Board Policy 415 described below:
  - 1. Ordinarily, the student should first attempt to resolve the concern with the instructor.
  - 2. If after meeting with the instructor, the student believes his/her concern is not resolved, or, if the student does not feel, for whatever reason, he/ she can directly approach the instructor, the student should meet with the division dean. This meeting shall be scheduled within 10 calendar days after meeting with the instructor. The division dean shall investigate the concern fully, including meeting with the instructor and the student and attempt to resolve the concern.
  - 3. If the concern is not resolved to the satisfaction of the student, the student may submit within five calendar days after the meeting with the division dean, a written summary of his/her concern to the Vice-President of Instruction. The Vice-President will confer with the division dean, the instructor, and the student in an attempt to resolve the concern.
  - 4. If the concern is not resolved to the student's satisfaction, the student may within 10 calendar days of the receipt of the Vice President of Instruction's findings request, in writing, that the College President review the concern. The President will review the concern and take such action as he/she deems appropriate including, but not limited to, the recommendation of action to the Board of Directors.

#### Title IX

As an educational institution, Iowa Central Community College strives to provide a respectful, safe, and non-threating environment for students and employees. The mission of the College is to promote intellectual discovery, physical development, social and ethical awareness, and economic opportunities for all through an education that transforms lives, strengthens community, and inspires progress. Harassment and violence against students, faculty, and staff subverts this mission and will not be tolerated. Students who feel that they have been the subjects of such harassment should advise the Vice President of Enrollment Management and Student Development or the College's Director, Human Resources / Equal Employment Opportunity (EEO) Coordinator. Staff members should advise one of the following: their immediate supervisor, the appropriate Vice President, or the College's Director, Human Resources/EEO Coordinator. More information on Title IX at www.iowacentral.edu/about/titleIX.asp.

#### **Tobacco and Nicotine Vapor Product Use Policy**

The lowa Smokefree Air Act applies to lowa Central Community College. The purpose of this legislation is "to reduce the level of exposure by the general public and employees to environmental tobacco smoke: and is designed to "regulate smoking in public places, places of employment, and outdoor areas" and "to improve the public health of lowans." Because the College wishes to provide a safe and healthy environment for students, employees, and visitors, the College shall comply with all state and federal laws by prohibiting the use of tobacco products in College facilities, on College property, and in College vehicles. To protect the health and environment of the College's community, the College also prohibits the use of nicotine vapor products (electronic smoking devices) in College facilities, on College vehicles. This policy applies to all College students, employees, and visitors.

Nicotine vapor products (electronic smoking devices) shall mean: Any non-combustible product which contains or delivers nicotine (e.g., Electronic Nicotine Delivery System or ENDS) or any other substance intended for human consumption that can be used to simulate smoking through a vapor or aerosol from the product, that employs a heating element, power source, electronic circuit, or other electronic, chemical, or mechanical means, regardless of shape or size, that can be used to produce vapor from a solution or other substance. Nicotine vapor product includes an electronic cigarette, electronic cigar, electronic cigarillo, electronic pipe, electronic hookah, vapor pen, or other similar product or device.

#### **Other Iowa Central Compliance Information**

Other compliance information can be found at the following websites:

Athletic participation rates and support data http://ope.ed.gov/athletics

#### Financial Aid

www.studentaid.ed.gov

#### Graduation Rates

http://surveys.nces.ed.gov/ipeds http://nces.ed.gov/IPEDS/COOL

### Foundation

The Iowa Central Community College Foundation is a non-profit corporation. The purpose of the Foundation is to solicit, receive and manage bequests, gifts, donations, grants and contributions made or for the use or benefit of Iowa Central Community College, its educational and technical programs and its various services. The Foundation distributes funds, including but not limited to scholarships and grants, on the basis of equal opportunity.

The Iowa Central Community College Foundation is managed by its Board of Directors. The Board of Directors consists of 14 members, including one member of the College Board of Trustees and the President of the College. Members are elected for a term of three years.

### History

Iowa Central Community College was organized in 1966 with a broad mandate to offer a vast array of educational opportunities to the residents of its nine-county area. Iowa Central was built on the firm foundation of three area junior colleges, which had been operating since the 1920s by the local public school systems: Fort Dodge, organized in 1921; Webster City, 1926; and Eagle Grove, 1928 (The Eagle Grove center was closed in 2004). Iowa Central came into being as a result of the Area School Act passed by Iowa's 61st General Assembly. The legislation authorized two or more county school systems to merge to form an area community college. Nine counties combined to create Area V and Iowa Central: Buena Vista, Calhoun, Greene, Hamilton, Humboldt, Pocahontas, Sac, Webster and Wright.

In 1971, a fourth center was added with the completion of a new building in Storm Lake. The Storm Lake Center continues to grow, offering a variety of community college programs and numerous services to the community. In 1975, Iowa Central partnered with Buena Vista University (then Buena Vista College) in a cooperative venture whereby students can transfer from Iowa Central to complete a four-year degree at the Fort Dodge Center.

Originally founded to provide students with a low cost, high-quality education, Iowa Central continues to expand its excellent reputation with an ever-growing variety of programs, facilities, and thriving student life activities. Iowa Central offers a number of certificates, diplomas, degrees, training opportunities, and continuing education to its communities. This catalog documents the current list of credit programs. Credit courses started being offered in high schools via the Iowa Communications Network (ICN) in 1993 and Iowa Central Television Network (ICTN) in 1987, Insturctional Television Fixed Signal (ITFS) in 1989 and continue to be offered in every high school in Area V as direct instruction, Triton Network in 2012, and online. Several programs and most transfer courses are offered completely online, an initiative that launched initially as a Guided Self-Study course beginning in 1997.

lowa Central also offers a wide variety of athletic programs and student clubs. Various programs are offered to student athletes with 25 men's and women's athletics available. The College also offers 10 student clubs and organizations.

Much of the college's significant growth period, both in service to students and campus aesthetics, began in the mid-1990s. At that time, the college's enrollment began increasing and has more than doubled today. As a result, facilities have expanded and changed much over recent years:

- 1995 Concurrent Enrollment (Earlybird) courses offered
- 1996 First apartment-style housing constructed with 15 buildings today
- 1996 Trolley Center Mall facility opened
- 1997 Ed Barbour Baseball Field
- 1997 Softball Field (now the site of the Triton Café)
- 1997 Guided Self-Study
- 1998 Internet Courses
- 2001 TRIO Program
- 2002 Dr. John E. Hodges Fieldhouse dedicated
- 2002 Career Education Building opened
- 2004 Recreational Center
- 2004 Storm Lake Center building dedicated to Melvin V. Samuelson Center
- 2005 Workforce Development Center Building
- 2006 Transportation Center
- 2006 Decker Auditorium dedicated
- 2007 Webster City Campus Library dedicated to Thomas Chelesvig Center
- 2007 Crimmins Center
- 2007 General Obligation Bonds
- 2007 Willow Ridge
- 2007 Fire Tower
- 2007 Biofuels Testing Lab
- 2007 Parking Ramp
- 2008 Hanson Center dedicated
- 2009 Agriculture Technology Farm
- 2009 Entrance from highway 169 to Fort Dodge Campus
- 2009 BioScience and Health Sciences
- 2010 Iowa District West Lutheran Building made into parking
- 2010 Student Resource Center
- 2011 Physical Facilities Building
- 2012 East Campus
- 2012 Woodruff Apartments purchased
- 2013 Dennis Pilcher Court dedicated
- 2014 Triton Café
- 2014 Culinary construction in Hanson Center
- 2014 Career Academy in Eagle Grove

lowa Central Community College understands that regional growth and prosperity require a community college that is progressive and responsive. Building on its heritage, lowa Central is positioned to continue meeting the growing educational needs of Fort Dodge and the surrounding area by providing diverse quality educational opportunities that meet our local, regional, and transfer needs.

# Institutional Goals

#### **Critical Thinking**

 The ability to dissect a multitude of incoming information, sorting the pertinent from the irrelevant, in order to analyze, evaluate, synthesize, or apply the information to a defendable conclusion.

#### **Effective Communication**

 Information, thoughts, feelings, attitudes, or beliefs transferred either verbally or nonverbally through a medium in which the intended meaning is clearly and correctly understood by the recipient with the expectation of feedback.

#### Personal Responsibility

• Initiative to consistently meet or exceed stated expectations over time.

# **Mission Statement**

Iowa Central Community College provides quality educational opportunities.

# Philosophy

It is the philosophy of Iowa Central Community College, as a comprehensive community college, to aid in developing our citizens' capabilities to the maximum.

lowa Central provides a flexible program to satisfy the needs of the individual and the needs of the community.

An educational environment is planned to provide experiences for those who desire pre-professional courses, improvement of educational or technical skills, or developmental programs for self-enrichment. This environment can be on campus or on-site.

In concert with this mission, Iowa Central offers

- college transfer courses,
- career and technical training,
- general education,
- recreation and personal enrichment programs,
- economic development,
- community service activities for people with diverse interests, needs, backgrounds and skills and
- adult basic education.

## Service Excellence Values

#### Professionalism

- Accountability: Recognize that work performance directly reflects your character.
- Communication: Practice exceptional internal and external communication.
- Personal Responsibility: Give 100%.
- Adapt: Respond to the ever-changing environment of higher education.

#### Integrity

- Diversity: Recognize and value individual and cultural differences.
- Ethics: Strive to be honest, fair, and responsible.
- Respect: Inspire mutual respect.
- Consistency: Promote and represent Iowa Central at all times.

#### Excellence

- Empower: Encourage initiative, creativity, and thoughtfulness in all we do.
- Quality Education: Continuously pursue improvement in courses, methods, and systems.
- Celebrate: Celebrate success and embrace and learn from challenges.
- Exceed Expectations: Strive to be the best you can be at all times.

## Vision Statement

Innovation, excellence, and continuous improvement define our college where the focus is on the learner and on the appreciation of diversity.

Iowa Central Community College will:

- Promote instructional excellence
- Serve lifelong learning needs
- Meet the changing needs of our workforce
- Strengthen partnerships
- Enhance customer service
- Increase retention and completion
- Prepare students for workforce/transfer successIncrease community awareness
- Increase efficiency
- Improve and enhance technology
- Maintain accessibility and affordability.

# ADMISSIONS

Academic Load Admission Admission - International Advisors Financial Aid Orientation Residency Policy Guidlines Student Identification Card Tuition and Fees Transfer of College Credit

# Academic Load

The normal load for a student expecting to graduate in two years with an Associate of Arts Degree in the Liberal Arts and Sciences Division is 15-16 credit hours per semester. Students in career programs are required to follow the offerings of their programs. Students who have a marginal academic background may be limited in the number of hours they may carry. This limitation is to help students succeed and is explained during enrollment. If they show good progress, an increased load will be suggested in subsequent semesters. Iowa Central Community College calculates student enrollment according to the following credit load for Fall and Spring:

- Full Time = 12+ credits
- lits 1/2 Time = 6-8 credits
  - 3/4 Time = 9-11 credits Less than 1/2 Time = <6 credits

#### Summer credit load:

- Full Time = 8+ credits 1/2 Time = 4-5 credits
  - 3/4 Time = 6-7 credits Less than 1/2 Time = <4 credits

These are commonly accepted credit load counts for reporting purposes for accrediting and state agencies.

## Admission

lowa Central Community College is a comprehensive college with an open-door admission policy. There is no application fee for admission to the College.

#### Ways to Apply

- Apply online at www.iowacentral.edu/admissions
- Request paper application by phone, 800-362-2793 ext. 1008 or 515-574-1008

A student may be accepted by the College, however, some academic programs have additional admissions requirements to be considered for acceptance into those programs including academic qualifications and other criteria. Academic programs that have additional requirements are Associate Degree Nursing, Dental Hygiene, Emergency Medical Services, Medical Assistant, Medical Laboratory Technician, Practical Nursing, Radiologic Technology, and Professional Semi-Truck Driving program. To learn about these additional requirements, refer to the Applied Science and Technology Programs section of this catalog.

#### **To Complete Enrollment Process:**

#### 1. Submit Placement Test Scores

lowa Central uses exam results to determine placement in reading, writing and math courses. Iowa Central will accept test scores from ACT, SAT, COMPASS, ASSET, and ACCUPLACER. The ALEKS test may be taken free of charge (first time) at all Iowa Central centers. Call 800-362-2793 for testing times.

#### 2. Submit Official College Transcripts

Send official college transcript(s) from prior Colleges (including College credit courses taken while attending high school) to the Student Records Office to be evaluated. Official transcripts are important to the advising process and should be mailed prior to starting classes.

#### 3. Apply for Financial Aid

Start early - the financial aid process can take time. Submit the Free Application for Federal Student Aid (FAFSA) as soon as possible after January 1. File online at www.fafsa.ed.gov with Iowa Central's school code (004597). It is necessary to reapply each year.

#### 4. Apply for Scholarships

lowa Central Community College and Iowa Central Community College Foundation offer a variety of scholarships to students. These scholarships are based on academic achievement, program interest, or activity involvement. Scholarships available can be viewed at http://www.iowacentral.edu/ financial\_aid/scholarships.asp.

#### 5. Apply for Housing

Fully furnished apartment living is provided at Iowa Central. Students can fill out the housing application online at www.iowacentral.edu/housing. This application will not be processed until the Housing Office receives the non-refundable application fee (\$125 Iowa Resident/\$300 Non-Resident). Send application fee to Director of Housing or contact the Housing Office at 800-362-2793 ext. 1086 to pay by phone.

#### 6. Enroll for Classes and Complete Registration

Students may enroll by phone, 800-362-2793, in person, or fill out the enrollment form on our website at www.iowacentral.edu/admissions/ admissions\_application.asp. Confirm intent to attend by completing the registration form. Registration will not be final until the student's minimum balance due is zero.

# **Admission - International**

Prospective international students applying for Admission to Iowa Central must:

- 1. Complete an International Student Application,
- Show evidence of their English proficiency by providing one of the following:
   TOEFL Score of 450 or higher (CBT 133 or higher), or
  - b. An official transcript showing a satisfactory grade (C or better) of a freshman level English course at an approved U.S. college or university, or
  - c. A high school transcript from a country where English language is the basic language taught, and
- 3. Submit a Statement of Financial Support to provide evidence of ability to meet educational and living expenses while a student.

International Students are not eligible for Federal or State-of-Iowa Financial Aid. Note: All F-1 international students must be enrolled full-time (12 hours or more) to be in compliance with Federal Immigration Laws.

#### TOEFL

- 1. Iowa Central Community College requires all prospective international students from non-English speaking countries to submit a TOEFL (Test of English as a Foreign Language) score.
- 2. International students are expected to score at least 450 for acceptance.
- Students who score below 500 in the TOEFL must enroll in English as a Second Language or Fundamentals of Writing.
- 4. International students must stay enrolled in English as a Second Language until they pass the course with a C grade or better.

### Advisors

All students are assigned an advisor at the time of the first enrollment. The advisor assists the student in the proper selection of courses and with program and transfer advice. Students are encouraged to consult with their assigned advisor continuously throughout their time of study at Iowa Central. Advisors meet with each student a minimum of twice a year for this purpose.

## **Financial Aid**

The purpose of the Financial Aid Program is to provide assistance to students who might find it difficult to attend college. The need for financial assistance is determined by subtracting the expected family contribution from the estimated cost of attending lowa Central Community College. The dollar amount of the expected family contribution is determined by the Federal Government through the Financial Aid application process. The Financial Aid Office then subtracts the expected contribution from the total estimated cost for the year and the difference is the financial need. Available financial aid is then awarded to the student. The total financial aid award may not exceed the total estimated cost.

Financial aid is awarded to students contingent of the student attending and successfully completing coursework. Therefore, if a student decides withdraw or to stop attending, students may be required to repay part of the financial aid to Iowa Central or the Department of Education. This policy applies to recipients who are receiving Federal Title IV funds which consist of Pell Grant, SEOG Grant, and Direct Loans. Students may obtain information on this policy from the Financial Aid Office.

For information on our Return of Title IV Funds Policy (R2T4) policy, visit www. iowacentral.edu/financial\_aid/forms\_docs/R2T4Policy.pdf

#### **Sources of Financial Aid**

- Federal Pell Grant
- Federally funded gift aid.
- Students must demonstrate need.
- Student must be an undergraduate.

#### Federal Supplemental Educational Opportunity Grant (SEOG)

- Federally funded gift aid administered by Iowa Central.
- Students must demonstrate need.
- Students must be undergraduate.
- Awards limited to funds available.

#### Work Study

- Part-time work opportunities.
- Federally or State funded, Iowa Central administered.
- Students must demonstrate need.Awards limited to funds available.

#### Iowa Vocational-Technical Grant

#### Iowa resident students.

- Enrollment in Career or Career Option programs.
- Students must demonstrate need.

#### Iowa Kibbie Grant

- Iowa resident students.
- Enrollment in Career technical or career option programs.
- Students must demonstrate need.
  Awards limited to funds available
- Awards limited to funds available.

#### Federal Direct Student Loan

- Fixed interest loans
- Students must demonstrate need for subsidized Direct loan.
- Maximum loan \$5,500 for first year, \$6,500 for second year (dependent student).

#### Federal Plus Loan

- Loans available to parents of dependent students.
- Financial need is not required.

#### **Private Student Loans**

- Private student loans may be available to students who meet Lender criteria.
- May require creditworthiness and/or co-signer.
- Please visit https://choice.fastproducts.org/FastChoice/home/186500.

#### Scholarships

Various businesses, organizations and individuals donate money to Iowa Central for the purpose of Financial Aid to students. These awards are made by Iowa Central or the donating organizations. Some awards may be based on need or specific donor criteria. The scholarship application process begins in January/February for fall term enrollment. Inquiries about specific awards may be made to the Financial Aid Office.

#### **Veterans' Benefits**

Qualified veterans are eligible for G.I. benefits at Iowa Central. Early arrangements should be made with the Veterans representative in Student Records. In order for GI benefits to be certified each term, students must contact the certifying official to complete the formal request. Veterans must maintain a cumulative GPA of 2.0 to be eligible to receive benefits. All veterans and their immediate family receive in-state tuition rates.

#### **Additional Aid**

Students are encouraged to seek information on financial aid in their own communities. Local service clubs and organizations, as well as national and state organizations may have financial aid to offer. The Financial Aid Office is available to assist students in identifying these sources. Non-resident students should check with their home state higher education agency for information about their home state's aid.

#### **Applications and Award Procedures**

- To be considered for financial assistance at Iowa Central students must
- 1. Apply and be accepted by the college.
- Complete a free application for Federal Student Aid (school code is 004597). Students may apply online at www.fafsa.gov
- 3. Complete any additional documentation requested by Iowa Central. This may include a copy of your/parent's IRS Tax Transcript.
- 4. Financial Aid Awards are made on a first-come, first-serve basis as students' files are completed. Award notifications are usually made to students in the late spring and early summer.

#### When to Apply for Financial Aid

Applications are available after January 1 each year. It is necessary to reapply each year. For best considerations of all types of aid, the application must be submitted by March 1. Pell Grants, Direct Student Loans, and Parent PLUS Loans are available after March 1, but other aid may already be committed.

#### **General Eligibility Requirements**

All students seeking Financial Aid must

- 1. Be enrolled or accepted for enrollment in a program at least six months in length,
- Intend to complete the program and receive a degree related to the educational objective,
- 3. Be a United States citizen or eligible non-citizen,
- 4. Not be in default for any previous loans disbursed,
- 5. Not owe a refund on any previous Federal Student Aid, and
- 6. Maintain satisfactory academic progress.

#### Financial Aid Satisfactory Academic Progress Policy

lowa Central Community College is required to establish academic progress standards for students who are federal and state financial aid applicants or recipients. This policy ensures that any student who receives or applies for financial aid is making progress toward a degree. The student's total academic history is monitored regardless of whether he/she has previously received financial aid.

In order to maintain eligibility for financial aid, a student must meet the "Standards Requirements" listed below. Failure to meet these requirements results in the loss of aid. Programs affected by "Standards Requirements" include, but are not limited to:

Federal Pell Grant IA Voc Tech Grant Federal SEOG Federal Work Study IA Kibbie Grant Federal Direct Loan Federal PLUS Loan IA National Guard Program Other State Programs

#### Standards Requirements

1. Pace: Successfully complete 67% of attempted credit hours. This will be measured on a cumulative basis. Example: If the student attempts a total of 24 credit hours the first academic year, the student must satisfactorily complete 16 credit hours. (Example: 24 credit hours x .67 (67%) = 16 credit hours.)

2. Maximum Time Frame: Completion of the academic program in 150% of the published credits. Example: Associate in Arts degree = 60 credit hours. Maximum attempted credit hours permitted to complete this program would be 90. (Example: 60 credit hours x 1.5 (150%) = 90 credit hours.)

3. Minimum Cumulative Grade Point Average:
A cumulative GPA of 2.00 must be met.

#### • A cumulative GFA of 2.00 mu

#### Additional Information

1. Credit/no credit, course repeats, withdrawals, incompletes, and developmental courses will be included as part of the student's cumulative credit hours attempted for pace and maximum time frame purposes.

2. In computing the cumulative GPA for graduation, only the most recent grade earned in a course, that has been repeated, will be used.

3. Transfer Students are considered to be making satisfactory academic progress for financial aid purposes upon initial enrollment. Upon enrollment, relevant transfer credits and GPA that become part of the student's academic record at Iowa Central will be included in the student's satisfactory academic progress calculation. Students must send all official college transcripts in order to determine eligibility. 4. Courses taken for audit, Advanced Standing, Advanced Placement and hours via the College Level Examination Program will not be included as a part of the student's cumulative credit hours enrolled for maximum time frame purposes.

#### **Monitoring Process**

1. Academic progress will be monitored at the end of each term to determine if the "Standards Requirements" have been met.

2. Financial Aid Warning - The first term the student fails to meet the "Standards Requirements" the student will be placed on Financial Aid Warning. This warning period should be utilized by the student to meet the "Satisfactory Academic Progress Standards Requirements." The student will only be given one Warning term at Iowa Central.

3. Academically Ineligible - Students failing to show satisfactory progress during their warning period will be Academically Ineligible. A student may not receive any aid listed above while they are Academically Ineligible.

#### **Reinstatement of Eligibility**

1. Complete the number of credit hours necessary to achieve the 67% requirement and/or minimum cumulative GPA needed for their grade level. This will be at the student's own expense. When these hours have been completed, the Financial Aid Office must be notified so eligibility for aid can be reinstated. 2. If special circumstances exist (including but not limited to: death of family member, personal or family illness, family crisis), the student may appeal by submitting a letter stating the reasons the "Standards Requirements" were not met and completing the Appeal Form. Appropriate third-party professional documentation may be required. The Appeals Committee will review the appeal. If the appeal is approved, eligibility for financial aid will be reinstated on a probationary status for one term.

3. If the student fails to meet the "Satisfactory Academic Progress Standards Requirements" after the probationary term, the student will be academically ineligible. The student has the option of completing an Academic Plan that will ensure the student meets the "Satisfactory Academic Progress Standards Requirements" at a specific point in time. If the student is not successfully following the Academic Plan they will no longer be eligible for financial aid at Iowa Central.

#### **Submission Deadlines**

Appeals: Fall Term: October 1; Spring Term: February 12; Summer Term: July 6; 8 Week Online: 2 weeks after start of term.

Academic Plans: Fall Term: 5th day of the term; Spring Term: 5th day of the term; Summer Term: June 1; 8 Week Online: 2 weeks after start of term

All Appeals or Academic Plan Worksheets must be turned in prior to the submission deadline to be considered for that term. If the deadline date falls on a weekend/holiday, the Appeal or Academic Plan Worksheet must be turned in prior to the weekend/holiday.

#### Additional Regulations Affect Veterans Benefit Status

For satisfactory academic progress, the following academic performance criteria apply to all veterans or other students eligible for VA benefits. The Veterans Administration requires that all students receiving VA education benefits maintain satisfactory academic progress. Iowa Central defines satisfactory academic progress as achieving a cumulative 2.00 GPA. If a veteran does not make at least a "C" average (2.00) on all hours pursued, a warning period of one term will be granted. At the end of the warning term a cumulative GPA of 2.00 must be reached. If a 2.00 is not attained, the VA benefits will be withdrawn and the student will be academically ineligible to receive VA education benefits. Reinstatement of eligibility is obtained by either reaching the 2.00 cumulative GPA or a student can submit a letter of appeal. If the appeal is approved, eligibility for the VA benefits will be reinstated on a term probationary status.

# Orientation

Freshman orientations are offered throughout the summer. Our orientation gives students and parents the opportunity to learn more about the multiple resources available at Iowa Central and to finalize any necessary paperwork.

# **Residency Policy Guidelines**

In determining a community college resident or non-resident classification, the primary determination is the reason a person is in the state of Iowa. The second determination will be the length of time a person has resided in Iowa. If a person is in the state primarily for educational purposes, that person will be considered a non-resident. The burden of establishing the reason a person is in Iowa for other than educational purposes rests with the student.

- A. The Enrollment Management & Student Development Office may require written documents, affidavits, or other related evidence deemed necessary to determine why a student is in Iowa. The burden of proof is upon the student. A student will be required to file at least two documents to determine his/ her residency status. No two documents may come from the same source. The following are examples of acceptable documentation.
  - 1. Iowa driver's license.
  - 2. Iowa vehicle registration card.
  - 3. Iowa state income tax return, signed and dated.
  - 4. Iowa voter registration card.
  - 5. Proof of Iowa Homestead credit on property taxes.
  - 6. Written and notarized documentation from an employer that the student is employed in Iowa.
- B. If you are not a U.S. citizen but are a permanent resident you must provide a copy of your U.S. Permanent Resident Card with your residency application.
- C. All documents must be dated at least 90 days prior to the start of the term you are requesting residency for.
- D. These documents must be submitted prior to the first day of the semester for which you are registering. Residency <u>cannot</u> be re-classified once the semester begins.
- E. If you are an international student please refer to the Request For Determination of Residency Status Application.

## **Student Identification Card**

Students living off campus must go to the Help Desk to obtain a Photo ID. Each student must have an ID to check out library materials, attend events around campus and pick-up financial aid refund checks in the business office. Students must have Financial Clearance on their bill before an ID is issued. The ID card will have the student's name, ID number, and a photo. The ID is valid for an entire academic year. Student IDs are no longer available in the Student Records Office. Students will be issued their first ID at no charge, but will be charged a replacement fee of \$5.00 for the first replacement ID, and \$20.00 for each additional replacement ID. Replacement fees must be paid in cash at the time the replacement ID is issued.

# **Tuition and Fees**

#### Tuition and Fees\*

Iowa Resident Tuition	.\$158.00 per hour
Non-Resident Tuition	.\$232.50 per hour
Student Fee per hour	\$14.00
Graduation Fee (per degree, diploma,	cert.) \$25.00
Deferred Payment Charge	\$25.00

The student fee is the only fee that is refundable on a pro-rated basis.

#### 8-Week Online Programs\*

Application Fee	\$25
eBook Fee/credit hour	\$27
Tuition/credit hour\$	315
Tuition/credit hour for military students \$	250

(\*Subject to change. Individual courses may also have additional fees.)

#### Refunds

Tuition and applicable fee adjustments are made for drops/withdrawals according to the following schedule:

#### 15-week semester refund

Session	days	1-5	.100%
Session	days	6-10	75%
Session	days	11-15	50%

Session days are defined as Monday through Friday. Session day count begins with the beginning date of the College term.

Tuition and applicable fee refunds for courses or sessions shorter than fifteen weeks will have proportionally shorter refund periods.

### Transfer of College Credit into Iowa Central Community College

When evaluating transcripts from other regionally accredited, post-secondary institutions, Iowa Central considers the guidelines of AACRAO (the American Association of Collegiate Registrars and Admissions Officers). Iowa Central requires a paper copy of an official transcript sent by the other college to the Student Records Office before credit is placed on the Iowa Central transcript.

### Transfer courses are evaluated in respect to the program and/or major that the student is seeking at Iowa Central:

- All courses taken, including "Fs", are transferred in and are included in the GPA for students seeking an AA, AAA, AS, or APS degree. Students are encouraged to repeat the "F" courses at Iowa Central in order to improve their GPA.
- Only courses required by the program are transferred in for the AAS degree and the one-year diploma programs.
- Military credit transferring in is based on ACE (American Council on Education) recommendations. Credit is not given for military basic training.
- Sixteen hours of Vocational Technical credit applies toward the 16 hours of elective credit for the AA degree.
- Transfer credit is granted by Iowa Central based on the credits granted at the awarding institution. Quarter hours of credit are converted to semester hours. Other unusual credit granting options are looked at based on the narrative on the reverse side of the sending colleges' transcript.

Students are responsible for monitoring their transfer of credit into Iowa Central. Students are encouraged to provide course descriptions or other documentation about their transfer credit if they do not agree with the Registrar's evaluation of their credit. Transfer credit appears on the Iowa Central degree audit with the label of TE.

#### International Transcripts:

Any prospective student (international, permanent resident or U.S. Citizen) who is applying for admission and who has attended a college or university outside the United States must have their international transcript(s) translated by and evaluated by one of the agencies listed below. The evaluation must be sent from the agency directly to Iowa Central Community College, Attn: Student Records Office, One Triton Circle, Fort Dodge, Iowa 50501.

Educational Credential Evaluators, Inc. P.O. Box 514070 Milwaukee, WI 53203 www.ece.org Global Education Group, Inc. 1205 Lincoln Road, Suite 218 Miami Beach, FL 33139 www.globaledu.com

International Education Research Foundation, Inc. P.O. Box 3665 Culver City, CA 90231 www.ierf.org

#### Transfer of College Credit to Regent Universities

lowa's Regent universities and community colleges have joined to create a web portal dedicated to assisting students with the transfer process. The site serves as a one-stop resource for students planning their future. The url for the site is www.transferiniowa.org.

Each year, thousands of students transfer from Iowa community colleges to one of the state's three public universities. Transferring from one college to the next can be a big step, but need not be complicated. The website contains resources helpful in educational planning as well as information for students to discuss with their counselor or advisor.

The number one question transfer students ask is "How will my credits transfer?" Students can learn about how their community college courses transfer to each of the three state public universities by following the links on the website. The website contains resources explaining statewide articulation agreements and individual program-to-program articulation agreements by community colleges. These resources are useful for students planning to transfer as well as counselors and advisors. In addition to online resources, it's always a good idea for students to discuss their plans with both a community college and university counselor or advisor. Contact information for the office or person responsible for transfer and articulation at each postsecondary institution is available on the site.

# ACADEMICS

Accomodations Adult Education/Literacy Advanced Placement/Advanced Standing Assessment of Student Academic Achievement **Attendance Regulations Audit Policy BIT Center Continuing Education Course Cancellation Developmental Education Discontinued Programs/Courses Distance Learning Economic Development Services Educational Opportunities EMS** Training **Enrollment and Assessment General Education** Grades Graduation Honors Long-Term Care **Non-Credit Courses Repeating Courses Scholastic Dishonesty** Semi-Truck Driving Program Weather Related Cancellations/Delays

### Accommodations

The Academic Resource Center staff is committed to providing quality service and support to students with disabilities. Our purpose is to remove barriers for student with disabilities to ensure equal access to educational opportunities. Accommodations are determined on an individual basis for each student who applies for services. A conversation about your experience and expectations will help identify the information necessary to support your accommodation request. For more information, contact 515-574-1045.

## Adult Education/Literacy and High School Equivalency Preparation

Free classes are held throughout the Merged Area V for adults 16 years of age and older to improve basic skill level or study for the five sub-tests of the High School Eqivalency Diploma (HSED) Test. Adult students are assessed to determine beginning skill level and progress. Classes meet weekly and run continuously throughout the year. Practice tests must be taken in classes to qualify for official HSED testing at the Academic Resource Center. English as a Second Language (ESL) classes are also available for students whose first language is not English. ESL classes reinforce English skills in the areas of reading, writing, speaking, and listening. Contact the Adult Education/Literacy Coordinator for further class information.

### Advanced Placement, Credit by Examination and Advanced Standing

Students at Iowa Central Community College may be admitted to courses above the introductory level on the basis of the Advanced Placement Examination (AP), the College Level Examination Program (CLEP) and Advanced Standing credit for career programs.

#### **Advanced Placement Program**

Credit is granted for successfully completing the Advanced Placement Program of the College Board with a score of 3.00 or better.

#### **College Level Examination Program (CLEP)**

Credit is granted for successfully completing Subject and General Examinations of the CLEP program. The Academic Resource Center has the information pertaining to CLEP testing and the guidelines for taking the tests.

#### Transfer of Credit Earned by Examination

#### through the College Level Examination Program (CLEP)

The Regents' universities accept credit earned through CLEP Subject and General Examinations as indicated on the participating community college transcript provided certain minimum scores are achieved. For this credit to be validated at the Regents' university, it must be accompanied by at least 12 semester credit hours of course work completed in residence at the community college.

#### **Advanced Standing**

Advanced Standing credit allows for students to earn credit for skills they bring into Iowa Central. Iowa Central has approved articulated credit from some training programs such as the State of Iowa, Department of Corrections. Iowa Central also awards credit to those who hold certain licenses and other courses may be tested-out for credit. Fees charged for articulation and test-out vary depending on the credit hour equivalent of the applicable course. \$50 is charged for courses of less than 2 semester hours of credit, \$75 is charged for courses of 2-4 semester hours, and \$100 is charged for courses greater than 4 semester hours. Some tests may also have a materials fee. Fees must be paid prior to testing and students must test within the first five days of the semester if they are currently enrolled in the course and want to test out. Students cannot test out if they were enrolled in the course and withdrew or received a grade.

Certain, non-credit courses taken at other institutions can be transferred in at the discretion of the Program Coordinator. Student must submit appropriate documentation to the Program Coordinator. The Program Coordinator will submit final approval to Student Records. Advanced Standing fees will be applied in these cases.

Certain, non-credit courses taken at Iowa Central Community College can be converted to credit courses at the discretion of the Program Coordinator. Student must submit appropriate documentation to the Program Coordinator. The Program Coordinator will submit final approval to Student Records. No Advanced Standing fees will be applied in these cases.

Please see page 150 for Advanced Standing course list.

### Assessment of Student Academic Achievement

Iowa Central Community College is a student-centered, learning-focused institution dedicated to continuous quality improvement in its instructional programs. To ensure that the educational mission of Iowa Central is realized through its curriculum, the Learning Improvement Process (LIP) Team has developed a comprehensive plan of assessment for student mastery of educational outcomes. The purpose and design of this plan is to provide the faculty and administration with evidence linking Iowa Central's educational expectations with students' learning. Such evidence allows the faculty and college to identify strengths and areas for remediation within the curriculum and its delivery system. Areas for improvement are identified and then addressed through academic and institutional planning and budgeting processes. This evidence further provides faculty with information which can be used to improve curricular design and classroom instruction.

Assessment of student academic achievement takes place at all levels within the College. The first assessments encountered by students are placement assessments given to ensure each student's enrollment in the proper writing and math courses. Classroom assessments are the most numerous and are intended to improve the teaching and learning which occur within the class. These classroom assessments are also used to measure student achievement of department and program outcomes as well as institutional outcomes. Pre- and post-exams are given in many classes to establish academic gains in the course. Students are expected to take all assessments activities very seriously because they directly or indirectly affect their future.

The assessment plan is for the purposes of improving learning and advancing the education mission of Iowa Central Community College. The results of assessment are not intended to be measures of the individual student and have no bearing on either a student's successful completion of an individual course or his or her individual progress toward the degree.

The student academic assessment process at Iowa Central has clearly defined goals: • To confirm that student learning is at the heart of every assessment initiative. Student

 To confirm that student learning is at the heart of every assessment initiative. Student learning is the common goal that drives every department and program.

- To use the potential of assessment to promote an environment that encourages learning and curricular innovation.
- To monitor general education requirements.
- To provide valuable feedback for curricular and scheduling processes.
- To ensure the institutional mission is being met.

lowa Central Community College is committed to this process and will monitor the results and use data obtained to improve instruction.

## **Attendance Regulations**

The College places the responsibility of attendance on the student. Regular attendance at classes and laboratory sessions is expected. Faculty are expected to maintain and submit attendance rosters.

#### **Automatic Grade Book Alerts**

Faculty can set thresholds for automatic attendance and grade alerts in the WebAdvisor Grade Book. Look for those notifications via email. Student advisors will also get copies of those alerts. For example, you may get an email when you miss two classes in a row or if your grade falls below 60 percent.

#### Administrative Withdrawal

If class absences exceed 25 percent of scheduled meetings, a student will be administratively withdrawn from a class. Automatic attendance notifications are sent when the number of absences exceed 15 percent and then again at 20 percent. School-sponsored absences do count towards these percentages, but the policy for contacting instructors prior to any such absences to arrange for missed work in advance is in place to prevent such absences from impacting a course grade. Students should talk to instructors about their absences and work with them to make plans for success before the 25 percent is exceeded. Students need to check an instructor's or program's attendance policy in the course syllabus, which may be more specific and grade-related.

#### **Military Service Policy**

If the student receives orders from the Iowa National Guard or reserve forces of the United States to active duty the student has the below options to choose from. This policy can also apply to spouses and parents who receive the military orders as well.

Withdraw: Withdraw from all courses and receive a full refund of tuition and mandatory fees.

Complete Courses: Arrange with the instructor/s for course grades or incompletes that will be completed by a later date as per the Iowa Central Community College Incomplete Grade Agreement. In this case, the tuition and fees are assessed in full for the courses.

Combination of Withdraw and Completion: A mix of grades, incompletes, and withdrawn courses is possible depending on the dialog between the instructor and the student based on timeframe of the course and semester. In this case there would be a mix of refunded tuition and fees for the withdrawn courses and full charges of tuition and fees for the graded and incomplete courses.

#### **Student-Initiated Withdrawal**

If you no longer wish to be enrolled in a class, you are expected to withdraw from the course using the online drop form which is located in WebAdvisor. Students choosing to not use the online drop procedure must pickup a Change of Enrollment Form in the Student Records Office, obtain the instructor's signature and return the form to the Student Records Office for processing. Failure to process a Change of Enrollment form will result in the grade of "F" on your transcript. See the Student Handbook for the the last day to drop a 15-week course in the Fall and Spring Semesters.

#### **Drop/Add Procedure**

**Dropping and adding a course:** Students who wish to drop or add a course should meet with their advisor. For classes running one full semester, the first five (5) days on the College calendar (not necessarily the first five times a class meets of that semester) have been designated to drop (without a "W" on transcript) and add courses.

Drop/Add dates vary for FlexNet and Flexlab courses and courses that run less than one full semester.

Interim and summer classes must be added no later than the first day of class.

#### Withdraw and Total Withdraw from College

Withdrawing from a course: The last day to withdraw from a class for Fall 2016 is November 18th and for Spring 2017 is April 7th. Classes must be withdrawn by these dates so as to not receive an "F" on permanent record. Not attending a class does not constitute a withdrawal. To withdraw from a course, students should log-in to WebAdvisor and click on "Withdraw from Class" to complete the online withdraw form. Students can check the status of their request in the section labeled "Previous Withdraw Requests" on the first screen of the online withdraw. It is the student's responsibility to make sure they have correctly submitted the online withdrawal. Students choosing not to withdraw from a class using the online withdraw procedure must pick up a Change of Enrollment form in the Student Records Office for processing.

Failure to attend class, once registered, does not cancel enrollment in any class or classes. Failure to change enrollment status except according to the above procedure will result in a grade "F" recorded on the permanent record.

A notation of "W" (withdrawal) will be made on the student's permanent record if he/she officially withdraws prior to the published withdraw date.

If you are in need of a copy of your class schedule, stop by the computers across from the Student Records Office.

Withdraw dates may vary for FlexNet and Flexlab courses and courses that are less than one full semester.

Total Withdraw from College: A student who finds it necessary to withdraw from all college courses before the end of the regular term should confer immediately with his or her advisor and then make application to the Student Records Office for total withdrawal. Failure to do so may result in the issuance of failing grades in all subjects for which the student enrolled. There is no withdrawal via telephone. Students receiving Federal Stafford Loans will be directed to do exit counseling at the time of withdrawal. If exit counseling is not completed at the time of withdrawal, the total withdrawal from college will not be processed.

Total Withdraw from College - All FlexNet Courses: Students who are enrolled in all FlexNet courses should log-in to WebAdvisor, click the "Withdraw from Class" link and complete the online withdrawal. Students receiving Federal Stafford Loans, will be directed to online exit counseling and the deadline for completing exit counseling will appear on the page. If the student fails to complete exit counseling before the deadline, the withdraw request is deleted from the system. The student will then have to fill out a new request and the withdraw will be processed as of the new request date. Once exit counseling is completed, the student returns to the "Withdraw from Class" link to submit the exit counseling confirmation number.

# **Audit Policy**

Students may be allowed to audit certain courses. Students who audit will not be held responsible for lesson assignments or tests and will not receive credit for the course. The audit fee is the regular course fee. A course may be audited before or after it is taken for credit. The decision to audit must precede registration. The audit grade is "N".

### Business and Information Technology Center (BIT Center)

The BIT Center is a computer lab located on the first floor of the AST Building (Applied Science and Technology Building). The BIT Center offers 15-16 self-paced courses per semester. These courses are Business Department courses and several are required for some of the programs in the Business Department. Students enrolled at the start of the term will have 15 weeks until the end of the term to complete a course. Students may enroll after the start of the term; however, they will only have the remainder of the term to complete coursework. Regardless of when a student enrolls, all coursework must be submitted by the last day of the term. Depending on individual pace, students may complete a course in less than 15 weeks.

Students receive a Learning Packet with course information and assignments. Assignments can be completed on any computer with the required software or in the BIT Center. Testing must be done in the BIT Center. Instructors are available for assistance during the hours that the BIT Center is open.

Check the lowa Central Web Site for the current course listing and for the  $\ensuremath{\mathsf{BIT}}$  Center hours.

### **Continuing Education**

General adult courses can be customized to meet the needs of small groups of individuals to best serve a particular area of interest. This category includes many hobby, craft and recreational courses as well as a wide variety of general knowledge courses.

### **Course Cancellation**

The college reserves the right to cancel any courses that have insufficient enrollment.

## **Developmental Education**

The goal of Developmental Education is to provide each student with an adequate background in basic skills so that he/she will be successful in college-level courses and ultimately in the workforce. In order to properly place students with diverse skill levels, Iowa Central requires either ACT, SAT, COMPASS, ASSET, ALEKS, or Accuplacer test scores from all students. If it is determined that the student is underprepared in reading, writing, or mathematics skills, he/she is required to enroll in Basic Reading, Reading I, Fundamentals of Writing, Elements of Writing, Fundamentals of Math, or Elementary Algebra. Placement is based on the tables on the previous page (page 20). Developmental courses utilize a classroom lecture and lab format. Developmental course credit <100 does not meet graduation credit requirements for certificate, diploma, general studies, or associate degree programs.

## Communications Department Guidelines for Advancing in Developmental Courses.

Students wanting to advance to the next level of writing or reading from Fundamentals of Writing (ENG-096), Basic Writing (ENG-025), and /or Basic Reading (RDG-048) must have a "CP," obtain the necessary post-test score, or in extenuating circumstances, obtain a letter of recommendation from the instructor indicating that the student may be advanced. Students in Elements of Writing (ENG-101) must earn a "C" or better, obtain the necessary post-test score, or in extenuating circumstances, obtain a letter of recommendation from the instructor indicating that the student may be advanced into college-level classes.

**Math Department Guidelines for Advancing in Developmental Courses** Students wanting to advance to college-level classes from Fundamentals of Math (MAT-045) or Elementary Algebra (MAT-063) must earn at least a "CP" or the necessary post-test score to advance to the next level. In extenuating circumstance, a letter of recommendation from an instructor may be accepted for advancement.

### **Discontinued Programs/Courses**

Students who request a degree from a discontinued program at Iowa Central will be advised regarding their options for completion of a degree. Iowa Central does not guarantee the availability of discontinued courses one year after Board action to discontinue.

# **Distance Learning**

lowa Central Community College serves a diverse student population, with different needs regarding accessibility and convenience of college credit offerings. In an attempt to offer students a variety of methods by which to complete college credit coursework, Iowa Central offers internet, Triton Network, and hybrid classes. Students can take classes this way exclusively, or combine traditional and alternative deliveries.

The College began offering internet courses during the Fall 1998 semester. Convenience to students and flexibility of scheduling are two benefits of distance learning courses. The College strongly recommends that only students with a 3.0 or higher GPA enroll in FlexNet or Online courses. The College has been approved by the Higher Learning Commission to offer Associate Degrees via the internet.

#### FlexNet Courses

Students can enroll in FlexNet courses at any time throughout the term, except within the last four (4) weeks of the term and as long as there is space available in the course. Regardless of when they enroll in the term, all students must complete FlexNet coursework by the last day of the term. Contact the Distance Learning Office for specific dates.

#### **Online Courses**

Online courses are very structured in format design, meaning the courses begin and end with the semester dates. Assignments and discussion postings are required for each week of the course, and students must complete and submit work at the end of each week. Students must enroll, make full payment, and login to online courses by the end of the add/drop period (first five days of the semester) to avoid being administratively withdrawn. Contact the Distance Learning Office for specific dates.

#### 8-Week Online Program

lowa Central offers students the opportunity to enroll and complete Associate Degrees via the 8-Week Online program. In most programs, students enroll in two courses over an eight-week block. The programs are completed 100% via the Internet and offer the flexibility of "attending" class without traveling to campus. The courses are designed to allow students the convenience of working at a time that best fits the needs of the student. Discussion topics are required weekly along with assignments and activities. Each student is assigned to an Admissions Counselor with BEST (Barker Educational Services Team). This Admissions Counselor works closely with each student as he/she enrolls in one of the programs. Many of the services provided to students such as recruiting, advising, and billing are provided in partnership with BEST. The application process, tuition, and other processes may vary due to the nature of the delivery system. For tuition and various fees, please refer to section "Tuition and Fees" in the catalog.

Programs offered via 8-Week Online delivery:

Computer Networking Technology A.A.S Degree began in 2005

Criminal Justice A.S. Degree began in 2006

Associate of Arts Degree began in 2007

Health Care Administration A.S. Degree began in 2008

Human Services A.S. Degree began in 2008

Supply Chain Managemant A.A.S. Degree began in 2011

#### **Triton Network System**

The Triton Network  $\hat{S}$ ystem is a Polycom system that allows courses to be offered via video conferencing. Students at receiving sites view the instruction on the network and interact live with faculty and other students.

#### **Earlybird Courses**

Iowa Central Community College and Area V high schools have formed partnerships to offer high school students opportunities to earn college credits while still in high school. Juniors and seniors are able to enroll and complete Iowa Central courses at their high school, on an Iowa Central campus, or online.

The high school faculty who meet community college faculty credentials are recognized as adjunct faculty and they must follow to the approved Iowa Central syllabus to offer the college-level course within the high school's schedule

#### **PSEO (Post-Secondary Enrollment Options)**

Students attending a public or accredited nonpublic school who are in the 11th or 12th grade are eligible to participate. Students need to consult with their high school to determine other eligibility requirements. Courses offered within PSEO are offered during the Fall and Spring semesters.

#### **Other Partnerships**

A Charter School partnership with Storm Lake Community School District has been created to offer access to various programs available at Iowa Central. The institution also offers courses through a Regional Career Academy located in Eagle Grove.

#### **Distance Learning Financial Aid Attendance Policy**

The following information only applies to students who have financial aid (scholarships, grants, or loans). Federal regulations state that a student must be making academic progress in their classes in order to be eligible for financial aid to be released. In a FlexNet course, attendance requirements are met by submitting work, such as an assignment, quiz, or test in each FlexNet course. The Financial Aid Office will verify established attendance in each student's course/s. This requirement does not require students to submit work each and every week in a FlexNet course.

Please note: In situations where a student unofficially withdraw from courses, lowa Central may be required to return some financial aid to the Federal government. For financial aid purposes, a student unofficially withdraws when the student stops attending class and does not officially complete the withdraw process. The student who unofficially withdraws will have an "F" recorded on the student's transcript and the unofficial withdraw may adversely affect future financial aid eligibility. For questions regarding this policy, please contact the Financial Aid Office at 1-800-362-2793.

Do not confuse this with Online (OL) courses. Online courses have different attendance policies.

#### **Economic Development Services** Iowa Central Community College's Economic Development Services mission is

Iowa Central Community College's Economic Development Services mission is to enhance economic vitality and ensure a competent/competitive workforce for Area V. Iowa Central provides economic development and training services that assist businesses in growth and development, increasing productivity, and enhancing employee skills. The Iowa New Jobs Training Program (260 E) and the Iowa Jobs Training Program (260 F) provide financial assistance to train new or incumbent workers. Financial assisted programs provide customized industrial training for area businesses and industries. Customized training is developed and designed specifically to meet the training needs of Area V companies. Economic Development programs are also used to attract employers to our area and encourage the expansion of existing businesses.

# **Educational Opportunities**

#### College Transfer

lowa Central Community College offers the first two years of a baccalaureate program to students who intend to transfer to a four-year college. Students desiring to transfer should consult with their advisor prior to enrolling to meet the requirements of receiving institutions. Below is a list of degrees offed at Iowa Central.

#### Associate of Arts

An Associate of Arts Degree is awarded to the student successfully completing 60 semester hours of course work with a minimum G.P.A. of 2.00. Requirements for the Associate of Arts selected from the general requirements are:

- 1. Nine (9) hours of Communications (Composition and Public Speaking);
- 2. Eight (8) hours of mathematics and science, at least one (1) course from each area;
- 3. Nine (9) hours of social sciences from any two of three areas;
- 4. Nine (9) hours of humanities from any two of four areas;
- 5. Five (5) hours of distributed courses from the four areas above; and
- 6. One (1) hour of instituional requirement.
- 7. Three (3) hours of computer literacy requirement.

An additional sixteen (16) semester hours are required:

- 1. Sixteen (16) hours of electives from Arts & Science
- 2. Sixteen (16) hours from applied sciences and technologies courses, or
- 3. Sixteen (16) hours of combined electives from one (1) and two (2) above.
- 4. Developmental courses (numbered <100) do not count toward a degree.

#### Associate of Science

An Associate of Science Degree is awarded to the student successfully completing 60 semester hours of course work with a minimum G.P.A. of 2.00. Requirements for the Associate of Science selected from the general requirements are:

- 1. Nine (9) hours of Communications (Composition and Public Speaking);
- 2. Twenty (20) hours of mathematics and science, at least one (1) course from each area;
- 3. Six (6) hours of social sciences from any two of three areas;
- 4. Three (3) hours of humanities from any of the four areas;
- 5. Two (2) hours of distributed courses from the four areas above; and
- 6. One (1) hour of institutional requirement.
- 7. Three (3) hours of computer literacy requirement.
- An additional sixteen (16) catalog hours are required:
- 1. Sixteen (16) hours of electives from Arts & Science
- 2. Sixteen (16) hours from applied sciences and technologies courses, or
- 3. Sixteen (16) hours of combined electives from one (1) and two (2) above.
- 4. Developmental courses (numbered < 100) do not count toward a degree.

#### Associate of Professional Studies - Career Option

An Associate of Professional Studies Degree - Career Option is awarded to the student successfully completing a specific career option program with a minimum G.P.A. of 2.00. Developmental courses (numbered <100) do not count towards a degree. Students enrolled in career option programs are eligible to enter the job market or transfer to a four-year college or university.

#### **Associate of Applied Arts**

An Associate of Applied Arts Degree is awarded to the student successfully completing a specific applied arts curriculum of at least two years with a minimum G.P.A. of 2.00. Developmental education courses (numbered <100) do not count toward a degree.

#### Associate of Applied Science

An Associate of Applied Science Degree is awarded to the student successfully completing a specific applied science and technology curriculum of at least two years with a minimum G.P.A. of 2.00. Developmental education courses (numbered <100) do not count toward a degree.

lowa Central Community College offers a wide variety of applied science and technology programs in the areas of Health Sciences, Business Technologies, and Industrial Technology. Placement services are available to students seeking employment.

#### **Associate of General Studies**

An Associate of General Studies Degree is awarded to the student successfully completing any 60 semester hours with a minimum G.P.A. of 1.80. Developmental education courses (numbered <100) do not apply toward the 60 hours.

#### Diploma

A Diploma is awarded to the student successfully completing an applied science and technology or career option curriculum of less than two years with a minimum G.P.A. of 1.80. Developmental education courses (numbered <100) do not count towards a degree.

#### Certificate

A certificate is awarded to a student in less than one year with a minimum G.P.A. of 1.80.

### **EMS** Training

Iowa Central Community College is an advanced provider of Emergency Medical Services (EMS) training, approved by the Iowa Department of Public Health Bureau of Emergency & Trauma Services section. Courses offered include Emergency Medical Responder, Emergency Medical Technician, Advanced EMT, and Paramedic. Skills taught will range from basic stabilizing techniques, patient assessment and examination to all advanced emergency medical care skills including cardiac evaluation and treatment, medication effects and treatment, and advanced airway management techniques.

### **Enrollment and Assessment**

The Enrollment Services Staff enroll new, current, former and transfer students. They acquaint the students with the courses they will be required to take to meet requirements for program completion. Students are to enroll within the dates given in the college calendar. Consult the college calendar for the last day to register and/or add a course(s).

#### Assessment Q & A

#### Who is required to present scores?

Scores are required for all first-time, full-time students; all part-time students taking math or writing; and all students whose programs require it (such as health programs).

#### What test scores are accepted, and why are scores necessary?

A necessary part of this preparation is being aware of the students' strengths and weaknesses and their goals. In order to obtain this information, Iowa Central requires ACT, SAT, COMPASS, ASSET, Accuplacer, or ALEKS test scores to guide students to appropriate coursework and to eventual academic success. ACT or SAT tests have usually been taken during high school. For those who have not taken them, Iowa Central offers the COMPASS test free of charge (first time) to its students (there is a fee for testing for other schools).

#### In what subjects will I be tested?

Students need to have scores from the three areas: writing, reading, and math.

#### Who is exempt from presenting scores?

Any student with a 2.0 GPA in college-level writing or a 2.0 in college-level math should be exempt from that specific exam.; any person who holds an Associate, Bachelor's, Master's or Doctorate degree should be exempt.; international students with a score of at least 500 (paper) or 133 (computer) on their TOEFL should be required to take COMPASS or ASSET or to present ACT or SAT scores. However, those with less than 500 or 133 should enroll in ESL or Fundamentals of Writing and take the test at a later date.

# **General Education**

#### Definition

General education is the curricular component that promotes lifelong learning regardless of a student's specific technical, vocational, or professional field. General education fosters learner development in the following areas: effective communication, , critical thinking, and personal responsibility.

#### Overview

For the Associate of Applied Science (AAS) Degree, Associate of Applied Arts (AAA) Degree, and the Diploma (D), the mastery of the general education skill groups will be achieved by enrollment in these courses plus some of the courses specific to a program.

#### General Education Component for AAS Degree

The general education component of an AAS degree program shall constitute a minimum of 12 semester hours of credit. The general education component shall include at least one course from each of the following: communications, social sciences and/or humanities, and mathematics and/or science.

#### Generan Education Component for AAA Degree

The general education component of an AAA degree program shall constitute a minimum of 12 semester hours of credit. The general education component shall include at least one course from each of the following: communications, social sciences and/or humanities, and mathematics and/or science.

#### General Education Component for Diploma

The general education component of a diploma program shall constitute a minimum of 3 semester hours of credit from any of the following: communications, social sciences and/or humanities, and mathematics and/or science

# Grades

#### **Requital of Grades**

Requital of Grades is the process of ignoring a student's prior grades when calculating the credits earned, the quality points, etc. and the grade point average. This new calculation is used for the purposes of graduation and other honor considerations.

#### Eligibility Guidelines:

- Students must not have attended any institution of higher education during the previous two years.
- Submit formal application for requital to the Registrar prior to completing 12 credit hours (excluding developmental credits). Students may pick up an application in the Student Records Office.
- 3. Students must earn a minimum GPA of 2.00 for 12 credit hours before grade requital will be indicated on the transcript.
- 4. The requital of grades may be granted only once at Iowa Central and a person's entire transcript will be requited.

#### Results:

- 1. If approved, the notation appears on the transcript and the calculation of the GPA and credit hours earned begin from the semester of requital and is inclusive of the aforementioned 12 credit hours.
- 2. For financial aid purposes, the entire transcript, including requited grades, will be considered.

#### **Grading System**

aung system		
A—Excellent	4 C	Grade Points

- B—Above Average ......3 Grade Points
- C—Average......2 Grade Points
- D—Below Average......1 Grade Point
- F— Failure.....No Grade Points W—Withdrawal. No Grade Points or Credit
- I—Incomplete. No Grade Points or Credit
- L—Advanced Standing
- N—Audit
- X—Repeat (POISE credit taken prior to September 2004)
- R—Repeat (Datatel credit taken after September 2004)
- P—Passing
- Q—No Credit/No Pass
- T—Credit by Testing

#### Grade Designations for Developmental Courses:

AP	Excellent / Not in GPA
BP	Very Good / Not in GPA
CP	Áverage / Not in GPA
DP	Below Average / Not in GPA
FQ	No Pass / No Credit

#### **Changing Grades**

A change of grade, not including a "W," will be accepted by the Registrar only if properly signed and dated by the instructor who taught the course and the division dean. A "W" grade will not be changed.

A Grade Change form will be accepted only for the following reasons:

- 1. An error in grade calculation
- 2. The terms of an Incomplete Grade Agreement were finished
- 3. A successful resolution of the Student Grade Appeal

#### **Incomplete Grades**

An incomplete ("I") grade in a course has an immediate effect on a student's semester GPA. A meeting arranged by the student with the instructor is held to discuss the reason for the incomplete grade. A contract between the student and instructor, stating the details and time schedule of work that is to be made up, must be agreed upon and signed, and must be submitted prior to the end of the term. The maximum time allowed for an incomplete is one year from the start date of the class. After all work is completed, the instructor will make the proper grade changes for the student's permanent record. Incompletes are approved only for unusual circumstances with appropriate documentation.

#### **Final Grades**

Student grades are distributed to Iowa Central students via WebAdvisor.

#### **Student Grade Appeals**

A student who believes a course grade he/she has received is inaccurate may seek an appeal as follows:

- Within 60 calendar days following the end of a course, the student will inform the instructor in writing of questions concerning course grade. The writing will address questions concerning the criteria and procedures the instructor used in determining the grade, the process by which it was assigned, and to request error correction, if any, in the grade.
- 2. Within 14 calendar days after the instructor's receipt of the student's written questions, the instructor will offer to meet with the student to attempt to resolve the questions concerning a grade.
- 3. If after the discussion with the instructor, the student believes that the grade is still inaccurate, the student will meet with the department Dean. This meeting must be scheduled within 10 calendar days after the instructor has offered to meet with the student. Before meeting with the Dean, the student will submit in writing to the Dean his/her questions regarding the grade. The Dean shall meet with the instructor and the student separately and/or together in an effort to resolve the questions regarding the grade.
- 4. If the steps above do not resolve the questions concerning the grade, the student may submit his/her written questions concerning course grade to the Vice President of Instruction no later than 10 calendar days after meeting with the Dean. Within 14 calendar days after receipt of the written questions from the student, the Vice President of Instruction will submit to the student, the instructor, and to the Dean a written decision concerning the grade.
- 5. If the appeal is not resolved to the student's satisfaction, the student may within 10 calendar days of the receipt of the Vice President of Instruction's findings request, in writing, that the College President review the appeal. The President will review the appeal and take such action as he/she deems appropriate including, but not limited to, the recommendation of action to the Board of Directors.

### Graduation

Commencement exercises are designed to provide formal recognition to students who have satisfied the requirements for a certificate, diploma, or associate degree. Students are encouraged to attend the Commencement ceremony at the time of graduation.

Students who plan to receive a certificate, diploma, or associates degree must declare to graduate with Student Records by completing the Graduation Declaration via WebAdvisor. The Graduation Declaration should be completed at the time of registration for the semester prior to the completion of college coursework.

lowa Central Community College grants certificates, diplomas, and associate degrees to certify the successful completion of programs of study.

Students may elect to graduate under requirements stated in the catalog in effect at the time of initial entry or in effect during the term of graduation.

Acceptance of transfer credit by Iowa Central toward a degree does not guarantee acceptance at other colleges. We urge students to consult with the college or university where they intend to transfer for more information.

#### Graduation Requirements:

An award will be granted to all students who:

- 1. Successfully complete hours required for program,
- 2. Complete an approved program,
- 3. Complete at least 12 hours from Iowa Central,
- 4. Maintain the required minimum grade-point average, and
- 5. Pay a graduation fee.

### Honors

#### President's List/Dean's List

The following criteria are needed to be named to the President's List or the Dean's List for the Fall and Spring semesters: 1) Developmental courses will not be considered as part of the criteria (grade point average and credit load); 2) Grades are posted on the transcript within three full weeks of the end of the Fall and Spring terms and not recalculated after that point; 3) Must have completed 6 credit hours that provide quality points for the grade point average for that semester (e.g. pass credit does not provide quality points); 4) Grade point average for that semester for the President's List must be 4.0 (not cumulative), Grade point average for that semester for the bean's List must be 3.5-3.99 (not cumulative). Recipient list is posted on the lowa Central website and lowa Central letters and pins may be picked up at each of the Centers (Student Records in Fort Dodge) for those who qualify.

#### Phi Theta Kappa (International Academic Fraternity)

Iowa Central has a chapter from the Phi Theta Kappa National Junior/ Community College Honor Society Fraternity. For membership into Phi Theta Kappa, the following criteria must be met: 1) Grade point must be 3.5 or higher (cumulative); 2) Must have accumulated 12 hours of college credit; 3) Developmental courses will not be considered as part of the criteria (grade point average and credit load); 4) Grades must be posted on transcript within three full weeks of end of term; 5) There is a one-time membership fee of \$70.00.

#### Iowa Central Honor Society

lowa Central Community College has an institutionally founded Honor Society. For membership into the lowa Central Honor Society, the following criteria must be met: 1) Developmental courses will not be considered as part of the criteria (grade point average and credit load); 2) Grades must be posted on transcript within three full weeks of end of term; 3) Cumulative grade point average of 3.5 or higher after the fall semester of the current school year; 4) Have met the credit hour requirements to graduate during the current academic year. (Honor Society is for students who are graduating; not all students with a 3.5 grade point average qualify.) The induction ceremony for the lowa Central Honor Society is held during the Spring Semester.

### Long-Term Care

The following courses are offered on a need basis throughout Area V: Supervising in Health Care, Medication Manager, 75-Hour Nurse Aide T9905, Certified Medication Aide, and Advanced Nurse Aide.

### **Non-Credit Courses**

lowa Central Community College offers a comprehensive variety of non-credit courses, seminars and workshops that are designed to meet the needs and requests of the residents in Area V. Programs are provided to help students prepare for a specific job, upgrade skills for an existing job, meet certification and recertification requirements, learn basic skills, earn a high school diploma, and increase general knowledge.

A comprehensive program of non-credit courses is made possible through the cooperation of Iowa Central Community College, numerous agencies and organizations in Merged Area V. Courses are offered throughout the year for people of various ages and backgrounds.

#### Starting Dates for Non-Credit Courses

Courses vary according to the program and the length of instruction. Program literature will specify the cost for each individual program/course. Special rates are available for senior citizens for some courses.

### **Repeating Courses**

A student may repeat any course more than once. Only the hours attempted and the grade point earned on the last repeat shall be used in calculating the cumulative grade point average. Withdrawing from a course that is being repeated and receiving a "W" does not erase the previous grades and does not constitute repeating the course. Courses from other colleges may be repeated with a like course at Iowa Central.

Certain courses in music, athletics, etc. may be repeated for cumulative credit. These are participatory courses such as Student Ambassadors, Student Senate, The Collegian, Concert Choir, etc.

# Scholastic Dishonesty

Iowa Central Community College may initiate disciplinary proceedings against a student accused of scholastic dishonesty. Scholastic dishonesty includes, but is not limited to, cheating and plagiarizing. Plagiarism is presenting someone else's words as one's own, whether in writing or in speaking. Cheating and plagiarism, whether intentional or accidental, are serious offenses.

Scholastic dishonesty will not be tolerated in any course. Plagiarism and other forms of cheating are examples of such dishonesty and will result in serious consequences.

One is plagiarizing if one:

- Uses direct quotes without quotation marks and textual citation of the material.
- Paraphrases without crediting the source.
- Presents another's ideas as your own without citing the source.
- Submits material written by someone else as your own (this includes purchasing or borrowing a paper).
- Submits a paper or assignment for which one has received so much help that the writing is significantly different from one's own.

One is cheating if one:

- Copies someone else's exam or homework.
- Purposefully allows another student to copy your work or submit work that you have written as his/her own.
- Refers to a text, notes or other materials during an exam without authorization to do so.
- Submits a paper or assignment for which you have received so much help that the writing is significantly different from your own.
- Passes test answers to another student during or before a test Disciplinary

Action by the Instructor -- An instructor who suspects a student of scholastic dishonesty will inform the student of the allegation as soon as possible. It is up to the instructor to determine the disciplinary action to be taken, which could include giving the student a zero for the assignment, reducing the student's grade for the course, assigning an "F" for the course, or other action. The instructor will send a written report of the incident to the student, the appropriate division dean and the Vice-President of Instruction. If the instructor concludes that the incident merits additional disciplinary action (such as suspension or expulsion), he/she will send a written report of the case to the Vice-President of Instruction for recommended additional disciplinary action.

### Semi-Truck Driving Program

ZST-206 - The PTDI Certified Course is 390 hours. Students will receive either a PTDI Certificate of Attainment or PTDI Seal of Attainment (placed on the Iowa Central certificate). A minimum of 51 Sessions (11 weeks) will be required. The program consists of classroom, pre- and post-trip inspections, cab familiarization, proper shifting techniques (RPM ranges), basic control of equipment, turning, backing, over the road trips. Classes are M-F, 7:00 am-3:30 pm, summer (evenings) session begins in April and operates M-F, 5:00 pm-9:00 pm. Most students average 2,000 miles of driving experience in the program.

ZST-207 - On the Job Training (OJT) consists of 210 hours (4 weeks) with the students new employer (pay will be provided during OJT).

#### **Requirements for Admission:**

- Minimum of 18 years of age or older.
- 2. Must possess a valid driver license.
- Must possess a social security card (metal version not accepted). 3.
- Must have no more than 5 moving violations in the last 3 years." 4
- Must have no suspensions or serious moving violations in the last 12 months. 5
- Must meet all applicable requirements of Federal Motor Carrier Safety Regulations 6. including physical, mental and vision.
- 7 No preventable accidents in the last 12 months.
- No alcohol related offenses in the last 3 years. 8. 9
- No drug related offenses in the last 3 years.\*
- 10. Must be able to verify the last 10 years of work history (if applicable).
- 11. Criminal history must be reviewed and approved prior to starting.

\*Must be approved prior to starting.

Tuition is \$5,500.00 plus \$800 in fees (books/DOT physical & drug test/MVR/ criminal background check & fuel). Housing is available for \$500. Grants and financial aid are available for individuals meeting the financial aid requirements.

#### **Course Description:**

The classroom prepares the student for the concepts of operating a semi-tractor and trailer. The hands on operation applies the learned knowledge into practical application. This time will be spent on inspections (all types), basic control, serpentine driving (control of trailer), backing (all types), proper set ups, turns, shifting, coupling and uncoupling, along with driving (all types) rural, city and interstate conditions. Teaching a student to operate a truck safely at 80,000 pounds will include map reading, trip planning, logging, load securement and proper weight distribution.

### Weather-Related **Cancellations and Delays**

The following guidelines will apply to cancellation or delay of College classes and activities in case of hazardous conditions involving weather:

#### **Cancellation or Delay of Classes**

The decision to cancel or delay classes will be made by the President or by his designee. If classes are delayed or canceled, the message will go to local radio/tv stations by approximately 6 a.m. A text message and email will also be sent to your cell phone if you are a TritonAlert subscriber. No announcement of cancellation or delayed classes via the media will mean that classes will be held as usual that day. At times, due to staff availability or changing weather conditions, there may be a delay in making announcements.

#### **Delay of Classes**

For one hour and one and one-half hour classes students and staff will report to the class with a start time at or after the announced start time. Department staff will define the start time for programs, such as those in the Applied Science and Technology Department, that are not one hour or one and one-half hour in length.

#### Early Dismissal of Classes

Should conditions develop during the day that would dictate that classes be dismissed early, the announcement of such dismissal will be circulated to the buildings by a member of the faculty or administrative staff. Students will not be used to circulate such information. The decision will be made by the President or by his designee.

#### **Evening Classes**

Any decision regarding evening classes (those starting after 5 p.m.) shall be made as soon as possible. Cancellation announcements will be given to local radio stations.

#### Cancellation or Delay of Activities and Non-Credit Classes

Department staff will determine any start time for activities or non-credit classes when the College is closed or opens late.

# **STUDENT LIFE**

**Academic Resource Center** Athletics Billing **Bookstore Career Services Concerts and Lectures Counseling Services Dental Hygiene Clinic Health Services** Housing Intramurals Music **Organizations/Clubs Publications Student Activities Student Ambassadors Student Government** Theatre **TRIO: Student Support Services Triton Enrichment Center Vocational Rehabilitation** 

# Academic Resource Center

The Academic Resource Center offers a range of services to Iowa Central students.

#### Academic Assistance

Regularly scheduled Academic Assistants help students study class materials, proofread papers, and complete assignments. Drop-in academic assistance is a free service available to all Iowa Central students. This is not only for students who are struggling or failing, but also for students who want to raise their grade from a "C" to a "B" or a "B" to an "A". Academic Assistants are located in a designated area in the Academic Resource Center and are available for a variety of subjects. A schedule of available services can be located in the Academic Resource Center or on the Iowa Central website.

Classroom Assistance provides students a designated hour of one-on-one time with an Academic Assistant. This is helpful for students who feel they need more individual and exclusive work with a specific Academic Assistant. The student is registered for Classroom Assistance like a regular class for credit and is graded as Pass/Fail. One hour of Classroom Assistance is the cost of one credit hour and students may register for up to 4 hours per week of Classroom Assistance for the price of 4 credit hours.

Online tutorial help is provided through Smarthinking.com. Students can access up to 7 hours of help each year with writing, math, science, business, and many other fields of study through this online service. Smarthinking.com is accessed through TritonPass and is available 24/7.

#### Accommodations

The Academic Resource Center staff is committed to providing quality service and support to students with disabilities. Our purpose is to remove barriers for student with disabilities to ensure equal access to educational opportunities. Accommodations are determined on an individual basis for each student who applies for services. A conversation about your experience and expectations will help identify the information necessary to support your accommodation request. For more information, contact 515-574-1045.

#### Information Media/Online Library

A wide variety of media including books, DVDs, and periodicals is located in the Academic Resource Center. Computers, printers, headphones, and webcams are provided for student use. Photocopying and color printing are available for a nominal fee.

Online services are available both on and off campus: EBSCOhost is a periodical database that offers access to thousands of articles and books; NAXOS allows students to listen to the world's most comprehensive collection of classical and jazz music; Films on Demand provides instant access to outstanding documentaries and films; and Opposing Viewpoints Resource Center is an electronic version of the immensely popular Opposing Viewpoints series which provides a balanced look at hundreds of current issues.

The Academic Resource Center staff provides research assistance and helps with the use of computers.

#### Testina

Academic Resource Center staff administers make-up/accommodated tests for Iowa Central courses as well as standardized tests.

A few guidelines that students need to be aware of are listed below:

- All testers must present a photo ID that shows their first and last names. - A valid photo ID is required for testing.
- All jewelry and personal items must be left in lockers during an exam.
- Pockets will be empty during testing.
- No hoods, coats, jackets, or hats are allowed in the testing room.
- All scratch paper and pencils will be provided by the Testing Center. Scantrons will need to be supplied by the student.
- No electronic books/tablets are allowed during open book exams. It is the student's responsibility to obtain a hard copy of the book for use in the Testing Center.
- No food or drinks, other than bottled water in a clear plastic container with all labels removed, will be allowed in the Testing Room. All water that is allowed must be kept on the floor.
- All testing must be completed in one sitting and turned in before closing time. - Leaving the testing station/room after the exam has been distributed is not
- permitted unless prior approval has been granted.
- Exam accommodations need to be arranged with the Academic Assistance and Accommodations Coordinator (515.574.1045) or with the testing organization.
- Accommodated tests should be taken in the Testing Center during scheduled class time. A make-up time can be arranged with the instructor if classes are scheduled back-to-back.
- Students with accommodations for a reader and/or private testing room must schedule an appointment at least 2 days in advance with the appropriate Testing Center (Fort Dodge, Storm Lake, or Webster City).

- Accommodated exams are the only exams given in the Testing Center during finals week.
- No children are allowed in the Testing Center.
- Academic dishonesty will not be tolerated.
- Iowa Central is not responsible for lost, stolen, or damaged items.
- Refusal to comply with the above guidelines will result in denial of Testing Center services.

# **Athletics**

Iowa Central has a balanced intercollegiate athletic program with competition in men's basketball, baseball, bowling, cross country, football, golf, rodeo, rugby, soccer, sports shooting, swimming, tennis, track & field, and wrestling. Women compete in basketball, bowling, cross country, golf, rodeo, soccer, softball, sports shooting, swimming, tennis, track & field, and volleyball. These sports can lead to championship play in the Iowa Area Community College Athletic Association and the National Junior College Athletic Association.

Also, students can participate on the Cheer Team, Dance Line, and Athletic Marching Band. These are not recognized by the NJCAA as intercollegiate sports.

# Billing

The College's Business Office is located in the Student Support Services Building. This is the office responsible for maintaining the financial records for all students. Students who enroll in credit and/or non-credit courses will have their tuition and fee charges appear on their student account. Students can view their student account activity using WebAdvisor. The Business Office sends out periodic billing statements, answers question regarding charges, and receives payments on accounts.

Payments for tuition and fees are due in full prior to the start of classes, although a deferred payment plan is available for eligible credit courses in the fall and spring semesters.

Student accounts not paid in full will be referred to the College's collection agency. Iowa Central also participates in the State of Iowa Offset Program operated by the Iowa Department of Administrative Services to collect overdue account balances.

### **Bookstore**

The main objective of the bookstore is to help students fill their book and supply needs as promptly as possible. The bookstore is also available to the general public with help in locating books and supplies for their personal and business needs. Along with textbooks and school supplies, items such as clothing, greeting cards, personal supplies, stamps and mail service are available.

For added convenience to students, many textbooks and apparel items are available for purchase through the Online Bookstore.

### **Career Services**

One of the main objectives of the Career Services Office is to educate students on job seeking skills and connect students & alumni with job opportunities. The Career Services office also provides a variety of job seeking services including; resume development and critiquing, interview preparation, on-campus interviews, occupational information, job searching resources, labor market information and career fairs. Information on these job seeking services can be found on the Career Services website located on Iowa Central's homepage under "Career Services." The Career Services website also provides the ability for students & alumni to view and search for full-time and part-time job openings.

## Concerts and Lectures

lowa Central students have the opportunity to attend a wide variety of professional entertainment on campus. Some performances are held during noon hours in the Student Resource Center while others are available during the evening and on weekends. Plays, concerts, and lectures held on campus as well as those sponsored by cooperating organizations are generally available with the student ID or a special student price. Students also have wonderful opportunities to participate in many of these performances through the performing arts group on campus.

# **Counseling Services**

Free student counseling services are available to all current students. Office hours are Monday-Thursday from 8:00 AM- 5:00 PM and Friday from 8:00 AM- 4:30 PM in the Applied Science and Technology (AST) Building, Office 117G. Services include short-term counseling, consultations, and referrals. Students can fill out an appointment request form through TritonPass under the "Student Forms" section.

# **Dental Hygiene Clinic**

All Iowa Central students who present their identification card may receive dental hygiene services for free including a dental examination, X-rays, teeth cleaning and athletic mouth guards. For more information regarding services, students can contact the Dental Hygiene Clinic at 574-1327 or online at the Iowa Central Dental Hygiene web page.

## **Health Services**

Student health is located in the Applied Science and Technology building. A registered nurse is available as a resource for the health concerns of students. The service offers emergency treatment for injury or illness and assistance in obtaining the services of local physicians and agencies, if necessary. Confidential counseling on health-related problems is available. The service also provides health awareness programs on stress, nutrition, substance abuse, wellness issues, etc. A student accident and insurance plan is available.

# Housing/Apartments

Fully furnished apartment living is provided with amenities including an adequate-sized kitchen with a range and refrigerator, living room, good-sized bath, and two bedrooms, all in the midst of campus life. They are spacious and well built, with a level of quality not typically found in many apartment developments. They include cable, wireless networking and the convenience of a safe campus environment.

Also on campus is the Woodruff Complex which offers furnished traditional style dorms, studio style apartments, and more apartment style living.

Our student housing staff includes the Director of Housing, four Associates of Housing, and Resident Assistants in each building. Security cameras are also installed in the parking lots.

An all-you-can-eat meal plan is also provided. It is offered in a 19-meals per week plan. Membership to the Iowa Central Rec Center is also included.

Unmarried students under 21 years of age who do not commute daily to and from their parent's or legal guardian's home are not required to live in college-approved housing (but are encouraged to do so).

Contracts for the Iowa Central housing facilities may be requested online at www. iowacentral.edu/housing/index.asp or by contacting the Iowa Central Community College Housing Office at 515-574-1086, One Triton Circle, Fort Dodge, IA 50501.

## Intramurals

A well-rounded intramural program is provided for all college students. Competition takes place in such sports as football, volleyball, softball, and basketball. Other activities are organized from the student body on a voluntary sign-up basis.

# Music

lowa Central has long been known for its Music Department. Our ensembles have performed throughout the area. Both vocal and instrumental opportunities are available through the Concert Choir, Encore Singers, Jazz Band, and Concert Band. Fall performance opportunities, Spotlight on the Stars, the Holiday Concert, the annual musical production, and a spring Showcase concert are scheduled in Decker Auditorium on campus. Tours each spring, along with many guest appearances throughout the state keep music students active.

# **Organizations/Clubs**

lowa Central Community College sponsors a wide variety of student clubs and organizations dealing with certain areas of study, as well as social opportunities. New clubs or organizations must go through the Student Activity Office for approval to function on campus. Membership must be made up of lowa Central students with a full-time staff member as an advisor. Organizations and clubs that are sanctioned are allowed representation in the student government and can incorporate "lowa Central" into its name. Organizations that do not qualify to be sanctioned may become recognized, allowing members to meet on campus. The College does not have fraternities and sororities, and it is against policies to form one on or off campus.

# **Publications**

The college's national award-winning student newspaper, called the *lowa Central Collegian*, is published twice per semester, and the online edition is updated every two weeks. Students interested in writing, advertising, layout and photography are encouraged to join the staff, especially those who are familiar with or interested in learning the computer program Adobe InDesign.

# **Student Activities**

Student activities at Iowa Central meet the wide variety of interests of students, from the arts and athletics to clubs and cookouts. Throughout the year, professional entertainers are scheduled in Decker Auditorium and the Student Resource Center. Bingo nights, athletic events, intramurals, dances, Iowa Central Performing Arts Department performances, plus cookouts, coffee houses, and comedians are among the many planned events that take place during the year. The college student ID card allows students free admission to most campus events and can be used at any center of Iowa Central to take advantage of the numerous activities.

# **Student Ambassadors**

The Enrollment Management and Student Development Office accepts applications for ambassadors in the Student Ambassador Program. Ambassadors are required to devote 48 hours per semester giving College tours, phone calling and acting as host/hostess for activities sponsored by the President's Office and Enrollment Management and Student Development. One semester hour of college elective credit per semester is available for participating students. A maximum of four semester hours may be earned.

## **Student Government**

lowa Central's Student Government consists of a governing body known as the Student Senate of Iowa Central Community College. The purpose of the Student Senate is to insure that all students enrolled at Iowa Central have the opportunity to achieve the best education. The main function of the Student Senate is to discuss campus issues and make recommendations to the College Administration regarding college policies, regulations, practices, and procedures. Active involvement in the planning and implementation of student activities, civic events, and community service projects sponsored by the Student Senate are a major focus of the organization. Meetings of the Student Senate begin on the first Tuesday of every school year, and all students are encouraged to attend and to get involved by becoming a member.

## Theatre

The college provides opportunities for students to participate in theatre and musical productions each year. Auditions, practices, and performances are held at the Fort Dodge Center. All Iowa Central students are encouraged to participate regardless of experience. Those not interested in performing on-stage might consider helping with other areas such as stage lighting, makeup, costume design, and set construction. The fall play is in October, and the spring musical is in February or March.

# **TRIO: Student Support Services**

Student Support Services, a federal grant TRIO program funded by the U.S. Department of Education, is designed to help students achieve academic and personal success in college. Twenty six colleges and universities in Iowa host SSS programs, and these programs serve almost 5,000 college students. SSS at Iowa Central Community College offers a variety of services to enhance students' potential to successfully complete their educational program. Services offered include peer tutoring, academic advising, transfer assistance, information workshops, financial aid and grant aid assistance, cultural and social activities, a study and computer area, proofreading, career advising, and job shadowing.

# **Triton Enrichment Center**

Triton Enrichment is available, without charge, to currently registered students. Office hours are Monday-Thursday from 8:00 a.m. – 5:00 p.m. and Friday from 8:00 a.m.-4:30 p.m. Triton Enrichment is located in Student Support Services in room 124. These services help connect students to all resources on campus. In addition, this services offer mentoring, success coaching, goal setting, getting involved, computer use, a relaxing environment, and much more.

# **Vocational Rehabilitation**

Vocational rehabilitation services are available to individuals who have physical or mental disabilities. The Iowa Division of Vocational Rehabilitation Services and Iowa Central Community College maintain a cooperative agreement that enables rehabilitation counselors to serve Iowa Central Community College students on campus. Rehabilitation services for eligible persons include medical and psychological assessment, vocational assessment, counseling and guidance, physical and/or mental restoration devices, adaptive equipment, job training, occupational tools, and job placement.

# TRANSFER INFORMATION

College Transfer Majors College and University Transfer Information Transfer Agreements Associate of Arts Degree Articulation Agreement Transfer of Vocational-Technical Credits Buena Vista University - Fort Dodge Center

# **College Transfer Majors**

The two-year Associate in Arts Degree from the Arts and Sciences Division of lowa Central will enable a student to enter four-year colleges and universities as a junior prepared to complete work toward a bachelor's degree in any number of major fields of study. Here is a partial list of majors students could select at a 4-year institution after their freshman and sophomore years at Iowa Central.

Accounting Advertising Aerospace Engineering Agriculture Business Agriculture Education Agronomy Animal Science Anthropology Apparel Design Architecture Art & Design Athletic Trainer Aviation Biochemistry Biology Botany Broadcasting **Business Administration** Chemistry Child Care Child & Family Services Chiropractic **Civil Engineering** Coaching Communication **Computer Science Consumer Food Science** Criminology **Dairy Science** Dental Hygiene Dentistry Dietetics - Food & Nutrition Early Childhood Education Earth Science Ecology **Economics** Electrical Engineering **Elementary Education** English Entomology Environmental Studies & Planning Family & Consumer Sciences Ed Family Resource Management Farm Operations Fashion Merchandising Finance Fisheries Food Science Forestry French Genetics Geography German Government History Horticulture Housing Hospital Management Hotel & Restaurant Management Industrial Engineering Interior Desian International Business International Relations Journalism Law Leisure Studies

Liberal Arts Library Science Literature Management Marketing Mass Communication Mathematics Mechanical Engineering Medical Technology Medicine Meteorology Microbiology Mortuary Science Music Nuclear Engineering Nuclear Medical Technology Nursing Nutritional Science Occupational Therapy Optometry Pharmacy Philosophy Physician Assistant Physics Physical Education Physical Therapy Physician Plant Pathology Podiatry Political Science Psychology Public Administration **Public Relations** Radiology Radio/TV Journalism Recreation Religion Sociology Social Science Social Work Soil Management Spanish Special Education Speech Education Speech Communication Statistics Theatre Transportation & Logistics Veterinary Medicine Virology Wildlife Biology Zoology

# College and University Transfer Information

The following courses of study are examples of how courses taken at Iowa Central meet requirements for various majors at selected four-year institutions in Iowa. The outlines are intended as guidelines for students planning to enter the profession listed. The list is not all inclusive, and students should consult with their advisors concerning requirements for their individual bachelor degree programs.

The courses of study have been compiled with the assistance of each senior college. Due to possible changes after printing, **students must assume the re-sponsibility for their own course of study.** Students are advised to correspond with their advisors, the admissions office and the department at the college where they plan to transfer.

# **Transfer Agreements**

Potential transfer students should be aware that the lowa community colleges and lowa's Public Universities have jointly developed a number of agreements to facilitate student transfer. Some of these may be of particular benefit to students. Among these agreements are the following:

# Iowa Community Colleges/ Iowa's Public Universities Associate of Arts (AA) Degree Articulation Agreement

Students who complete an AA degree at an Iowa community college and who subsequently enroll at one of Iowa's Public Universities are considered to have met freshman and sophomore level general education requirements for certain Bachelor's degrees under the terms specified in the agreement.

# Transfer of Vocational-Technical Credits

lowa's Public Universities accept up to 16 semester credit hours of vocational-technical courses for transfer towards a Bachelor's degree from the community colleges provided those credits apply to the AA degree at the host community college and the other Iowa community colleges. You do not have to obtain an AA degree, however, to have this credit awarded.

There are opportunities for completing a Bachelor of Applied Studies at a University after completing your Associate of Applied Science at Iowa Central. See your advisor for more information.

## Buena Vista University -Fort Dodge Center

The Fort Dodge Center of Buena Vista University opened in February 1975. This unique partnership of a public and a private institution serves the region by offering a Bachelor of Arts degree program in Fort Dodge. Students complete the first two years as Iowa Central Community College students and the junior and senior year as Buena Vista University students.

The Center appeals particularly to employed persons who cannot relocate to complete their four-year degrees. In addition to the large evening program, daytime classes are offered in several fields. Students can complete their degrees while maintaining their home and job responsibilities.

Evening courses meet twice a week for eight weeks. Five terms make up one school year. The normal course load is two courses per term, thus 30 hours are completed each year.

#### Admission

The Buena Vista Fort Dodge Center is classified as a junior-/senior-level college. Persons who have completed an Associate of Arts degree or two years of college work (60 semester hours) with an acceptable grade point average qualify for admission.
#### **Graduation Requirements**

The Center has an open admissions policy, but an overall cumulative grade point average of 2.0 is necessary for graduation. For those pursuing teacher certification, a grade point average of 2.5 for the total program and in each major and minor field is required.

#### Academic Programs

Buena Vista offers the following programs at the Fort Dodge Center:

Accounting **Bachelor of Applied Studies Business Administration Business Education** Criminology & Criminal Justice Distributive Major Elementary Education English English with Teaching Licensure (5-12) English with Teaching Licensure (Grades K-8) Health Services Leadership (Distributive) History Human Services (Distributive) Management Organizational Leadership Psychology Social Science Sociology Technology Management (Distributive)

#### **Endorsements & Certification**

Middle School Endorsement (5-8) Post-Baccaulaureate Certification Program Pre-Kindergarten/Kindergarten Secondary School Certification Special Education Endorsement

A significant aspect of the Fort Dodge Center is the personalized academic counseling and course programming available to students. Students planning to complete full four-year programs at Iowa Central and Buena Vista/Fort Dodge are encouraged to plan their programs with assistance from the advisors at both institutions.

Several types of financial aid are available to Buena Vista/Fort Dodge students. Persons wishing information about registration and transfer procedures, degree requirements, or financial aid should contact the Buena Vista/Fort Dodge Center office on the main floor of the Iowa Central Community College Liberal Arts Building. Telephone: (515) 576-4881 or 1-800-798-4881.

# PROGRAMS OF STUDY

Health & Beauty Management ......64 Health Care Administration ......65 History ......66 Human Services ......66 HVAC Technology/Technician ......65 Industrial Business ......67 Industrial Mechanics ......67 Industrial Robotics & Automation ......68 Liberal Arts & Science ......68 Mathematics ......69 Medical Assistant ......70 Medical Laboratory Technician ......71 Medicine ......72 Modern Languages ......72 Mortuary Science ......73 Music .....73 Nursing - Associate Degree ......74 Nursing - Practical ......75 Optometry ......76 Pharmacy ......76 Physical Education ......77 Physical Therapy .....77 Political Science/Government ......78 Pre-Law .....78 Process Plant Technology ......79 Professional Photography ......80 Psychology ......80 Radiologic Technology ......81 Religious Studies ......82 Sciences ......82 Social Sciences ......83 Sociology .....83 Supply Chain Management ......84 Theatre ......85 Turfgrass Management ......86 TV and Radio Production ......87 Veterinary Medicine ......87 Web Technology ......88 Welding Technology ......88

Accounting Associate ......40 Administrative Specialist ......41 Agriculture ......42 Agriculture Technology ......42 Art .....43 Athletic Training ......44 Automotive Collision Technology ......44 Auto Restoration Technology ......45 Automotive Technology ......45 Baking & Pastry Arts ......46 Biotechnology ......46 Business ......47 **Business Administration ......47** Carpentry ...... 48 Chiropractic ......48 Coaching Authorization ......49 Computer Integrated Fabrication Technology ......50 Computer Networking Technology ......51 Computer Repair ......51 Criminal Justice ......52 Culinary Arts & Hospitality Management ......53 Dental Hygiene ......54 Dentistry ......55 Deisel Technology ......55 Dietetics & Food Science ......56 **Digital Mass Comunications ......56** Education - Early Childhood ......57 Education - Elementary ......57 Education - Secondary ......58 Electrical Technologies ...... 58 Electrical/Mechanical Technician ......59 Emergency Medical Services ......60 Engineering ......61 Engineering & Design Technology ......61 English/Communications ......62 Family & Consumer Science ......62 Fire Science ......63 Geography ......63 Graphics Technology ......64

# **Accounting Associate Program**

### Diploma/Associate of Professional Studies (APS)/Associate of Arts (AA)

The accounting profession is seeking highly-motivated, dedicated and well-educated people. The field is especially attractive and fulfilling to those who have good problem-solving skills and enjoy working with people.

The Accounting Associate Program offers students the opportunity to enter the work force after completion and/or to further their education. Students progress through the sequence of courses their first year to obtain an Accounting Assistant Diploma. Upon successful completion of a second year of study, students will also earn an Associate of Professional Studies degree in the Accounting Associate Program. A third option also exists for those wishing to complete the Associate of Arts transfer degree.

Courses in the program are offered utilizing hands-on, active learning approaches. The two-year program culminates with the Practicum, on-the-job training in an accounting-related position with an area employer.

**First Semester** 

<b>Program of Study</b>	- Accounting Assistant (Diploma)
First Semester	Sem. Hrs.
ACC-111	Intro to Accounting or
ACC-142	Financial Accounting*
CSC-110	Intro to Computers
ENG-105	Composition I 3
MAT-157	Statistics** or
	Math Elective
ECN-120	Principles of Macroeconomics**
ADM-131	Office Calculators1
SDV-108	The College Experience*
	Total Hours
Second Semester	Sem. Hrs.
ACC-311	Computer Accounting3
ACC-142	Financial Accounting or
ACC-146	Managerial Accounting*3
ACC-364	Excel for Accounting
ENG-106	Composition II
ACC-108	Pavroll Applications 3
	Total Hours 15
	Accounting Assistant Diploma Total Hours 32
Summer Semester	Sem. Hrs.
	numanities Elective
Program of Study	- Accounting Associate (APS Degree)
	Jatama diata Association I
ACC-211	Cast Association
ACC-221	Cost Accounting
SPC-112	Public Speaking
	Social Science Elective**
	Humanities Elective** <u>3</u>
	Total Hours15
Fourth Semester	Sem. Hrs.
ACC-932	Internship
ACC-701	Certified Bookkeeping Review
ACC-266	Tax Accounting3
	Science Elective**3
	Humanities Elective** <u>3</u>
	Total Hours15
	Assessmenting a Assessing ADC Designed Tetal Harris (4

#### \*Required for A.P.S. degree

\*\*See current A.S./A.A. degree requirements

Students taking the A.A. Accounting Transfer option will also receive the Accounting Assistant Diploma with the suggested sequence of courses. Course selection may differ depends upon the transfer institution requirements.

\*\*\*Program requirements: Must pass all classes with the prefix ACC with a "C" or better for Graduation.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 33 (Diploma), 66 (APS) Campus: Fort Dodge Department: Business CIP#: 5203010200

MAT-157	Statistics	4
ECN-120	Principles of Macroeconomics	3
ADM-131	Office Calculators	1
SDV-108	The College Experience	<u>1</u>
	Total Hours	18
Second Semester	Sem	. Hrs.
ACC-311	Computer Accounting	3
ACC-146	Managerial Accounting	3
ACC-364	Excel for Accounting	3
FNG-106	Composition II	3
	Payroll Applications	3 3
ACC-100	Tatal Hours	15
		15
Third Semester	Sem	. Hrs.
Third Semester MAT-158	Sem Statisitics II	. Hrs.
Third Semester MAT-158 ECN-130	Sem Statisitics II Principles of Microeconomics	. <b>Hrs.</b> 3 3
Third Semester MAT-158 ECN-130	Sem Statisitics II Principles of Microeconomics Social Science Elective**	. Hrs. 3 3 3
Third Semester MAT-158 ECN-130	Sem Statisitics II Principles of Microeconomics Social Science Elective** Science Elective**	. Hrs. 3 3 3
Third Semester MAT-158 ECN-130	Sem Statisitics II Principles of Microeconomics Social Science Elective** Science Elective** Humanities Elective**	. Hrs. 3 3 3 3 3
Third Semester MAT-158 ECN-130	Sem Statisitics II Principles of Microeconomics Social Science Elective** Science Elective** Humanities Elective**	<b>. Hrs.</b> 3 3 3 3 3 3 15
Third Semester MAT-158 ECN-130	Sem Statisitics II Principles of Microeconomics Social Science Elective** Science Elective** Humanities Elective** Total Hours	
Third Semester MAT-158 ECN-130 Fourth Semester	Sem Statisitics II Principles of Microeconomics Social Science Elective** Humanities Elective** Total Hours Sem	
Third Semester MAT-158 ECN-130 Fourth Semester SPC-112	Sem Statisitics II Principles of Microeconomics Social Science Elective** Science Elective** Humanities Elective** <b>Total Hours</b> Sem Public Speaking	. Hrs. 3 3 3 3 3 3 15 15
Third Semester MAT-158 ECN-130 Fourth Semester SPC-112	Sem Statisitics II Principles of Microeconomics Social Science Elective** Humanities Elective** Total Hours Sem Public Speaking Humanities Elective**	
Third Semester MAT-158 ECN-130 Fourth Semester SPC-112	Sem Statisitics II Principles of Microeconomics Social Science Elective** Humanities Elective** Total Hours Public Speaking Humanities Elective** Humanities Elective**	
Third Semester MAT-158 ECN-130 Fourth Semester SPC-112	Sem Statisitics II Principles of Microeconomics Social Science Elective** Humanities Elective** Total Hours Public Speaking Humanities Elective** Humanities Elective** Distributive Requirements**	I. Hrs. 

Program of Study - Accounting Transfer (AA Degree)

Sem. Hrs.

lowa Central also offer a "Numbers at Night" program designed for working adults. All accounting courses are offered in a face-to-face classroom via night delivery on Monday and Thursday evenings. The remainder of the courses are available via FlexNet, online, or night delivery.

Software training will include Microsoft Word, Microsoft Access, Microsoft PowerPoint, Microsoft Excel, Taxcut, Quickbooks Pro, Peachtree, and Payroll Integrated Software.

AA Degree Total Hours ...... 62

# **Administrative Specialist**

### Certificate/Diploma/Associate of Applied Science (AAS)

Today's businesses have sophisticated equipment such as computers, copiers, scanners, telephones, and video display projectors to name a few. Businesses everywhere need employees who can operate these machines efficiently and productively. The Administrative Specialist program at Iowa Central provides students the opportunity to learn and to improve the technical and communication skills that today's business offices demand.

Students learn to refine their spoken, written, and listening communication competencies. They have ample opportunity to work cooperatively and in team settings. In addition, they are encouraged to develop the work attitudes employers value most-dependability, initiative, follow-through, cooperation, and human relations.

In the technical skills area, students strive to increase their speed and accuracy at the keyboard and on the calculating machine, to apply business math concepts, and to learn general accounting principles. Students also develop the essential computer applications of word processing, spreadsheet, database management, and Web publishing. They are well prepared for Microsoft certification and placement in a business environment.

#### Program of Study - Office Assistant (Diploma) Fir

st Seniester	Jenn HIS
BUS-161 Human Relations	3
ADM-112 Keyboarding**	
BUS-102 Intro to Business	
CSC-110 Intro to Computers*	
ADM-260 Personal Development	1
ENG-105 Composition I	
Total Hours	

Second Semester		Sem. Hrs.
ADM-148	Transcription	2
ADM-162	Office Procedures	3
ADM-116	Keyboarding II	3
ACC-111	Introduction to Accounting	3
BUS-121	Business Communications	

\*OR (BCA-122, BCA-146, BCA-164, and BCA-174)

\*\*Student must complete a 3-minute timed writing with a minimum speed of 35 words per minute with three (3) or fewer errors. If this minimum is not met, the student will be required to enroll in ADM-105 Intro to Keyboarding as a pre-requisite.

ADM-131 Office Calculators ......1 ADM-258 Professional Development......1

Total Hours......16

Summer Semester	Sem. Hrs.
ADM-941	Practicum2
	Total Hours 2

Summer semester is optional for Office Assistant Diploma. The practicum is also applicable for the A.A.S Degree.

> Office Assistant Diploma Total Hours ...... 32/34

Program of Study -	Administrative	Specialist (AAS	5 Degree)
--------------------	----------------	-----------------	-----------

Third Semester	-	Sem. Hrs.
BUS-180	Business Ethics	3
ACC-364	Excel for Accounting.	3
CIS-256	Dreamweaver I or	
BCA-251	Publisher or	
GRA-176	Layout Design I	3
ADM-108	Keyboarding Skill Development	1
ADM-180	Administrative Management	3
	Program Elective****	<u>3</u>
	Total Hours	
Fourth Semester		Sem. Hrs.
Fourth Semester BUS-112	Business Math***	Sem. Hrs.
Fourth Semester BUS-112 ADM-941	Business Math*** Practicum	Sem. Hrs. 
Fourth Semester BUS-112 ADM-941 ADM-297	Business Math*** Practicum Certification Preparation	Sem. Hrs. 
Fourth Semester BUS-112 ADM-941 ADM-297 ADM-146	Business Math*** Practicum Certification Preparation Integrated Applications	Sem. Hrs. 
Fourth Semester BUS-112 ADM-941 ADM-297 ADM-146 BCA-252	Business Math*** Practicum Certification Preparation Integrated Applications Access for Business Apps	Sem. Hrs. 
Fourth Semester BUS-112 ADM-941 ADM-297 ADM-146 BCA-252	Business Math*** Practicum Certification Preparation Integrated Applications Access for Business Apps Program Elective****	Sem. Hrs. 

\*\*\*Course may be substituted with a related course from the approved general education course list.

\*\*\*\*See Program Coordinator for approved list and description of courses to fulfill electives

Administrative Specialist A.A.S. Degree Total Hours63	
Applicable toward A.A. Degree Total Hours40	

### The following program requirements must be met: Minimum GPA of 2.0 cumulative

Minimum "C" grade required in: ADM-112 Keyboarding ADM-116 Keyboarding II ADM-146 Integrated Applications ADM-941 Practicum

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 32 (Diploma), 63 (AAS) Campus: Fort Dodge Department: Business CIP#: 5204010200

# Agriculture

### Associate of Arts (AA)

lowa Central offers a unique educational program in Agriculture. Typically, the first two years of the program are taken at Iowa Central and the final two years are completed at a four-year University. Courses will be selected to align with specific programs at four-year institutions.

#### Suggested Program of Study:

English/Speech Com	munication - 9 cr. required	Sem. Hrs.
ENG-105	Composition I	3
ENG-106	Composition II	3
SPC-112	Public Speaking	3
Math and Science - 8	cr. required	Sem. Hrs.
MAT-140	Finite Math	3
MAT-157	Statistics	4
	or	
MAT-210	Calculus I	4
	or	
MAT-127	College Algebra & Trigonometry	
BIO-102	Introductory Biology	3
BIO-102	Introductory Biology Lab	1
DIO-105	or	
PIO 112	General Rieleaw I	1
CUM 110	Introduction to Chamistry	
	Introduction to Chemistry Lab	
CHIVI-111	Introduction to Chemistry Lab	
CHM-165	or General Chemistry I	4
Social Science - 9 cr.	required	Sem. Hrs.
	Social Science Elective*	3
	Social Science Elective*	3
	Social Science Elective*	3
Humanities - 9 cr. rec	uired	Sem. Hrs.
	Humanities Elective*	3
	Humanities Elective*	3
	Humanities Elective*	3
Computer Literacy - 3	5 additional hours required from above c 3 cr. required	ategories 5 Sem. Hrs.
030-110	Introduction to Computers	
College Experience		Sem. Hrs.
SDV-108	College Experience	1
Electives - 16 cr. requ	ired	Sem. Hrs.
AGA-852	Principles of Crop Production	3
AGS-113	Survey of the Animal Industry	3
ΔGR_225	Introduction to Agriculture Markets	2
VCP-500	Introduction to Renewable Resources	ع ۲
VCB 330	Farm Business Management	ວ
AGE-330	Swine Production	
ACC EES	Beef Production	
ACB 122	Introduction to A g Pusiness	
AGB-133	A surface literal Calas	
AGB-330	Agricultural Sales	
AGE-219	Equine Science	3
AGA-154	Fundamentals of Soil Science	3
AGA-155	Fundamentals of Soil Science Lab	1
AGA-380	Integrated Pest Management	4
AGP-336	Precision Agriculture	3
AGC-129		
100 040	Sustainable Agriculture	3
AGC-940	Sustainable Agriculture On-the-Job Training	3 3
AGC-940 AGH-221	Sustainable Agriculture On-the-Job Training Principles of Horticulture	3 3 3
AGC-940 AGH-221 AGA-271	Sustainable Agriculture On-the-Job Training Principles of Horticulture Advanced Corn and Soybean Production	3 3 3
AGC-940 AGH-221 AGA-271 ACC-142	Sustainable Agriculture On-the-Job Training Principles of Horticulture Advanced Corn and Soybean Production Financial Accounting	
AGC-940 AGH-221 AGA-271 ACC-142 ACC-146	Sustainable Agriculture On-the-Job Training Principles of Horticulture Advanced Corn and Soybean Production Financial Accounting Managerial Accounting	
AGC-940 AGH-221 AGA-271 ACC-142 ACC-146 AGP-330	Sustainable Agriculture On-the-Job Training Principles of Horticulture Advanced Corn and Soybean Production Financial Accounting Managerial Accounting Advanced GPS	

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge Department: Industrial Technology CIP#: 2401010200

# Agriculture Technology

### Associate of Applied Science (AAS)

In the dynamic realm of today's agriculture, this program is designed to prepare students for the production, retail, and service aspects of the agriculture industry. Students will gain employable skills through such courses as animal science, crop production, farm business management, and field studies. In addition, students will receive practical experience in some of the largest agricultural businesses in the Midwest. The college farm also provides the resources for students to apply many farm management skills. Upon the completion of this Associate of Applied Sciences program, students may seek full-time employment in agriculture or may choose to continue their education.

Program of Study First Semester AGS-113 AGC-201 AGA-852 ACC-111	Survey of the Animal Industry American Agricultural History* Principle of Crop Production Introduction to Accounting	Sem. Hrs. 
	Total Hours	<u>3</u> 15
Second Semester		Sem. Hrs.
AGB-206 AGC-318 AGB-235	Field Ops & Management I Field Studies/Career Opps Introduction to Ag Markets***	3 3 3
	Ag Tech Electives** Total Hours	<u>6</u> 15
Summer Session		Sem. Hrs.
AGB-934	Ag Tech Fast Track Courses: Must complete 3 credit hours from the AGM-101 Ag DSL Tractor/Equip. Main. AUT-121 Small Engines (1), CON-100 Basi ELE-162 Basic Wiring (1), CON-130 Concr Total Hours	
Third Semester		Sem. Hrs.
AGA-154	Fundamentals of Soil Science Lab	3 1
AGB-207	Farm Ops & Management II	3
	Ag Tech Electives**	6
	Total Hours	<u>3</u> 16
Fourth Semester		Sem. Hrs.
AGA-380	Integrated Pest Management	4
AGB-330	Farm Business Management Ag Tech Electives**	3
BUS-112	Business Math or	
	Math Elective*	<u>3</u>
	Total Hours	

\*Elective must be chosen from the current approved general education course list. \*\*Ag Tech electives must be chosen from the list below. \*\*\*Satisfies General Education Elective.

Fall Electives AGS-308	Livestock Management Techniques	Sem. Hrs.
AGH-221	Principles of Horticulture	3
AGF-338 AGC-940	On The Job Training	
AGB-133	Introduction to Ag Business	3
AGS-401 AGB-336	Ag Sales	
IND-127	Shop Operations	1
WEL-122 BUS-113	Beginning Welding Workplace Readiness	2 1.5
Spring Electives	Sustainable Agriculture	Sem. Hrs.
//00/12/		2
AGS-553	Beef Production+	3
AGS-553 AGE-219 AGA-271	Beef Production + Equine Science	
AGS-553 AGE-219 AGA-271 AGA-390	Beef Production+ Equine Science Adv. Corn & Soybean Production+ Introduction to Renewable Resources	
AGS-553 AGE-219 AGA-271 AGA-390 AGC-940 AGP-330	Beef Production + Equine Science Adv. Corn & Soybean Production + Introduction to Renewable Resources On The Job Training. Advanced GPS	3 3 3 3 3 3 3

+ Third or Fourth Semester Classes Only

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 65 Campus: Fort Dodge Department: Industrial Technology CIP#: 0101020200

### Art

### Associate of Arts (AA)

The Art Department provides a problem solving structure in which students can explore ideas, enhance visual perception and develop creative thinking skills. Students will acquire basic visual vocabulary, an understanding of the "story" of art and an appreciation of the contribution of artists to the fabric of society. Art classes at lowa Central are designed to provide a complete curriculum for art majors planning to transfer into a four-year art program, as well as exploratory courses designed for the non-art major. To succeed in art, students need an active imagination, a curious mind and perseverance to acquire the skills relevant to the design process. Students planning to major in art should enroll in a variety of art courses offered at lowa Central.

#### Suggested Program of Study:

		Sem. Hrs.
ART-101	Art Appreciation	3
PSY-111	Introduction to Psychology	3
ENG-105		3
SDV-108	I ne College Experience	I
CSC-110	Introduction to Computers	ວ
	Tatal Haura	<u>ې</u> <u>ې</u>
	Iotal Hours	
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
POL-111	American National Government	3
MAT-111	Math for Liberal Arts	4
ART-133	Drawing	3
	Studio Course	<u>3</u>
	Total Hours	16
Third Semester		Sem. Hrs.
Third Semester ART-203	Art History	Sem. Hrs.
Third Semester ART-203 SPC-112	Art History I Public Speaking	Sem. Hrs. 
Third Semester ART-203 SPC-112 BIO-102	Art History I Public Speaking Introductory Biology	Sem. Hrs. 
Third Semester ART-203 SPC-112 BIO-102 BIO-103	Art History I Public Speaking Introductory Biology Introductory Biology Lab	Sem. Hrs. 
Third Semester ART-203 SPC-112 BIO-102 BIO-103	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course	Sem. Hrs. 3 3 3 1 3
Third Semester ART-203 SPC-112 BIO-102 BIO-103	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course	Sem. Hrs. 3 3 1 1 3 1 3 1 3
Third Semester ART-203 SPC-112 BIO-102 BIO-103	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course Total Hours	Sem. Hrs. 3 3 1 3 13 Score Here
Third Semester ART-203 SPC-112 BIO-102 BIO-103	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course <b>Total Hours</b>	Sem. Hrs. 3 3 1 3 13 Sem. Hrs.
Third Semester ART-203 SPC-112 BIO-102 BIO-103 Fourth Semester ART-204	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course <b>Total Hours</b> Art History II	Sem. Hrs. 3 3 1 3 13 Sem. Hrs. 3 2
Third Semester ART-203 SPC-112 BIO-102 BIO-103 Fourth Semester ART-204 REL-105 SOC 110	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course <b>Total Hours</b> Art History II Introduction to Religion Introduction to Sociology	Sem. Hrs. 3 3 1 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester ART-203 SPC-112 BIO-102 BIO-103 Fourth Semester ART-204 REL-105 SOC-110	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course <b>Total Hours</b> Art History II Introduction to Religion Introduction to Sociology Studio Course	Sem. Hrs. 3 3 1 3 3 3 3 Sem. Hrs. 3 3 3 3 3 3
Third Semester ART-203 SPC-112 BIO-102 BIO-103 Fourth Semester ART-204 REL-105 SOC-110	Art History I Public Speaking Introductory Biology Studio Course Total Hours Art History II Introduction to Religion Introduction to Sociology Studio Course Studio Course	Sem. Hrs. 3 3 3 3 3 3 3 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester ART-203 SPC-112 BIO-102 BIO-103 Fourth Semester ART-204 REL-105 SOC 110	Art History I Public Speaking Introductory Biology Introductory Biology Lab Studio Course <b>Total Hours</b> Art History II Introduction to Religion Introduction to Religion	Sem. Hrs. 3 3 1 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3

It is strongly recommended that students who intend to transfer into art and design majors take additional studio work, selecting from the following classes:

Painting I & II Graphic Design I & II Ceramics I & II Photography I & II

# Athletic Training

### Associate of Arts (AA)

The Athletic Training degree at Iowa Central Community College will allow students to gain valuable experience in the field of Athletic Training while still obtaining the Associate of Arts degree for transfer to the 4-year institution of their choice. The curriculum is rich in Physical Education and Science to give the student a strong understanding of the human body, anatomy, and physiology as well as experience working with athletes in the college setting.

Athletic Training students will have the opportunity to work with men's and women's athletic teams that compete at the National Junior College Athletic Association (NJCAA) Division II level. Athletic teams include Baseball, Men's and Women's Basketball, Softball, Men's and Women's Rodeo, Men's and Women's Golf, Men's and Women's Soccer, Wrestling, Volleyball, Football, Men's and Women's Track and Field, Men's and Women's Cross Country, and Men's and Women's Swimming.

Within the program, the students will embark on field experience on the playing and practice fields as well as a work clinical where the student will gain experience as an athletic trainer in the workplace. During these clinical experiences, the students will be assigned to an approved clinical instructor (ACI) at various settings both on and off campus. Through these assignments, the students are exposed to the various aspects of organization and administration of the athletic training program while utilizing the athletic training staff as a resource. This wide range of experience enhances the total development of each athletic training student's skills.

#### Suggested Program of Study:

First Semester		Sem. Hrs.
ENG 105	Composition I	3
PEH 141	First Aid	2
PSY 111	Introduction to Psychology	3
BIO 168	Human Anatomy & Physiology I w/lab	4
PET 105	Basic Athletic Training	3
SDV 108	The College Experience	<u>1</u>
	Total Hours	16
Second Semester	Composition II	Sem. Hrs.
ENG 100	Latra ta Computera	
	Nutrition	ວ
BIO 131 BIO 173	Human Anatomy & Physiology II w/lab	3 A
DIO 173	Secial Science Elective*	4 2
		<u>5</u> 16
Third Semester		Sem. Hrs.
Third Semester SPC 112	Public Speaking	Sem. Hrs.
Third Semester SPC 112 BIO 102	Public Speaking Introductory Biology**	<b>Sem. Hrs.</b> 
Third Semester SPC 112 BIO 102 BIO 103	Public Speaking Introductory Biology** Introductory Biology Lab**	Sem. Hrs. 
Third Semester SPC 112 BIO 102 BIO 103 MAT 157	Public Speaking Introductory Biology** Introductory Biology Lab** Statistics**	Sem. Hrs. 
Third Semester SPC 112 BIO 102 BIO 103 MAT 157	Public Speaking Introductory Biology Lab** Statistics** Humanities Elective*	Sem. Hrs. 
Third Semester SPC 112 BIO 102 BIO 103 MAT 157	Public Speaking Introductory Biology ** Introductory Biology Lab** Statistics** Humanities Elective* Humanities Elective*	Sem. Hrs. 
Third Semester SPC 112 BIO 102 BIO 103 MAT 157	Public Speaking Introductory Biology ** Introductory Biology Lab** Statistics** Humanities Elective* Humanities Elective* Total Hours	Sem. Hrs. 
Third Semester SPC 112 BIO 102 BIO 103 MAT 157	Public Speaking Introductory Biology** Introductory Biology Lab** Statistics** Humanities Elective* Humanities Elective* Total Hours	Sem. Hrs. 3 3 1 4 3 3 1 7 Sem. Hrs.
Third Semester           SPC 112           BIO 102           BIO 103           MAT 157   Fourth Semester CHM 165	Public Speaking Introductory Biology** Introductory Biology Lab** Statistics** Humanities Elective* Humanities Elective* <b>Total Hours</b> General Chemistry**	Sem. Hrs. 3 3 4 3 3 3 17 Sem. Hrs. 4
Third Semester           SPC 112           BIO 102           BIO 103           MAT 157   Fourth Semester CHM 165 PEH 185	Public Speaking Introductory Biology ** Introductory Biology Lab** Statistics** Humanities Elective* Humanities Elective* Total Hours General Chemistry** Contemporary Health Issues	Sem. Hrs. 3 3 4 3 3 1 7 Sem. Hrs. 4 3 3 17 Sem. Hrs. 4 3 3 17
Third Semester SPC 112 BIO 102 BIO 103 MAT 157 Fourth Semester CHM 165 PEH 185	Public Speaking Introductory Biology ** Statistics** Humanities Elective* Total Hours General Chemistry** Contemporary Health Issues Social Science Elective*	Sem. Hrs. 3 3 1 4 3 3 <b>1</b> 4 <b>3</b> <b>3</b> <b>17</b> Sem. Hrs. 4 3 3 <b>3</b> <b>3</b> <b>1</b> <b>4</b> <b>3</b> <b>3</b> <b>3</b> <b>4</b> <b>4</b> <b>4</b> <b>5</b> <b>6</b> <b>6</b> <b>6</b> <b>6</b> <b>7</b> <b>7</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b> <b>1</b>
Third Semester SPC 112 BIO 102 BIO 103 MAT 157 Fourth Semester CHM 165 PEH 185	Public Speaking Introductory Biology ** Statistics** Humanities Elective* Humanities Elective* Total Hours General Chemistry** Contemporary Health Issues Social Science Elective* Humanities Elective*	Sem. Hrs. 3 3 1 4 3 3 <b>1</b> 4 <b>3</b> <b>17</b> Sem. Hrs. 4 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester SPC 112 BIO 102 BIO 103 MAT 157 Fourth Semester CHM 165 PEH 185	Public Speaking Introductory Biology** Statistics** Humanities Elective* Humanities Elective* Total Hours General Chemistry** Contemporary Health Issues Social Science Elective* Humanities Elective* General Education Course***.	Sem. Hrs. 3 4 3 3 1 7 Sem. Hrs. 4 3 3 3 3 3 3 3 3 3 3 3 3 3

\*Course must be chosen from appropriate AA/AS general education list

 $\star\star To$  ensure best transfer, student and advisor should confirm Math and Science classes with transfer institution

\*\*\*Must be selected from areas I-IV section of AA degree sheet

# **Automotive Collision Technology**

### **Diploma/Associate of Applied Science (AAS)**

The Automotive Collision Technology Program will train students to work in all levels of the Auto-Body repair and restoration industry. Students will learn the necessary electrical systems, suspension and steering systems, panel repair and replacement, paints and refinishing and repair estimating. Students may graduate with a diploma in Automotive Collision after successful completion of first and second semesters. Students can continue to third and fourth semesters to complete an Associate in Applied Science (A.A.S) Degree.

Program of Study:		
First Semester		Sem. Hrs.
MAT-743	Technical Math*	3
CRR-303	Introduction to Auto Body Repair	3
CCR-337	Beginning Metal & Filler Work	3
CRR-110	Auto Body Welding	3
CRR-204	Repair of Plastics & Adhesives	3
CRR-309	Auto Body Prep and Masking	<u>3</u>
	Total Hours	
Consul Composition		C
Second Semester		Sem. Hrs.
CRR-850	Computerized Paint Mixing	3
CRR-807	Auto Body Refinishing	3
CRR-401	Panel & Door Skin Replacement	3
CRR-813	Advanced Auto Body Repair & Refinish.	3
CRR-501	Frame Machine Use	3
	Humanities/Social Science Elective*	<u>3</u>
	Total Hours	

Students may graduate with a diploma in Automotive Collision after successful completion of first and second semester. Students can continue to third and fourth semesters to complete an Associate in Applied Science (A.A.S) Degree.

Third Semester		Sem. Hrs.
CRR-910	Auto Body Rebuild Project I	3
CRR-345	Adv. Metal Sectioning & Repair	3
CRR-852	Custom Painting & Airbrush	3
CRR-620	Electrical Mechanical Systems	3
CRR-415	Restraint Systems	3
	Communications Elective*	3
	Total Hours	
Fourth Semester		Sem. Hrs.
CRR-612	Introduction to Suspension & Steering	3
CRR-612 AUT-703	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst	3 ems3
CRR-612 AUT-703 CRR-911	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst Auto Body Rebuild Project II	3 ems3 3
CRR-612 AUT-703 CRR-911 CRR-750	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst Auto Body Rebuild Project II Damage Estimating & Shop Operations	3 .ems3 3
CRR-612 AUT-703 CRR-911 CRR-750 CRR-817	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst Auto Body Rebuild Project II Damage Estimating & Shop Operations Buffing and Detailing	3 ems3 3 3 3
CRR-612 AUT-703 CRR-911 CRR-750 CRR-817	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst Auto Body Rebuild Project II Damage Estimating & Shop Operations Buffing and Detailing General Education Elective*	
CRR-612 AUT-703 CRR-911 CRR-750 CRR-817	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst Auto Body Rebuild Project II Damage Estimating & Shop Operations Buffing and Detailing General Education Elective* Total Hours	
CRR-612 AUT-703 CRR-911 CRR-750 CRR-817	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst Auto Body Rebuild Project II Damage Estimating & Shop Operations Buffing and Detailing General Education Elective* Total Hours	
CRR-612 AUT-703 CRR-911 CRR-750 CRR-817 <b>Optional</b> BUS 112	Introduction to Suspension & Steering Automotive Heating & Air Condition Syst Auto Body Rebuild Project II Damage Estimating & Shop Operations Buffing and Detailing General Education Elective* Total Hours	

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefixes: CRR, AUT.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge Department: Business CIP#: 2401010200 Enrollment Date: Fall Semester Minimum Required Credits: 36 (Diploma), 72 (AAS) Campus: Fort Dodge Department: Industrial Technology CIP#: 4706030200

# **Auto Restoration Technology**

### Associate of Applied Science (AAS)

The Auto Restoration Technology Program will train students in the steps involved in restoring, welding, customizing, fabricating, custom painting, various ways of metal stripping and custom design. Along with the use of specialty tools and equipment used in today's custom shops.

The first year in this program is identical to the first year of the Auto Collision Technology program of study. Therefore, students could complete the two-year Auto Collision program and stay an addition year to complete the 3rd and 4th semesters of the Auto Restoration Program. Otherwise, students would follow the Auto Restoration program of study and complete their degree in two years.

#### Program of Study:

First Semester		Sem. Hrs.
CRR-303	Introduction to Auto Body Repair	3
CRR-337	Beginning Metal and Filler Work	3
CRR-110	Auto Body Welding	3
CRR-204	Repairs of Plastic & Adhesives	3
CCR-309	Auto Body Prep and Masking	3
MAT-743	Technical Math <sup>*</sup>	3
	Total Hours	
Second Semester		Sem. Hrs.
CRR-850	Computerized Paint Mixing	3
CRR-807	Auto Body Refinishing	3
CRR /01	Panel and Door Skin Replacement	3
CRR 813	Advanced Auto Body Repair & Refinish	3
CPP 501	Frame Lice Machine	ວ
CIVIC-301	Humanitias/Casial Salanaas Elastiva*	
	Total Hours	<u>ఎ</u> 10
	Iotal Hours	
Third Semester	Introduction to Auto Postoration	Sem. Hrs.
CRR-104	Introduction to Auto Restoration	
CDD 105		2
CRR-105	Introduction to Speciality Tools	3
CRR-105 CRR-111	Introduction to Speciality Tools Street Rod Welding	3
CRR-105 CRR-111 CRR-341	Introduction to Speciality Tools Street Rod Welding Metal Fabrication	3 3 3
CRR-105 CRR-111 CRR-341 CRR-346	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping	3 3 3
CRR-105 CRR-111 CRR-341 CRR-346	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective*	
CRR-105 CRR-111 CRR-341 CRR-346	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* Total Hours	
CRR-105 CRR-111 CRR-341 CRR-346	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* Total Hours	
CRR-105 CRR-111 CRR-341 CRR-346	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* Total Hours	
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I	
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-853	Introduction to Speciality Tools Street Rod Welding Metal Fabrication. Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting	
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-853 CRR-613	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting Altered Steering and Suspension	
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-853 CRR-853 CRR-613 CRR-914	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting Altered Steering and Suspension Restoration Project II	3 3 3 3 3 3 3 3 3 18 Sem. Hrs. 3 3 3 3 3 3 3 3
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-853 CRR-614 CRR-914 CRR-887	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting Altered Steering and Suspension Restoration Project I I Complete Refinish & Detail	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-913 CRR-613 CRR-914 CRR-887	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting Altered Steering and Suspension Restoration Project II. Complete Refinish & Detail. General Education Elective*	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-853 CRR-613 CRR-914 CRR-887	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting Altered Steering and Suspension Restoration Project II Complete Refinish & Detail General Education Elective* <b>Total Hours</b>	
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-853 CRR-813 CRR-914 CRR-887	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting Altered Steering and Suspension Restoration Project II Complete Refinish & Detail General Education Elective* <b>Total Hours</b>	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-853 CRR-613 CRR-914 CRR-887 Optional	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* <b>Total Hours</b> Restoration Project I Custom Street Rod Painting Altered Steering and Suspension Restoration Project II Complete Refinish & Detail General Education Elective* <b>Total Hours</b>	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
CRR-105 CRR-111 CRR-341 CRR-346 Fourth Semester CRR-913 CRR-613 CRR-613 CRR-914 CRR-887 Optional BUS-113	Introduction to Speciality Tools Street Rod Welding Metal Fabrication Metal Stripping Communications Elective* Total Hours Restoration Project I Custom Street Rod Painting Altered Steering and Suspension Restoration Project II Complete Refinish & Detail General Education Elective* Total Hours	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: CRR.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

# **Automotive Technology**

### Associate of Applied Science (AAS)

The Automotive Technology program is designed to prepare students for employment in the fast paced, ever-changing, high technology automotive service industry and to update those currently employed in the automotive industry. During the first year of the program, students develop competence in servicing today's automotive systems and additional diagnostic and repair expertise on automotive engines, heating and air conditioning systems, fuel and exhaust systems, ignition and emission systems, and suspension and steering systems. During the second year of the program, the diagnostic and repair emphasis is concentrated in the areas of advanced engine repair, manual transmissions and trans-axles, automatic transmissions and trans-axles, automotive electronics, power train control systems, and advanced brake systems. Upon successful completion of the Automotive Technology course of study, students will receive an Associate of Applied Science Degree.

Sem. Hrs.

#### **Program of Study:** First Semester MAT-743 AUT-164 Automotive Engine Repair ......4 AUT-610 Auto Electrical I ......4 AUT-879 Automotive Lab I.....1

Second Semester		Sem. Hrs.
AUT-304	Manual Transmissions	4
AUT-172	Advanced Engine Repair	2
AUT-404	Steering & Suspension	4
AUT-205	Automatic Transmissions	5
	Humanities/Social Science Elective*	3
	Total Hours	
Third Semester		Sem. Hrs.

AUT-856	Scan Tools	1
AU1-658	Automotive Electrical II	3
AUT-538	Advanced Braking Systems	1
AUT-831	Diesel Hybrid	3
AUT-659	Automotive Advanced Electrical	3
AUT-704	AC & Heating	4
	Communications Elective*	<u>3</u>
	Total Hours	18
Fourth Semester		Sem. Hrs.
Fourth Semester AUT-828	Automotive Ignition Systems	Sem. Hrs. 4
Fourth Semester AUT-828 AUT-835	Automotive Ignition Systems Automotive Fuel Systems	Sem. Hrs. 4 4
Fourth Semester AUT-828 AUT-835 AUT-801	Automotive Ignition Systems Automotive Fuel Systems Engine Performance	Sem. Hrs. 
Fourth Semester AUT-828 AUT-835 AUT-801 AUT-882	Automotive Ignition Systems Automotive Fuel Systems Engine Performance Automotive Lab II	Sem. Hrs. 4 4 4 4 4 4
Fourth Semester AUT-828 AUT-835 AUT-801 AUT-882	Automotive Ignition Systems Automotive Fuel Systems Engine Performance Automotive Lab II General Education Elective*	Sem. Hrs. 4 4 3 3
Fourth Semester AUT-828 AUT-835 AUT-801 AUT-882	Automotive Ignition Systems Automotive Fuel Systems Engine Performance Automotive Lab II General Education Elective* Total Hours	Sem. Hrs. 4 4 3 3 3 18
Fourth Semester AUT-828 AUT-835 AUT-801 AUT-882	Automotive Ignition Systems Automotive Fuel Systems Engine Performance Automotive Lab II General Education Elective* Total Hours	Sem. Hrs. 4 4 3 3 18

BUS-113 Workplace Readiness ......1.5

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: AUT.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Fall Semester Minimum Required Credits: 72 Campus: Fort Dodge Department: Industrial Technology CIP#: 4706990200

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 72 Campus: Fort Dodge Department: Industrial Technology CIP#: 4706040200

# **Baking and Pastry Arts**

### Diploma

The Baking & Pastry Arts one-year diploma program will introduce students to modern techniques of producing artisan breads, classic pastry, pies, tarts, celebration cakes, confections and showpieces. Students will acquire skills in the preparation, production and presentation of baked goods, desserts and pastries, while also becoming proficient in food safety and cost control. Students will also complete an on-the-job training practicum in an industry field of their choice to complete their well-rounded diploma program.

#### Program of Study:

First Semester		Sem. Hrs.
HCM-108	Safety and Sanitation	3
HCM-128	Basic Baking and Lab	2
HCM-131	Basic Pastry and Lab	2
HCM-291	Cake Decorating	2
HCM-299	Creative Desserts	3
HCM-259	Jams, Jellies, and Preservatives	2
HCM-513	Hospitality Professionalism	1
	Total Hours	
Second Semester		Sem. Hrs.
HCM-293	Advanced Cake Decorating	2
HCM-194	International Breads	2
HCM-297	Chocolate Confections	2
HCM-129	Advanced Baking and Lab	2
HCM-132	Advanced Pastry and Lab	2
HCM-266	Culinary Math*	3
HCM-517	Hospitality Professionalism II	1
BUS-113	Workplace Readiness*	<u>1.5</u>
	Total Hours	15.5
Summer Session		Sem. Hrs.
HCM-511	Food Technology Internship	<u>3</u>
	Total Hours	
	Diploma Total Hours	33.5

.

\*Course may be substituted with a related course from the approved general education course list.

# Biotechnology

### Associate of Applied Science (AAS)

The AAS Biotechnology degree offers extensive hands-on training for students who desire to work in specialized vocations associated with the manufacture of biologically-based products. The biotechnology/biofuels industry seeks employees with excellent analytical skills, accurate documentation skills, and the ability to operate and maintain sophisticated equipment. Successful completion of the biotechnology degree will provide students with the knowledge and skills necessary to be competitive in the biotechnology labor market. Beginning in the first year of the program, students will have the opportunity to visit area industries to observe the practical application of information obtained during classroom instruction. Students will be required to complete an internship before graduation.

### Program of Study:

First Semester	Sem. Hrs.
BIO-112 General Biology I	4
or	
BIO-102 Introductory Biology	3
and	
BIO-103 Introductory Biology Lab	1
BPT-162 Introduction to Biotechnology	2
BPT-163 Introduction to Biotechnology Lab.	1
CHM-165 General Chemistry I	4
or	
CHM-110 Introduction to Chemistry	3
and	
CHM-111 Introduction to Chemistry Lab	1
PSY-111 Introduction to Psychology	3
or	
BUS-161 Human Relations	<u>3</u>
Total Hours	14
and Semester	Sem Hrs
ENV-111 Environmental Science	4
BPT-148 Biotechnology Methods I	3
BPT-149 Biotechnology Methods I Lab	1
CHM-130 Introduction to Organic and Bioche	mistry* 3
CHM-131 Introduction to Organic and Bioche	mistry Lab* 1
ENG-105 Composition I	3
or	-
ENG-111 Technical Writing	
Total Hours	
hree Semester	Sem. Hrs.
BPT-120 Molecular and Cellular Biology	
BPI-152 Biotechnology Methods II	4
PHY-162 College Physics I	4
or DUN(404 A L' LDL :	
PHY-184 Applied Physics	
MAI-157 Statistics	
	2
MAI-150 Discrete Math	<u>)</u>
Iotal Hours	14/15
urth Semester	Sem. Hrs.
BPT-154 Biotechnology Methods III	4
BIO-186 General Microbiology	4
BPT-220 Biotechnology Workforce Readines	s3
SPC-112 Public Speaking	3
or	
BUS-121 Business Communication	<u>3</u>
Total Hours	
Immor Socion	Sam U
BPT-932 Internship	Jem. nrs.

\*Student may substitute Organic Chemistry I & II, CHM-261 & CHM-271 (in a 2 semester sequence), for Intro to Organic and Biochemistry w/Lab, CHM-130 & CHM-131.

Enrollment Date: Fall Semester Minimum Required Credits: 33.5 Campus: Fort Dodge Department: Business CIP#: 1205010100 Enrollment Date: Fall Semester Minimum Required Credits: ????? Campus: Fort Dodge Department: Liberal Arts and Sciences CIP#: 2612010200

### **Business**

### Associate of Professional Studies (APS)

The Associate of Professional Studies degree in Business is designed to offer students the flexibility of placement in a business position upon graduation or the opportunity to complete a curriculum that will satisfy most Business Administration requirements at four-year colleges. Students will have many choices in the selection of courses to develop their specific business skills in general business, accounting, office administration, or web development.

Upon graduation, successful students will have the background necessary to move into entry-level positions in the field of business. An option is given for students to participate in practicum courses. These courses will give students valuable experience as they work in local businesses during their course of study.

#### Suggested Program of Study:

First Semester		Sem. Hrs.
SDV-108	The College Experience	1
ENG-105	Composition I	3
ECN-120	Principles of Macroeconomics	3
MAT-157	Statistics***	
	or	
MAT-140	Finite Math	3
ACC-142	Financial Accounting	
	Humanities Elective*	3
	Total Hours	

econd Semester		Sem. Hrs.
ENG-106	Composition II	
ECN-130	Principles of Microeconomics	3
CSC-110	Intro to Computers	3
ACC-146	Managerial Accounting	3
MGT-101	Principles of Management	<u>3</u>
	Total Hours	

Summer Session BUS-932	Internship (Optional)	<b>Sem Hrs.</b> 3
Third Semester		Sem. Hrs.
SPC-112	Public Speaking	3
BUS-185	Business Law 1	3
BUS-130	Introduction to Entrepreneurship	3
	Social Science Elective*	
	Humanities Elective*	
	Business Elective**	
	Total Hours	

#### Fourth Semester MKT-110

S

•••		••••••
0	Principles of Marketing	
	Business Elective**	
	Business Elective**	
	Humanities Elective*	
	Science Elective*	4
	Total Hours	

Som Hrs

\*Social Science/Humanities/Science electives must be chosen from the current approved A.P.S. degree requirements.

\*\*Business electives must be chosen from the prefixes ACC, ADM, BCA, BUS, CIS, GRA, MAT, MKT, or MGT.

\*\*\*Statistics Lab is a suggested course.

Program is pending Department of Education approval.

# **Business Administration**

### Associate of Arts (AA)

Business graduates from four-year universities can expect work in all sectors of business, from small businesses and entrepreneurial start-ups to large Fortune 500 corporations and government agencies. Students can start their progression toward business career goals by completing a large part of their general education and core business courses at Iowa Central. In addition, the Business and web technology, and multimedia. Scholarships, field trips, state and national competitions, along with experienced business instructors help students succeed in today's business world.

Employment for business graduates exists in both profit and nonprofit organizations across the nation as well as internationally. Iowa Central's Business Administration program provides students opportunities to explore the many facets of business and also provides the necessary preparation for further study at a four-year institution.

The following schedule is a guide to obtain an Associate of Arts Degree from lowa Central Community College. Students should check with the transfer institution on specific requirements. Additional courses may be required before taking a college-level English or Mathematics course.

#### Suggested Program of Study:

First Semester	-	Sem. Hrs.
CSC-110	Introduction to Computers	3
ENG-105	Composition I	3
MAT-157	Statistics	4
ACC-142	Financial Accounting	3
SDV-108	The College Experience	1
	Humanities Elective*	<u>3</u>
	Total Hours	17
Second Semester		Sem. Hrs.
ACC-146	Managerial Accounting	3
ENG-106	Composition II	3
	Math Elective*	3
	Humanities Elective*	3
	Science Elective* & Lab	<u>4</u>
	Total Hours	16
Third Semester		Sem. Hrs.
Third Semester BUS-185	Business Law 1	<b>Sem. Hrs.</b>
Third Semester BUS-185 ECN-120	Business Law 1 Principles of Macroeconomics	Sem. Hrs. 
Third Semester BUS-185 ECN-120 SPC-112	Business Law 1 Principles of Macroeconomics Public Speaking	Sem. Hrs. 
Third Semester BUS-185 ECN-120 SPC-112	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective*	Sem. Hrs. 
Third Semester BUS-185 ECN-120 SPC-112	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective*	Sem. Hrs. 3 3 3 3 3 3 3
Third Semester BUS-185 ECN-120 SPC-112	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective* <b>Total Hours</b>	Sem. Hrs. 3 3 3 3 3 3 3 15
Third Semester BUS-185 ECN-120 SPC-112 Fourth Semester	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective* Total Hours	Sem. Hrs. 3 3 3 3 3 3 15 Sem. Hrs.
Third Semester BUS-185 ECN-120 SPC-112 Fourth Semester MGT-101	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective* Total Hours Principles of Management	Sem. Hrs. 3 3 3 3 3 3 3 3 5 5 5 8 6 8 6 8 7 5 3
Third Semester BUS-185 ECN-120 SPC-112 Fourth Semester MGT-101 ECN-130	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective* <b>Total Hours</b> Principles of Management Principles of Macroeconomics	Sem. Hrs. 3 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester BUS-185 ECN-120 SPC-112 Fourth Semester MGT-101 ECN-130	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective* <b>Total Hours</b> Principles of Management Principles of Macroeconomics Business Elective*	Sem. Hrs. 3 3 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester BUS-185 ECN-120 SPC-112 Fourth Semester MGT-101 ECN-130	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective* <b>Total Hours</b> Principles of Management Principles of Macroeconomics Business Elective* Business Elective*	Sem. Hrs. 3 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester BUS-185 ECN-120 SPC-112 Fourth Semester MGT-101 ECN-130	Business Law 1 Principles of Macroeconomics Public Speaking Social Science/Humanities Elective* Social Science Elective* <b>Total Hours</b> Principles of Management Principles of Macroeconomics Business Elective* Business Elective* Humanities Elective*	Sem. Hrs. 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3

\*Electives must be chosen from the current A.A. degree list.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 65 Campus: Fort Dodge, Storm Lake, and Webster City Department: Business CIP#: 5202010200

# Carpentry

### Diploma

Fin

The Carpentry program provides students with the skills needed to successfully enter the construction industry. The main emphasis of this program is residential carpentry with related instruction in concrete, dry wall, roofing, and mechanical systems. Building Science and "House as a System" technology are integrated throughout this program. Upon completion of this program students will be prepared for employment in the carpentry trade. Students who successfully complete this program will be awarded a diploma in Carpentry.

#### Program of Study (start classes in June or September)

st Semester	-	Sem. Hrs.
BUS-112	Business Mathematics*	3
CAD-194	Architectural Modeling	2
CON-102	Introduction to Residential Construction.	2
CON-129	Concrete Theory & Lab	3
CON-131	Site Layout & Blueprint Reading	1
CON-301	Framing for Sustainable Design	7
CON-302	Building Science I	1
	Total Hours	19

Second Semester		Sem. Hrs.
CON-321	Residential Estimating	
CON-303	Building Science II	1
CON-133	Construction Technology Lab	4
CON-308	Interior Finish I	2
CON-175	Residential Construction Applications	6
IND-110	CPR, First Aid, and Safety Certification	1
	Communications Elective*	<u>3</u>
	Total Hours	19

Sem. Hrs.		Summer Session
1	Sustainable Design	CON-386
4	Exterior Finish	CON-219
3	Interior Finish II	CON-309
8	Total Hours	
Sem. Hrs.		Optional
	Basic Woodworking	CON-307
	Workplace Readiness	BUS-113

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: CON.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

# Chiropractic

### Associate of Arts (AA)

A minimum of two years of college is required for entrance into one of the sixteen colleges in the United States that have programs in chiropractic medicine. Some chiropractic schools encourage prospective students to have as many as ninety hours of undergraduate course work. Factors considered for admission to chiropractic schools generally involve overall grade point average and science grade point average, credit earned, letters of recommendation and person profile essays.

The following schedule is a guide to obtain an Associate of Arts Degree from Iowa Central Community College. Additional developmental courses may be required before you can take a college-level English or Math course. Check with transfer institution on specific requirements.

#### Suggested Program of Study:

First Semester	· · · · · · · · · · · · · · · · · · ·	Sem. Hrs.
ENG-105	Composition I	3
MAI-127	College Algebra & Trigonometry	5
CHM-165	General Chemistry I	4
BIO-112	General Biology I	
	Iotal Hours	
Second Semester		Sem. Hrs.
PSY-111	Introduction to Psychology	3
ENG-106	Composition II	3
BIO-113	General Biology II	4
CHM-175	General Chemistry II	4
	Humanities Elective	<u>3</u>
	Iotal Hours	
Third Semester		Sem. Hrs.
Third Semester SPC-112	Public Speaking	Sem. Hrs. 3
Third Semester SPC-112 PHY-162	Public Speaking College Physics I	Sem. Hrs. 
Third Semester SPC-112 PHY-162 CHM-261	Public Speaking College Physics I Organic Chemistry I	Sem. Hrs. 
Third Semester SPC-112 PHY-162 CHM-261 CSC-110	Public Speaking College Physics I Organic Chemistry I Introduction to Computers	Sem. Hrs. 
Third Semester SPC-112 PHY-162 CHM-261 CSC-110	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective	Sem. Hrs. 3 4 4 3 3
Third Semester SPC-112 PHY-162 CHM-261 CSC-110	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective	Sem. Hrs. 3 4 4 3 3 3 3
Third Semester SPC-112 PHY-162 CHM-261 CSC-110	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective Total Hours	Sem. Hrs. 3 4 4 3 3 3 3 20
Third Semester SPC-112 PHY-162 CHM-261 CSC-110 Fourth Semester	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective Total Hours	Sem. Hrs. 3 4 4 3 3 20 Sem. Hrs.
Third Semester SPC-112 PHY-162 CHM-261 CSC-110 Fourth Semester CHM-271	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective <b>Total Hours</b> Organic Chemistry II	Sem. Hrs. 3 4 4 3 3 20 Sem. Hrs. 4
Third Semester SPC-112 PHY-162 CHM-261 CSC-110 Fourth Semester CHM-271 PHY-172	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective <b>Total Hours</b> Organic Chemistry II College Physics II	Sem. Hrs. 3 4 4 3 3 20 Sem. Hrs. 4 4 4 4 4 4 4 4 4 4 4 4 4
Third Semester           SPC-112           PHY-162           CHM-261           CSC-110   Fourth Semester CHM-271 PHY-172 ECN-130	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective <b>Total Hours</b> Organic Chemistry II College Physics II Principles of Micro Economics	Sem. Hrs. 3 4 4 3 3 20 Sem. Hrs. 4 4 3 3 20 Sem. Hrs. 4 3 3 20 Sem. Hrs. 4 3 3 20 Sem. Hrs. 4 3 3 20 Sem. Hrs. 4 3 3 3 20 Sem. Hrs. 4 3 3 3 20 Sem. Hrs. 4 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester           SPC-112           PHY-162           CHM-261           CSC-110   Fourth Semester CHM-271 PHY-172 ECN-130	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective <b>Total Hours</b> Organic Chemistry II College Physics II Principles of Micro Economics Humanities Electives	Sem. Hrs. 3 4 4 3 3 20 Sem. Hrs. 4 3 3 3 20 Sem. Hrs. 4 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester SPC-112 PHY-162 CHM-261 CSC-110 Fourth Semester CHM-271 PHY-172 ECN-130	Public Speaking College Physics I Organic Chemistry I Introduction to Computers Humanities Elective Social Science Elective Total Hours Organic Chemistry II College Physics II Principles of Micro Economics Humanities Electives Social Science Elective	Sem. Hrs. 3 4 4 3 3 3 20 Sem. Hrs. 4 3 3 3 3 3 3 3 3 3 3 3 3 3

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 46 Campus: Fort Dodge Department: Industrial Technology CIP#: 4602010100

# **Coaching Authorization**

Students completing the core courses for the state coaching authorization can receive a certificate from Iowa Central Community College. Students who complete this program will qualify for the Department of Education coaching authorization.

Non-credit courses are also offered to satisfy the requirements of the Coaching Authorization.

Students who have completed all four requirements can contact the Board of Education Examiners for the Coaching Authorization application.

The following courses are required to complete:

	Sem. H	rs
*PEC-123	Anatomy for Coaching	'
**PEC-110	Coaching Ethics, Techniques and Theory	'
***PEC-115	Athletic Development and Human Growth	'
****PEC-127	Care and Prevention of Athletic Injuries	2

#### Substitute courses:

*PEC-121	Body Structure and Function	2
**PEC-111	Techniques and Theory of Coaching	2
***PSY-121	Developmental Psychology	3
****BIO-163	Essentials of Anatomy & Physiology	4

**Enrollment Date:** Fall and/or Spring Semester **Campus:** Fort Dodge and Flexnet **Department:** Business

# Computer Integrated Fabrication Technology

Ρ

### Associate of Applied Science (AAS)/Diploma

The Computer Integrated Fabrication Technology program prepares students for entry level positions as numerical control technicians, general machinists, tool and die makers, mold makers, tool designers, and quality control technicians. During the first year, students will develop a solid foundation in basic machine tools such as lathes, milling machines, and surface grinders. In the second year, students will develop basic skills in CNC programming, CAD/CAM, jig & fixture making, tool & die, and mold making. Upon completion of the program, graduates are awarded an Associate of Applied Sciences (A.A.S.) Degree.

	- AAS Degree	с II
MAT-743 IND-126 IND-127 IND-128 IND-184 MFG-256 MFG-266 WEL-122 EGT-450	Technical Math* Precision Measurements Lab Shop Operations Blueprint Reading Mechanical Processes Introduction to Lathe Operations Introduction to Lathe Operations Beginning Welding Computer Integrated Manufacturing <b>Total Hours.</b>	Sem. Hrs. 
Second Semester MAT-748 CAD-230 MFG-238 MFG-257 MFG-506 MFG-302 MFG-312	Technical Math II* Geometric Tolerancing Machine Processes I Advanced Lathe Quality Assurance CNC Operations Advanced CNC Communications Elective* <b>Total Hours.</b>	Sem. Hrs. 
Summer Session MFG-932	(Required) Internship Total Hours	Sem. Hrs. 4 4
Third Semester MFG-422 MFG-320 MFG-400 CAD-101	Jigs and Fixture Design Computer Aided Machining Introduction to Die Making Introduction to CAD Humanities/Social Science Elective* <b>Total Hours</b> .	Sem. Hrs. 
Fourth Semester PHY-184 CAD-164 MFG-326 MFG-453 WEL-190 WEL-190 WEL-710	Applied Physics* Solid Modeling I Computer Assisted Machining II Introduction to Mold Making Gas Tungsten Arc Welding Adv. Gas Tungsten Arc Welding Robotic Welding Total Hours	Sem. Hrs. 4 2 3 2 2 2 2 2 3 3 

MAT-743 Technical Math\*......3 IND-126 Precision Measurements Lab.....1 IND-127 Shop Operations ......1 IND-128 Blueprint Reading......1 IND-184 Mechanical Processes......2 MFG-256 Introduction to Lathe Operations......2 MFG-266 Introduction to Mill Operations......2 WEL-122 Computer Integrated Manufacturing ......3 EGT-450 Second Semester Sem, Hrs. MAT-748 Technical Math II\*......3 Geometric Tolerancing ......2 CAD-230 MFG-238 MFG-257 Advanced Lathe ......2 MFG-506 Quality Assurance.....1 MFG-305 CNC Óperations.....2 Advanced CNC ......2 MFG-312 Communications Elective\* ......3 Total Hours...... 17 Summer Session (Optional) Sem. Hrs. MFG-932 Internship......4

Total Hours...... 4

Sem. Hrs.

Program of Study - Industrial Machinist (Diploma)

First Semester

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: MFG.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Fall Semester Minimum Required Credits: 34 (Diploma), 71 (AAS) Campus: Fort Dodge Department: Industrial Technology CIP#: 4805010200

# **Computer Networking Technology**

### Associate of Applied Science (AAS)

Opportunities are virtually endless when you have mastered technology. Are you looking for a training program that is in high demand and is expected to show continued growth in the future? Entry-level salaries in computer repair and networking jobs range from \$25,000 to \$40,000 a year. Job opportunities are growing dramatically with the expansion of Internet and global networking.

The Computer Networking Technology Program is designed to provide graduates with the necessary skills to succeed in the jobs of the future. Graduates are able to administer a local area network, install and troubleshoot communication hardware/software and integrate technologies that the business world demands. The program aims to prepare one to be involved in a complex telecommunications environment.

Students learn to set up the complete system that facilities information exchanges between networks. The program offers a theoretical and hands-on approach to networking. For every hour of theory, students get two hours of lab time. Students assist with on-campus networks working in the colleges on campus help desk and get practical experience in a student-run network in the technology lab. They install the network, run the cable, debug and maintain the system.

The program is available to students with varied backgrounds. Sign up now and get on the fast track to the many employment opportunities including design, configuration, installation and maintenance of networks in small and large companies.

### Program of Study:

First Semester		Sem. Hrs.
NET-774	Help Desk I	1
NET-110	Microcomputer Fundamentals	3
NET-191	Network Cabling	2
NET-211	CISCO Networking	2
NET-790	PC Support I	3
	English/Speech Elective*	3
	Social Science/Humanities Elective*	<u>3</u>
	Total Hours	17
Second Semester		Sem. Hrs.
NET-345	Windows Scripting	3
NET-612	Fundamentals of Network Security	3
NET-222	CISCO Routers	3
NET-791	PC Support II	3
NET-775	Help Desk II	1
	Math Elective*	<u>3</u>
	Total Hours	
Third Semester		Sem. Hrs.
Third Semester NET-750	Telecommunication Services	<b>Sem. Hrs.</b>
Third Semester NET-750 NET-232	Telecommunication Services CISCO Switches	<b>Sem. Hrs.</b> 
Third Semester NET-750 NET-232 NET-314	Telecommunication Services CISCO Switches Windows Server	Sem. Hrs. 
Third Semester NET-750 NET-232 NET-314 NET-413	Telecommunication Services CISCO Switches Windows Server Linux System Administration	<b>Sem. Hrs.</b> 
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation	Sem. Hrs. 
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III	Sem. Hrs. 
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III Total Hours	Sem. Hrs. 3 4 4 2 1 17
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776 Fourth Semester	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III Total Hours	Sem. Hrs. 3 3 4 4 2 1 17 Sem. Hrs.
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776 Fourth Semester NET-347	Telecommunication Services CISCO Switches Windows Server. Linux System Administration Network Design and Documentation Help Desk III Total Hours Windows Directory Scripting	Sem. Hrs. 3 4 4 2 1 17 Sem. Hrs. 2
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776 Fourth Semester NET-347 NET-485	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III <b>Total Hours</b> Windows Directory Scripting Advanced Network Security	Sem. Hrs. 3 4 4 2 1 <b>Sem. Hrs.</b> 2 3
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776 Fourth Semester NET-347 NET-485 NET-152	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III <b>Total Hours</b> Windows Directory Scripting Advanced Network Security Advanced Networking Technology	Sem. Hrs. 3 4 4 2 1 <b>Sem. Hrs.</b> 2 3 3
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776 Fourth Semester NET-347 NET-485 NET-485 NET-152 NET-242	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III <b>Total Hours</b> Windows Directory Scripting Advanced Network Security Advanced Network Security CISCO Wide Area Network (WAN)	Sem. Hrs. 3 4 4 2 1 17 Sem. Hrs. 2 3 3 3 3
Third Semester NET-750 NET-232 NET-314 NET-161 NET-161 NET-776 Fourth Semester NET-347 NET-485 NET-152 NET-242 NET-343	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III <b>Total Hours</b> Windows Directory Scripting Advanced Network Security Advanced Network Security CISCO Wide Area Network (WAN) Windows Directory Services	Sem. Hrs. 3 4 4 2 17 Sem. Hrs. 2 3 3 3 3 3 3
Third Semester NET-750 NET-232 NET-314 NET-413 NET-161 NET-776 Fourth Semester NET-347 NET-485 NET-152 NET-242 NET-343 NET-343 NET-343 NET-345	Telecommunication Services CISCO Switches Windows Server Linux System Administration Network Design and Documentation Help Desk III <b>Total Hours</b> Windows Directory Scripting Advanced Network Security Advanced Network Security CISCO Wide Area Network (WAN) Windows Directory Services Advanced Linux System Administration	Sem. Hrs. 3 4 4 2 1 17 Sem. Hrs. 2 3 3 3 3 3 3 3 3

\*Course must be selected from the approved general education course list.

\*\*All courses must receive a grade of "C" or better for graduation.

\*\*\*See Program Coordinator for approved list and description of courses to fulfill electives.

Enrollment Date: Fall Semester Minimum Required Credits: 68 Campus: Fort Dodge Department: Business CIP#: 1503030200

# **Computer Repair**

#### Diploma

Students will develop skills in computer hardware repair and maintenance, operating systems, networking, and technical support. Hardware skills include assembly, upgrade, repair and troubleshooting of personal computers. The students will also focus on learning how to install, configure, and manage a variety of operating systems. These will include operating systems such as DOS, Microsoft Windows, and Linux. The students will be introduced to the basics of networking including setting up networks, what is required for Internet access, and basic network troubleshooting.

Students interested in computer repair must also have good professional skills. These include technical writing, customer service, help desk operations, and user training. Courses will feature hands-on experience as well as theory to properly equip the student for career success. Another feature of the program is preparation for industry certifications. These certifications include A+, N+ and possibly MCP. Upon successful completion of this program, students will be awarded a diploma in Computer Repair.

#### **Program of Study:**

First

Semester		Sem. Hrs.
NET-774	Help Desk I	1
NET-110	Microcomputer Fundamentals	3
NET-191	Network Cabling	2
NET-211	CISCO Networking	2
NET-790	PC Support I	3
	English/Speech Elective*	
	Social Science/Humanities Elective*	
	Total Hours	

Second Semester		Sem. Hrs.
NET-345	Windows Scripting	3
NET-612	Fundamental Network Security	3
NET-222	CISCO Routers	3
NET-791	PC Support II	3
NET-775	Help Desk II	1
	Math Elective*	3
	Total Hours	16

\*Course must be selected from the approved general education course list. All courses must receive a grade of "C" or better for graduation.

Enrollment Date: Fall Semester Minimum Required Credits: 33 Campus: Fort Dodge Department: Business CIP#: 1109010100

# **Criminal Justice**

### Diploma/Associate of Applied Science (AAS)

The Criminal Justice field offers many challenging career opportunities. Law Enforcement, Corrections, Judicial Services, and Forensic Laboratories are in need of qualified and trained personnel. Some of the duties in these career fields include investigations, traffic enforcement, evidence collection, inmate supervision, hunting regulation enforcement, correctional counseling, court services administration, and many more.

One of our programs strengths is the fact that many of our instructors are currently working or have worked in the Criminal Justice field. The ranks of our teaching staff have included a police chief, a chief deputy, a detective, criminal prosecutors, a former trooper, a correctional officer, and many other local Criminal Justice personnel. The Criminal Justice program can be taken as a diploma program when 30 core semester hours are completed or as an Associate of Applied Sciences or Associate of Arts degree when certain core semester hours are completed in accordance with each degree's requirements.

Specific departmental requirements govern entry into all Criminal Justice careers. In the State of Iowa all certified law enforcement officials must first attend and successfully complete an accredited law enforcement academy. Iowa Central's Criminal Justice Program will help prepare you for that challenge.

Indoor Simulated Firearms Range: lowa Central Criminal Justice utilizes current state of the art Simunition firearms equipment that allows students the ability to learn basic firearms skills and tactics from qualified instructors on site. Students use two primary weapons systems: the Glock 17T and the DPMS AR-15T. These weapon systems utilize training marker rounds which are much like a "paintball" style round, but much more realistic. This training allows students the ability to experience practical hands-on skills that will help them in their future careers in the criminal justice system. These weapons systems are currently used by law enforcement and corrections training around the nation.

lowa Law Enforcement Credit: Students who have graduated from the Iowa Law Enforcement Academy may receive up to 18 hours of Criminal Justice credit at Iowa Central Community College.

**Program of Study:** Criminal Justice is a two-year Associate of Applied Sciences Study Program offered at Iowa Central Community College. Students may enroll at any of the three centers for the general education portion of the program. The Criminal Justice program can be taken as a diploma program when 30 core semester hours are completed, or an Associate of Applied Science Study Degree program when 67 semester hours are completed.

#### **Program of Study - Criminal Justice**

First Semester		Sem. Hrs.
ENG-105	Compostition I	3
CRJ-100	Introduction to Criminal Justice	3
CRJ-132	Consitutional Law	
SDV-108	The College Experience	1
	Math Elective	3
	Social Science Elective	з
	Total Hours	<u>5</u> 16
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
CSC-110	Introduction to Computers	3
CRJ-110	Patrol Procedures	3
CRJ-133	Consitutional Criminal Procedures	
CRJ-141	Criminal Investigation	
CR I-120	Introduction to Corrections	3
010 120	Total Hours	<u>0</u> 18
Third Semester		Sem. Hrs.
SPC-112	Public Speaking	3
CRJ-160	Introduction to Forensic Investigation	3
CRJ-300	Perspectives of Homeland Security	3
	Criminal Justice Elective	3
	Social Science Elective	
	Humanities Elective	3
	Total Hours	

#### Fourth Semester

Criminal Justice Elective	3
Criminal Justice Elective	
Humanities Elective	3
Science Elective	3
Social Science Elective	<u>3</u>
Total Hours	15

Sem Hrs

<b>Criminal Justice Ele</b>	ctive Courses	Sem. Hrs.
CRJ-152	Defensive Tactics	3
CRJ-170	Overview of Cybercrime	3
CRJ-200	Criminology	3
CRJ-201	Juvenile Delinquency	3
CRJ-206	Terrorism Response	3
CRJ-260	Medicolegal Death Investigation	3

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 30 (Diploma), 67 (AAS) Campus: Fort Dodge, Storm Lake, and Webster City Department: Business CIP#: 4301070200

#### Program of Study - Leading to a Diploma

Choose 9 of the following 13 courses CRJ-100 Intro to Criminal Justice CRJ-132 Constitutional Law CRJ-110 Patrol Procedures CRJ-133 Constitutional Criminal Procedures CRJ-141 Criminal Investigation CRJ-120 Intro to Corrections CRJ-160 Intro. To Forensic Investigation CRJ-300 Perspectives of Homeland Security CRJ-152 Defensive Tactics CRJ-170 Overview of Cybercrime CRJ-200 Criminology CRJ-200 Juvenile Delinquency CRJ-206 Terrorism Response CRJ-260 Medicolegal Death Investigation

Choose a Social Science course from the approved AA/AS General Education List.

\*The following Social Science courses are highly recommended for students planning to complete a Bachelor's degree in Criminal Justice at a four-year institution: Introduction to Psychology (PSY:111), American National Government (POL:111), Introduction to Sociology (SOC:110) and Minority Group Relations (SOC:200)

# **Culinary Arts & Hospitality Management**

### Diploma/Associate in Applied Science (AAS)

The Culinary Arts Program will offer an Associate in Applied Science (AAS) degree through Iowa Central Community College. This program combines the important components of food preparation and culinary arts, along with nutrition, food safety and sanitation, baking, art of cuisine, and food service management.

The culinary arts program will also provide an introduction to hospitality and restaurant management with applicable hands-on experience throughout the program. These combined learning experiences will provide program graduates with the necessary skill sets to successfully enter the food industry. The students will complete an on-the-job training practicum in an industry field of their choice to complete their well-rounded culinary program. This will provide the student with a real-life experience and introduction, not only in culinary arts, but also food service management.

Program of Study First Semester	- AAS Degree	Sem. Hrs.
HCM-108	Safety and Sanitation	3
HCM-292	Food Preparation	3
HCM-298	Knife Skills	2
HCM-148	Food Fundamentals	3
HCM-294	Food Preparation 2	3
HCM-513	Hospitality Professionalism	<u>1</u>
	Total Hours	15
Second Semester		Sem. Hrs.
HCM-305	Meat and Fish Fabrication	2
HCM-228	Nutrition & Food Science	3
HCM-285	Advanced Food Preparation	4
HCM-296	International Cuisine	3
HCM-266	Culinary Math	3
HCM-517	Hospitality Professionalism II	<u>1</u>
	Total Hours	
Summer Session		Sem. Hrs.
	Eagd Tachnalagy Internahin	2
	Food technology internship	
Third Semester	rood recinology internship	Sem. Hrs.
Third Semester HCM-336	Event Planning	Sem. Hrs.
Third Semester HCM-336 HCM-300	Event Planning Beverage Management	Sem. Hrs.
Third Semester HCM-336 HCM-300 HCM-608	Event Planning Beverage Management Introduction to Hospitality	Sem. Hrs. 
Third Semester HCM-336 HCM-300 HCM-608 HCM-513	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I	Sem. Hrs. 3 2 3
Third Semester HCM-336 HCM-300 HCM-608 HCM-513 MKT-110	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing	Sem. Hrs. 3 
Third Semester HCM-336 HCM-300 HCM-608 HCM-513 MKT-110	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective*	Sem. Hrs. 
Third Semester           HCM-336           HCM-300           HCM-608           HCM-513           MKT-110	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* Total Hours	Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester HCM-336 HCM-300 HCM-608 HCM-513 MKT-110	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* Total Hours	Sem. Hrs. 3 2 3 1 3 3 1 3 5 5 5 8 cm. Hrs.
Third Semester HCM-336 HCM-300 HCM-608 HCM-513 MKT-110 Fourth Semester HCM-242	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* Total Hours Event Planning/Customer Service	Sem. Hrs. 3 2 3 3 1 3 3 3 5 5 5 8 cm. Hrs. 2
Third Semester HCM-336 HCM-300 HCM-608 HCM-513 MKT-110 Fourth Semester HCM-242 HCM-332	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* <b>Total Hours</b> Event Planning/Customer Service Hospitality Personnel Management	Sem. Hrs. 3 2 3 3 3 3 3 5 Sem. Hrs. 2 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester           HCM-336           HCM-300           HCM-608           HCM-513           MKT-110           Fourth Semester           HCM-242           HCM-332           HCM-517	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* Total Hours Event Planning/Customer Service Hospitality Personnel Management Hospitality Professionalism II	Sem. Hrs. 3 2 3 3 3 3 5 Sem. Hrs. 3 3 15 Sem. Hrs. 3 3 15 3 15 3 15 3 15 3 15 15 15 15 15 15 15 15 15 15
Third Semester           HCM-336           HCM-300           HCM-608           HCM-513           MKT-110   Fourth Semester           HCM-242           HCM-332           HCM-517           ACC-102	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* Total Hours Event Planning/Customer Service Hospitality Personnel Management Hospitality Professionalism II Workplace Accounting*	Sem. Hrs. 3 2 3 1 3 3 3 5 Sem. Hrs. 2 3 3 15 Sem. Hrs. 3 3 15 3 3 15 3 3 15 3 3 15 3 3 15 3 3 15 3 15 3 15 3 15 3 15 3 15 3 15 15 15 15 15 15 15 15 15 15
Fourth         Semester           HCM-336         HCM-336           HCM-300         HCM-608           HCM-513         MKT-110           Fourth         Semester           HCM-242         HCM-332           HCM-517         ACC-102           BUS-114	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* Total Hours Event Planning/Customer Service Hospitality Personnel Management Hospitality Professionalism II Workplace Accounting*	Sem. Hrs. 3 2 3 1 3 3 3 5 Sem. Hrs. 2 3 3 3 3 3 3 3 3 3 3 3 3 3
Fourth         Semester           HCM-336         HCM-336           HCM-300         HCM-608           HCM-513         MKT-110           Fourth         Semester           HCM-242         HCM-322           HCM-517         ACC-102           BUS-114         CSC-110	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* <b>Total Hours</b> Event Planning/Customer Service Hospitality Personnel Management Hospitality Professionalism II Workplace Accounting* Introduction to Computers	Sem. Hrs. 3 2 3 1 3 3 3 5 Sem. Hrs. 2 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Fourth         Semester           HCM-336         HCM-336           HCM-300         HCM-608           HCM-513         MKT-110           Fourth         Semester           HCM-242         HCM-332           HCM-517         ACC-102           BUS-114         CSC-110           MGT-101         MGT-101	Event Planning Beverage Management Introduction to Hospitality Hospitality Professionalism I Principles of Marketing Social Science/Humanities Elective* <b>Total Hours</b> Event Planning/Customer Service Hospitality Personnel Management Hospitality Professionalism II Workplace Accounting* Workplace Communications* Introduction to Computers Principles of Management	Sem. Hrs. 3 2 3 3 3 3 3 5 Sem. Hrs. 2 3 1 5 Sem. Hrs. 2 3 3 3 3 3 3 3 3 3 3 3 3 3

\*Course may be substituted with a related course from the approved general education course list.

#### Program of Study - Culinary Arts (Diploma) **First Semester** Sem. Hrs. HCM-108 Safety and Sanitation......3 HCM-298 Knife Skills......2 HCM-294 Food Preparation 2......3 HCM-513 Hospitality Professionalism......1 Total Hours......15 Second Semester Sem. Hrs. HCM-305 Meat and Fish Fabrication ......2 HCM-285 Advanced Food Preparation ......4 HCM-517 Hospitality Professionalism II.....1 Summer Session Sem. Hrs. HCM-511 Food Technology Internship......3

#### Program of Study - Hospitality Management (Diploma)

First Semester		Sem. Hrs.
HCM-108	Safety and Sanitation	3
HCM-336	Event Planning	3
HCM-300	Beverage Management	3
HCM-608	Introduction to Hospitality	3
HCM-513	Hospitality Professionalism I	1
MKT-110	Principles of Marketing	<u>3</u>
	Total Hours	
Second Semester		Sem. Hrs.
HCM-242	Event Planning/Customer Service	2
HCM-332	Hospitality Personnel Management	3
HCM-266	Culinary Math*	3
HCM-517	Hospitality Professionalism II	1
ACC-102	Workplace Accounting*	3
CSC-110	Introduction to Computers	3
MGT-101	Principles of Management	<u>3</u>
	Total Hours	
Summer Session		Sem. Hrs.
HCM-511	Food Technology Internship	3

# **Dental Hygiene**

### Associate of Applied Science (AAS)

The Dental Hygiene (DH) program prepares the student to provide comprehensive therapeutic oral health care and preventative education directly to diverse population groups in both clinical and community environments. An integral part of the dental team, the dental hygienist provides valuable oral health care services which may include oral assessments, oral cancer screenings, removing deposits from the teeth, exposing and processing dental radiographs, the administration of local anesthesia, nutritional counseling, sealant placement, fluoride treatments and preventative education.

**Program Mission Statement:** The Dental Hygiene Program is committed to providing a diverse learning environment built on a strong theoretical base in: psychological sciences, basic sciences, and evidence-based dental hygiene sciences, utilizing the state-of-the-art Dental Hygiene clinic.

Program Requirements: Students must earn a grade of a "C" or better in all Dental Hygiene program of study courses and meet the necessary prerequisites to progress in the program.

Student Responsibilities: Students receive clinical experience at the Iowa Central Dental Hygiene Clinic located at the Fort Dodge Campus. A medical health form and certification in basic cardiac life support must be completed prior to attending clinical sessions and the student must begin the hepatitis immunization series during their first semester. Students are required to purchase dental hygiene instruments and other personal protective materials. Transportation to various community projects is the responsibility of the student. Dental Hygiene is a licensed profession. Applicants for licensure are asked if they have ever been charged, convicted, found guilty of, or entered a plea of guilty or no contest to a felony or misdemeanor crime. A prior criminal history or record or habitual use of drugs or intoxicants can be grounds for licensure or licensure registration denial.

Admissions Criteria: This program is a selective, limited enrollment program. Students who would like to be considered for admission must complete an additional Dental Hygiene application packet. The deadline for the Dental Hygiene application for consideration for the following fall is March 1 of each year. Students must also be enrolled in, or have previously completed any pre-requisites of the program with a "C" or higher before they will be considered for the program. Students must submit proof of their enrollment in/or completion prior to the application deadline. The following criteria is required for applicants: a minimum of a high school diploma (GPA 2.5) or equivalent (GED 550); minimum Asset scores of 40 in each category, Compass (writing 65, reading 80, pre-algebra 39 or algebra 46), or ACT scores of 18 in reading, English, and math. High School Biology, Algebra, English, and Chemistry are highly recommended. It is recommended that the required general education courses are completed prior to entry into the Dental Hygiene program.

Accreditation: The program in dental hygiene is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "approval without reporting requirements". The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312-440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611.

Program of Study			
Pre-requisites	Sem. Hrs.	Third Semester	Sem. Hrs.
BIO-168	Human Anatomy & Physiology I w/lab4	DHY-278	Dental Hygiene II Theory2
BIO-173	Human Anatomy & Physiology II w/lab4	DHY-280	Clinical Dental Hygiene II
CHM-110	Introduction to Chemistry3	DHY-224	Dental Materials1
CHM-111	Introduction to Chemistry Lab1	CHM-130	Introduction to Organic & Biochemistry*3
BIO-186	Microbiology with Lab <u>4</u>	CHM-131	Introduction to Organic & Biochemistry Lab*1
	Total Hours16		Total Hours
First Semester	Sem. Hrs.	Fourth Semester	Sem. Hrs.
DHY-174	Principles of Dental Hygiene5	DHY-293	Dental Hygiene III Theory2
DHY-114	Dental Hygiene Anatomical Sciences4	DHY-292	Clinical Dental Hygiene III5
DHY-163	Radiology3	DHY-256	Community Dentistry2
DHY-121	Oral Histology and Embryology <u>2</u>	DHY-132	Dental Pharmacology3
	Total Hours14	ENG-105	Composition I* <u>3</u>
			Total Hours 15
Second Semester	Sem. Hrs.		
DHY-183	Dental Hygiene I Theory2	Fifth Semester	Sem. Hrs.
DHY-184	Clinical Dental Hygiene I	DHY-303	Dental Hygiene IV Theory2
DHY-140	General & Oral Pathology2	DHY-302	Clinical Dental Hygiene IV5
DHY-209	Periodontology3	DHY-253	Community Oral Health Rotation1
DHY-233	Preventative Dentistry/Nutrition2	DHY-265	Current Dental Hygiene Practice2
PSY-111	Introduction to Psychology* <u>3</u>	SOC-110	Introduction to Sociology*3
	Total Hours15	SPC-112	Public Speaking* <u>3</u>
			Total Hours

\*Applicants are strongly encouraged to complete the 16 credits of Arts & Science classes prior to program entry.

Enrollment Date: Fall Semester Minimum Required Credits: 86 Campus: Fort Dodge Department: Health Sciences CIP#: 5106020200

# Dentistry

### Associate of Arts (AA)

Dentistry is the health profession that deals with the prevention, diagnosis and treatment of disorders in the teeth and adjacent tissues. Dentistry is now highly recommended for overall general health. Most dentists are general practitioners that see patients for routine office visits especially because of prevention and treatment of tooth decay and gum disease. Dentists often spend time with restorations that include filling cavities, extracting teeth that cannot be repaired, root canals, reviewing x-rays, preparing fitted dentures, and treating problems associated with gum disease. Another important aspect of being a dentist is health education. Preventative dental care is essential to good health and patients are encouraged to brush, floss, use fluoride, and have good nutrition to protect their teeth and gums.

At least two years of college training is required before a person can be admitted to a dental school in the United States, but many complete Bachelor's degrees before applying. During this time, the pre-dentistry students should develop a strong science background and excellent communication skills. Courses that are usually required for admission to dental schools include English, biology, chemistry and physics. A four-year course of study is required at most dental colleges. Dental colleges are very competitives oa a college grade point average is extremely important, especially in the science courses. There are fifty-two accredited dental schools in the United States and are usually associated with medical schools at large universities. The curriculum includes both basic science and clinical study. Before dentists can enter private practice, they must pass a licensing board examination in the state in which they intend to practice.

#### Suggested Program of Study:

First Semester	Sem. Hrs	•
ENG-105	Composition I	3
BIO-112	General Biology I	1
CHM-165	General Chemistry I	1
SDV-108	The College Experience	1
	Humanities Elective*	3
	Total Hours	5
Second Semester	Sem. Hrs	
ENG-106	Composition II	3
BIO-113	General Biology II	1
CHM-175	General Chemistry II	1
CSC-110	Introduction to Computers	3
MAT-157	Statistics	1
	Total Hours	3
Third Semester	Sem. Hrs	
Third Semester PSY-111	Sem. Hrs	
Third Semester PSY-111 SPC-112	Sem. Hrs Introduction to Psychology	
Third Semester PSY-111 SPC-112 PHY-162	Sem. Hrs Introduction to Psychology Public Speaking	3334
Third Semester PSY-111 SPC-112 PHY-162 CHM-261	Sem. Hrs Introduction to Psychology Public Speaking College Physics I	3 3 4
Third Semester PSY-111 SPC-112 PHY-162 CHM-261	Sem. Hrs Introduction to Psychology Public Speaking College Physics I	3 3 4 4 3
Third Semester PSY-111 SPC-112 PHY-162 CHM-261	Sem. Hrs Introduction to Psychology	3344 437
Third Semester PSY-111 SPC-112 PHY-162 CHM-261	Sem. Hrs Introduction to Psychology	3 4 4 3 7
Third Semester PSY-111 SPC-112 PHY-162 CHM-261	Sem. Hrs Introduction to Psychology	· 3 3 4 4 3 7
Third Semester PSY-111 SPC-112 PHY-162 CHM-261 Fourth Semester BIO-186	Sem. Hrs Introduction to Psychology	. 3 3 4 4 3 7
Third Semester PSY-111 SPC-112 PHY-162 CHM-261 Fourth Semester BIO-186 CHM-271	Sem. Hrs Introduction to Psychology	· 3 3 4 4 3 7 · 4 4
Third Semester PSY-111 SPC-112 PHY-162 CHM-261 Fourth Semester BIO-186 CHM-271 PHY-172	Sem. Hrs Introduction to Psychology	· 3 3 4 4 3 7 · 4 4 4
Third Semester PSY-111 SPC-112 PHY-162 CHM-261 Fourth Semester BIO-186 CHM-271 PHY-172 ECN-130	Sem. Hrs Introduction to Psychology	· 3 3 4 4 3 7 · 4 4 4 3

#### **Recommended General Education Courses:**

Introduction to Ethical Conflict, Art Appreciation, History Courses, Minority Group Relations, Calculus, American Diversity

To ensure best transfer, student and advisor should confirm math and science classes with transfer institution.

Total Hours ...... 18

\*Course must be chosen from appropriate AA/AS general education list

# **Diesel Technology**

### **Associate of Applied Science (AAS)**

The Diesel Technology program is designed to provide training in the repair and maintenance of agricultural, over-the-road diesel trucks and off-road diesel power units. The Diesel Mechanic graduates will be trained in entry level skills of mechanical, electrical, fuel systems, power trains, brake systems, air conditioning, welding, and hydraulics. Upon completion of the program, graduates are awarded an Associate of Applied Science (A.A.S.) Degree.

Program of Study: First Semester	Sem. Hrs.
MAT-743 DSL-323 DSL-426 DSL-427 DSL-620 DLS-634	Technical Mathematics*
Second Semester DSL-357 DSL-358 DSL-445 DSL-804 DSL-547	Sem. Hrs.         Diesel Engines I       3         Diesel Fuel Systems       3         Ag & Commercial Equipment Maintenance       3         Ag Power Train       3         Humanities/Social Science Elective*       3         Total Hours       18
(required) DSL-932	Sem. Hrs. Internship in Diesel Mechanics4
Third Semester DSL-403	Sem. Hrs.
DSL-413 DSL-840 DSL-841 DSL-850 WEL-122	Electronic Engine Control II
DSL-413 DSL-840 DSL-841 DSL-850 WEL-122 Fourth Semester DSL-838 DSL-743 DSL-645 DSL-615 DSL-835 PHY-184	Electronic Engine Control II

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: DSL.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge Department: Liberal Arts & Sciences CIP#: 2401010200 Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 78 Campus: Fort Dodge Department: Industrial Technology CIP#: 4706050200

# **Dietetics and Food Science**

### Associate of Arts (AA)

Dietetics is a program that prepares students to help others use food to prevent and treat disease while maintaining good health practices. Becoming a dietitian or nutritionist usually requires at least a bachelor's degree in dietetics, foods and nutrition, food service systems management, or a related area. After obtaining an Associate of Arts degree, an additional 3 years of coursework from an accredited dietetics program is required to be eligible to pursue and accredited dietetic internship and take the national examination to earn Registered Dietitian credentials. Some states do require additional certifications or registration requirements. Graduate degrees also are available. College students in these majors take courses in food and nutrition, institution management, chemistry, biochemistry, biology, microbiology, and physiology. Other suggested courses include business, mathematics, statistics, psychology, sociology, and economics. Most jobs for dietitians are in hospitals, offices of physicians, nursing care facilities, and other health related centers, however there is a high demand for people with nutrition backgrounds in many different settings, especially with an increased public awareness for health-related disease and illness in our society.

Food Science is the study of all technical aspects of food. Our food supply must be safe and properly preserved to maintain high quality, yet must be low enough in cost for all to have access to a nutritionally adequate diet, irrespective of income. Activities of food scientists include the development of new food products, design of processes to produce these foods, choice of packaging materials, shelf-life studies, sensory evaluation of the product with panels or potential consumers, as well as microbiological and chemical testing. Next time you walk into a supermarket, take a closer look at all those shelves upon shelves of cereals, fruit juices, dairy products, and microwavable convenience foods. These are some of the everyday items available because food scientists find ways to keep plant and animal products appetizing and nutritious, and to stop them from spoiling. Students in this program should obtain admissions requirements and confirm courses with transfer institution.

#### Suggested Program of Study:

Fir

S

st Semester		Sem. Hrs.
ENG-105	Composition I	
MAT-210	Calculus I	4
BIO-112	General Biology I	4
CHM-165	General Chemistry I	4
PSY-111	Introduction to Psychology	
SDV-108	The College Experience	1
	Total Hours	

econd Semester		Sem. Hrs.
ENG-106	Composition II	3
MAT-157	Statistics I	4
BIO-113	General Biology II	4
CHM-175	General Chemistry II	4
CSC-110	Introduction to Ethical Conflicts	<u>3</u>
	Total Hours	

Third Semester		Sem. Hrs.
SPC-112	Public Speaking	3
PSY-121	Developmental Psychology	3
PHY-162	College Physics I	4
CHM-261	Organic Chemistry I	4
	Humanities Elective*	<u>3</u>
	Total Hours	

# Fourth Semester Sem Hrs. CSC-110 Introduction to Computers 3 ECN-130 Principles of Micro Economics. 3 PHY-172 College Physics II. 4 CHM-271 Organic Chemistry II. 4 Humanities Elective\* 3 7

BIO-186 Microbiology and BIO-151 Nutrition also recommended.

To ensure best transfer, student and advisor should confirm math and science classes with transfer institution.

\*Must be selected from areas I-IV section of AA degree sheet.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

# **Digital Mass Communications**

### Associate of Applied Arts (AAA)/Certificate

The Associate of Applied Arts in Digital Mass Communications will prepare students for many exciting positions within the communications industry, such as digital and social media, journalism, and public relations, while combining general education requirements with hands-on job specific experiences. The Digital Mass Communications major provides a well-integrated, hands-on learning environment related to digital media industries and production. Students learn the skills to craft stories, messages, and a voice for digital content, and utilizing state-of-the-art technology will produce professional content such as The Collegian, lowa Central's student newspaper, as well as podcasts, images, and social media content.

Degree options include the A.A.A. degree and/or Certificates in Social Media Management or Public Relations Marketing.

#### Program of Study:

GRA-176		Sem. Hrs.
1011404	Layout Design I	3
JOU-121	News Writing & Reporting	3
ENG-105	Composition I	3
SDV-108	College Experience	1
JOU-210	Media Law and Ethics	3
ART-184	Photography I	<u>3</u>
	Total Hours	
Second Semester		Sem. Hrs.
PHT-185	Photography II	3
MMS-241	Public Relations & Marketing**	3
GRA-177	Layout Design II	
COM-142	Mass Media Writing	3
SMM-170	Social Media Campaigns* **	<u>3</u>
	Total Hours	
Third Semester		Som Hrs
GRA 158	Web Multimedia	3
CIS-265	Photoshon I	
COM 150	Mass Communications & Society	3
IOU-200	AP Editing	3
JOU-200 SMM-200	AP Editing	
JOU-200 SMM-200	AP Editing Emerging Media Technologies* Practicum	
JOU-200 SMM-200 JOU-941	AP Editing Emerging Media Technologies* Practicum Total Hours	
JOU-200 SMM-200 JOU-941	AP Editing Emerging Media Technologies* Practicum Total Hours	
JOU-200 SMM-200 JOU-941	AP Editing Emerging Media Technologies* Practicum Total Hours	
JOU-200 SMM-200 JOU-941 Fourth Semester SPC-112	AP Editing Emerging Media Technologies* Practicum Total Hours Public Speaking	
Fourth Semester SPC-112 SMM-210	AP Editing Emerging Media Technologies* Practicum Total Hours Public Speaking Web Analytics*	
Fourth Semester SPC-112 SMM-210 JOU-941	AP Editing Emerging Media Technologies* Practicum Total Hours Public Speaking Web Analytics* Diversity & The Media	
Fourth Semester SPC-112 SMM-210 COM-148 COM-170	AP Editing Emerging Media Technologies* Practicum Total Hours Public Speaking Web Analytics* Diversity & The Media Crisis Media Management**	
Fourth Semester SPC-112 SMM-200 JOU-941 Fourth Semester SPC-112 SMM-210 COM-148 COM-170 MAT-111	AP Editing Emerging Media Technologies* Practicum <b>Total Hours.</b> Public Speaking Web Analytics* Diversity & The Media Crisis Media Management** Math for Liberal Arts (or equivalent)	3 3 1 15 Sem. Hrs. 3 3 3 3 3 3 4
Fourth Semester SPC-112 SMM-200 JOU-941 Fourth Semester SPC-112 SMM-210 COM-148 COM-170 MAT-111 JOU-941	AP Editing Emerging Media Technologies* Practicum. <b>Total Hours</b> . Public Speaking. Web Analytics* Diversity & The Media Crisis Media Management**. Math for Liberal Arts (or equivalent) Practicum.	3 3 1 5 5em. Hrs. 3 3 3 3 4 4 4
Fourth Semester SPC-112 SMM-200 JOU-941 Fourth Semester SPC-112 SMM-210 COM-148 COM-170 MAT-111 JOU-941	AP Editing Emerging Media Technologies* Practicum. Total Hours. Public Speaking. Web Analytics* Diversity & The Media Crisis Media Management** Math for Liberal Arts (or equivalent) Practicum. Total Hours.	3 3 1 5 5em. Hrs. 3 3 3 3 4 4 1 7
Fourth Semester SPC-112 SMM-200 JOU-941 Fourth Semester SMM-210 COM-148 COM-170 MAT-111 JOU-941	AP Editing Emerging Media Technologies* Practicum. Total Hours. Public Speaking. Web Analytics* Diversity & The Media. Crisis Media Management** Math for Liberal Arts (or equivalent) Practicum. Total Hours.	3 3 1 5 5em. Hrs. 3 3 3 3 3 4 1 17 5 5em. Hrs. 5 7 7 5em. Hrs. 7 7
Fourth Semester SPC-112 SMM-200 JOU-941 Fourth Semester SMM-210 COM-148 COM-170 MAT-111 JOU-941 Fifth Semester SMM-910	AP Editing Emerging Media Technologies* Practicum Total Hours Public Speaking Web Analytics* Diversity & The Media Crisis Media Management** Math for Liberal Arts (or equivalent) Practicum Total Hours	3 3 1 5 5em. Hrs. 3 3 3 3 4 1 17 5em. Hrs. 3
Fourth Semester SPC-112 SMM-200 JOU-941 Fourth Semester SMM-210 COM-148 COM-148 COM-170 MAT-111 JOU-941 Fifth Semester SMM-910	AP Editing Emerging Media Technologies* Practicum Total Hours Public Speaking Web Analytics* Diversity & The Media Crisis Media Management** Math for Liberal Arts (or equivalent) Practicum Total Hours Internship Social Science/Humanities Elective.	3 3 1 5 5 6 6 7 5 8 6 7 7 5 6 7 7 7 5 6 7 7 7 5 6 7 7 7 7 7

\*Courses required to complete the Social Media Management Certificate are marked by an asterisk (\*)

\*\*Courses required to complete the Public Relations Marketing Certificate are marked by a double asterisk (\*\*)

Certificates are pending Department of Education approval.

Enrollment Date: Fall Semester Minimum Required Credits: 69 Campus: Fort Dodge Department: Liberal Arts and Sciences CIP#: 0907020200

# **Education - Early Childhood**

### Diploma

The decision to work with toddlers and preschool age children is one of the most important career decisions that one can make. An early childhood caregiver is a special person in children's lives as they master new skills, develop friendships, grow in independence, and move to new levels of thinking and understanding about themselves and the world. It is an exciting and challenging responsibility to set up a supportive environment for a group of toddlers or preschoolers, develop a relationship with each one, and meet their needs as individuals and as a group. Children's learning experiences during this period in their lives can increase their self-confidence and readiness as they grow and develop.

lowa Central's Early Childhood Education program is designed for students planning to work with children in a preschool, infant/toddler, family, day care, or home visitor setting. It is a one year diploma with the option of obtaining your Paraeducator certification within the programing, and recognizing the competence of child care providers and home visitors.

The coursework in Iowa Central's Early Childhood Education Program is based primarily on eight major subject areas as stipulated by the Child Development Associate National Credentialing Program: (1) planning a safe, healthy learning environment; (2) steps to advance children's physical and intellectual development; (3) positive ways to support children's social and emotional development; (4) strategies to establish productive relationships with families; (5) Strategies to manage an effective program operation; (6) maintaining a commitment to professionalism; (7) observing and recording children's behavior, and (8) principles of child growth and development.

Sem, Hrs.

### Suggested Program of Study:

First	Semester
	ECE 102

Seco

ECE-103 ECE-133 ECE-158 PSY-222 HSV-162	Introduction to Early Childhood Education Child, Health, Safety and Nutrition Early Childhood Curriculum I Child Psychology Introduction to Human Disability Services Total Hours	n3 
ond Semester ECE-159 ECE-221 ECE-243 ECE-262	Early Childhood Curriculum II Infant/Toddler Care and Education Early Childhood Guidance Early Childhood Field Experience General Education Requirement Total Hours.	Sem. Hrs. 3 3 3 3 3 3 3 3 3 15
<b>Optional</b> EDU-213 EDU-920	Introduction to Education Paraeducator Field Experience	Sem. Hrs. 3

# **Education - Elementary**

### Associate of Arts (AA)

To become a teacher, a student must graduate from an accredited teacher training institution. Students can attend Iowa Central for their first two years and then transfer to a public or private college for the remaining two years. After completing the necessary coursework, students at Iowa Central can receive an Associate of Arts degree with a concentration in Elementary Education. Iowa Central's education curriculum combines a strong arts and science core with professional courses in education. This curriculum provides general education coursework, specific skills training, and direct experience working with children and young people in a school setting. The student who completes an Associate of Arts degree at Iowa Central with a concentration in Elementary Education will be prepared to function in a variety of supportive roles as part of an educational team.

Our education students have gone to a wide variety of senior colleges and universities. Iowa Central students are prepared to do well and have become award-winning educators. Our graduates regularly attend all major colleges in Iowa as well as the three regent universities. They are employed as classroom teachers, administrators, counselors, and librarians. Course work at Iowa Central has provided a strong foundation to support their efforts.

#### Suggested Program of Study - Elementary Education:

First Semester		Sem. Hrs.
EDU-213	Introduction to Education	3
PSY-111	Introduction to Psychology	3
ENG-105	Composition I	3
POL-111	American National Government	3
SDV-108	The College Experience	1
MAT-111	Math for Liberal Arts	<u>4</u>
	Total Hours	17
Second Semaster		Som Hrs
ENIG 104	Composition II	3eiii. 1113. 3
PSV 121	Developmental Psychology	
PHI 1/15	Introduction to Ethical Conflicts	
BIO 102	Introduction to Ethical Connicts	
BIO-102	Introductory Biology	
DIO-103	Total Hours	<u>+</u> 13
Third Semester		Sem. Hrs.
Third Semester EDU-235	Children's Literature	Sem. Hrs. 3
Third Semester EDU-235 SPC-112	Children's Literature Public Speaking	Sem. Hrs. 3 3
Third Semester EDU-235 SPC-112 REL-105	Children's Literature Public Speaking Introduction to Religion	Sem. Hrs. 
Third Semester EDU-235 SPC-112 REL-105 CHM-110	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry	Sem. Hrs. 
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab	Sem. Hrs. 
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111 SOC-115	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems	Sem. Hrs. 
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111 SOC-115	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems Total Hours	Sem. Hrs. 
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111 SOC-115	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems Total Hours	Sem. Hrs. 
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111 SOC-115 Fourth Semester EDU-115	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems Total Hours Education and the Teaching Process	Sem. Hrs. 
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111 SOC-115 Fourth Semester EDU-115 EDU-255	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems Total Hours Education and the Teaching Process Technology in the Classroom	Sem. Hrs. 3 3 3 3 3 3 1 1 5 Sem. Hrs. 4 3 3 16 3 3 16 3 3 16 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester           EDU-235           SPC-112           REL-105           CHM-110           CHM-111           SOC-115           Fourth Semester           EDU-215           MAT-117	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems <b>Total Hours</b> Education and the Teaching Process Technology in the Classroom Math for Elementary Teachers.	Sem. Hrs. 3 3 3 3 3 3 1 3 5 6 Sem. Hrs. 4 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester           EDU-235           SPC-112           REL-105           CHM-110           CHM-111           SOC-115           Fourth Semester           EDU-115           EDU-255           MAT-117           ART-101	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems <b>Total Hours</b> Education and the Teaching Process Technology in the Classroom Math for Elementary Teachers Art Aporeciation	Sem. Hrs. 3 3 3 3 3 3 1 1 5 5 6 Sem. Hrs. 4 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111 SOC-115 Fourth Semester EDU-115 EDU-255 MAT-117 ART-101 PSY-121	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems <b>Total Hours</b> Education and the Teaching Process Technology in the Classroom Math for Elementary Teachers Art Appreciation Developmental Psychology	Sem. Hrs. 3 3 3 3 3 3 3 1 1 5 5 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7
Third Semester EDU-235 SPC-112 REL-105 CHM-110 CHM-111 SOC-115 Fourth Semester EDU-115 EDU-255 MAT-117 ART-101 PSY-121	Children's Literature Public Speaking Introduction to Religion Introduction to Chemistry Introduction to Chemistry Lab Social Problems <b>Total Hours</b> Education and the Teaching Process Technology in the Classroom Math for Elementary Teachers Art Appreciation Developmental Psychology <b>Total Hours</b>	Sem. Hrs. 3 3 3 3 3 3 1 1 5 Sem. Hrs. 4 3 3 3 3 1 1 6 3 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 30 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

# **Education - Secondary**

### Associate of Arts (AA)

To become a teacher, a student must graduate from an accredited teacher training institution. Students can attend Iowa Central for their first two years and then transfer to a public or private college for the remaining two years. After completing the necessary coursework, students at Iowa Central can receive an Associate of Arts degree with a concentration in Secondary Education. Iowa Central's education curriculum combines a strong arts and science core with professional courses in education. This curriculum provides general education coursework, specific skills training, and direct experience working with children and young people in a school setting. The student who completes an Associate of Arts degree at Iowa Central with a concentration in Secondary Education will be prepared to function in a variety of supportive roles as part of an educational team.

Our education students have gone to a wide variety of senior colleges and universities. Iowa Central students are prepared to do well and have become award-winning educators. Our graduates regularly attend all major colleges in Iowa as well as the three regent universities. They are employed as classroom teachers, administrators, counselors, and librarians. Course work at Iowa Central has provided a strong foundation to support their efforts.

Som Hre

#### Suggested Program of Study - Secondary Education:

Thist Demester		Jeni. 1115.
EDU-213	Introduction to Education	3
PSY-111	Introduction to Psychology	3
ENG-105	Composition I	
POI -111	American National Government	3
SDV-108	The College Experience	1
501100	Elective (Concentration)	3
	Total Hours	<u>9</u> 16
Second Semester		Sem. Hrs.
PSY-121	Developmental Psychology	3
ENG-106	Composition II	3
PHI-145	Introduction to Ethical Conflicts	
BIO-102	Introductory Biology	3
BIO-103	Introductory Biology Lab	1
EDU-255	Technology in the Classroom	
200 200	Total Hours	16
Third Semester		Sem. Hrs.
SOC-110	Introduction to Sociology	3
SPC-112	Public Speaking	3
MAT-111	Math for Liberal Arts	4
	Humanities Elective	3
	Elective (Concentration)	
	Total Hours	
Fourth Semester		Sem. Hrs
EDI 115		1
LD0-115	Education and the Teaching Process	4
PSY-281	Education and the Teaching Process Educational Psychology	
PSY-281 GEO-121	Education and the leaching Process Educational Psychology World Geography	

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

# **Electrical Technologies**

### **Associate of Applied Sciences (AAS)**

The Electrical Technologies program provides training essential for entry-level positions as residential electricians, plant maintenance electricians, and wind farm technicians. During the first year, students will develop a solid electrical foundation essential to the many fields of the electrical and electronics industry. The eight-week summer internship will provide relevant industry work experience to insure a classroom-to-work transition. The second year of the program will provide additional skills in motor controls, programmable controllers, motor fundamentals, industrial wiring, and conduit bending. Upon successful completion of the program, students are awarded an Associate in Applied Sciences Degree.

Program of Study:		
First Semester	Sem. Hi	rs.
MAT-150	Discrete Math*	.3
ELE-124	Tools/Adaptors/Instrumentation	.2
ELE-114	DC Fundamentals	.3
ELE-111	AC Fundamentals	.3
ELE-155	National Electrical Code I	.2
ELE-164	Residential Wiring	.2
IND-314	Computerized Maintenance Management Systems	.1
IND-110	CPR, First Aid and OSHA	.1
	Total Hours	17
Second Semester	Sem. Hi	r <b>s.</b> 3
ELE 167	Industrial Electrical Systems	.J 3
ELE-107	Motor Control	.J 3
ELE-175	Power Distribution	2
INID_184	Mechanical Process	.2
W/EL_122	Beginning Welding	.2
	Humanities/Social Science Elective*	. ۲ ۲
	Total Hours	18
Required	Sem. Hi	re .
ELE-932	Internship Total Hours	. <u>4</u> <b>4</b>
ELE-932	Internship Total Hours Sem. Hi	. <u>4</u> 4
ELE-932 Third Semester ELE-156	Internship Total Hours Sem. Hi National Electrical Code II	. <u>4</u> <b>4</b> <b>rs.</b> .2
ELE-932 Third Semester ELE-156 PHY-184	Internship Total Hours Sem. Hi National Electrical Code II Applied Physics*	. <u>4</u> <b>4</b> <b>5.</b> .2
ELE-932 Third Semester ELE-156 PHY-184 ELE-198	Internship Total Hours Sem. Hi National Electrical Code II Applied Physics* Solid State Motor Controls	.4 4 (s. .2 .4 .2
ELE-932 Third Semester ELE-156 PHY-184 ELE-198 ELE-204	Internship	. <u>4</u> <b>4</b> <b>5</b> . .2 .4 .2 .3
ELE-932 Third Semester ELE-156 PHY-184 ELE-198 ELE-204 ELE-187	Internship	.4 <b>4</b> <b>5</b> . .2 .4 .2 .3 .4
ELE-932 Third Semester ELE-156 PHY-184 ELE-198 ELE-204 ELE-187	Internship	.4 (s. 2 .2 .3 .4 .2 .3 .4 .2 .3 .4 .2 .3
ELE-932 Third Semester ELE-156 PHY-184 ELE-198 ELE-204 ELE-187	Internship	.4 <b>4</b> .2 .4 .2 .3 .4 .3 .4 .3 <b>18</b>
Third Semester ELE-156 PHY-184 ELE-178 ELE-204 ELE-187 Fourth Semester	Internship	<b>s</b> . <u>4</u> <b>s</b> . <u>2</u> <u>4</u> <u>5</u> . <u>2</u> <u>4</u> <u>5</u> <u>6</u> <u>6</u> <u>6</u> <u>6</u> <u>6</u> <u>6</u> <u>7</u> <u>8</u> <u>7</u> <u>8</u> <u>8</u> <u>7</u> <u>8</u> <u>8</u> <u>8</u> <u>8</u> <u>8</u> <u>8</u> <u>8</u> <u>8</u> <u>8</u> <u>8</u>
Third Semester ELE-156 PHY-184 ELE-178 ELE-204 ELE-204 ELE-187 Fourth Semester ELE-221	Internship	<b>.</b>
Third Semester ELE-156 PHY-184 ELE-178 ELE-204 ELE-204 ELE-187 Fourth Semester ELE-221 IND-116	Internship	<b>s</b> . 4 <b>s</b> . 2. 4. 2. 3. 4. 3. 18 <b>s</b> . 3. 2. 2. 3. 4. 3. 18 <b>s</b> . 3. 2. 2. 3. 4. 3. 18
ELE-932 Third Semester ELE-156 PHY-184 ELE-204 ELE-204 ELE-187 Fourth Semester ELE-221 IND-116 ELE-149 ELE-149	Internship	<b>.</b> 4 <b>. .</b> 2 <b>.</b> 2 <b>.</b> 4 <b>.</b> 2 <b>.</b> 3 <b>.</b> 4 <b>.</b> 3 <b>.</b> 3 <b>.</b> 2 <b>.</b> 4 <b>.</b> 2 <b>.</b> 3 <b>.</b> 4 <b>.</b> 3 <b>.</b> 3 <b>.</b> 2 <b>.</b> 4 <b>.</b> 3 <b>.</b> 4 <b>.</b> 4 <b>.</b>
ELE-932 Third Semester ELE-156 PHY-184 ELE-198 ELE-204 ELE-204 ELE-187 Fourth Semester ELE-221 IND-116 ELE-128 ELE-286 ELE-286	Internship	<b>5</b> . 4 <b>7</b> . 2. 4. 2. 3. 4. 3. <b>18</b> <b>7</b> . 3. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
ELE-932 Third Semester ELE-156 PHY-184 ELE-198 ELE-204 ELE-204 ELE-211 IND-116 ELE-221 IND-116 ELE-158 ELE-225 ELE-225 ELE-225 ELE-225	Internship	<b>5</b> .4 <b>7</b> .2 <b>4</b> .2 <b>3</b> .4 <b>3</b> .4 <b>3</b> .8 <b>5</b> .3 <b>2</b> .2 <b>2</b> .2 <b>3</b> .4 <b>3</b> .7 <b>5</b> .3 <b>2</b> .2 <b>3</b> .4 <b>5</b> .3 <b>2</b> .2 <b>3</b> .4 <b>5</b> .3 <b>1</b> .2 <b>1</b> .2 <b>1</b> .4 <b>1</b> .5 <b>1</b> .5 <b></b>
ELE-932 Third Semester ELE-156 PHY-184 ELE-204 ELE-204 ELE-204 ELE-187 Fourth Semester ELE-221 IND-116 ELE-149 ELE-158 ELE-205 ELE-205 ELE-245 ELE-245	Internship	<b>5</b> .4 <b>7</b> .2 <b>4</b> .2 <b>3</b> .4 <b>3</b> .4 <b>5</b> .3 <b>2</b> .2 <b>2</b> .3 <b>4</b> .1 <b>5</b> .3 <b>2</b> .2 <b>2</b> .3 <b>4</b> .1 <b>5</b> .3 <b>2</b> .2 <b>3</b> .4 <b>1</b> .2 <b>1</b> .2 <b>1</b> .3 <b>1</b> .4 <b>1</b> .5 <b>1</b> .5 <b></b>
ELE-932 Third Semester ELE-156 PHY-184 ELE-204 ELE-204 ELE-204 ELE-221 IND-116 ELE-221 IND-116 ELE-158 ELE-205 ELE-245 ELE-245 ELE-104	Internship	<b>s</b> . 4 <b>s</b> . 2. 4. 2. 3. 4. 3. <b>8</b> <b>s</b> . 3. 2. 2. 2. 3. 4. 1. <b>17</b>
ELE-932 Third Semester ELE-156 PHY-184 ELE-204 ELE-204 ELE-204 ELE-211 IND-116 ELE-221 IND-116 ELE-215 ELE-205 ELE-205 ELE-205 ELE-205 ELE-205 ELE-204 ELE-204 ELE-158 ELE-205 ELE-204 ELE-158 ELE-205 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-158 ELE-204 ELE-205 ELE-205 ELE-205 ELE-204 ELE-205 ELE-2	Internship	<b>5</b> <u>4</u> <b>5</b> <u>2</u> <u>4</u> <u>2</u> <u>3</u> <u>4</u> <u>3</u> <u>8</u> <u>5</u> <u>3</u> <u>2</u> <u>2</u> <u>2</u> <u>3</u> <u>4</u> <u>3</u> <u>8</u> <u>5</u> <u>3</u> <u>2</u> <u>2</u> <u>2</u> <u>3</u> <u>4</u> <u>1</u> <u>7</u> <u>5</u>

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: ELE.

BUS-113 Workplace Readiness ......1.5

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

\*\*Course may be substituted with CAD-101 Introduction to CAD with approval of the program coordinator.

Enrollment Date: Fall Semester Minimum Required Credits: 74 Campus: Fort Dodge Department: Industrial Technology CIP#: 4701050200

# **Electrical/Mechanical Technician**

### **Associate of Applied Sciences (AAS)**

The Electrical/Mechanical Technician program was designed in response to industry needs. The program will provide training for entry-level positions working as a machine repairer, building and plant maintenance, and also as a plant maintenance electrician. Graduates will have a solid electrical foundation, and the skills to install, maintain, and troubleshoot the equipment utilized by today's industries. Upon completion of the program, graduates will be awarded an Associate of Applied Sciences degree.

First Semester	Sem. Hrs.
MAT-150/743	Discrete Math/Technical Math*
ELE-124	Tools/Adapters/Instrumentation2
ELE-114	DC Fundamentals
ELE-111	AC Fundamentals
ELE-155	National Electrical Code I2
ELE-164	Residential Wiring2
IND-126	Precision Measurements Lab1
IND-314	Computerized Maintenance Management Systems1
IND-110	CPR, First Aid and OSHA <u>1</u>
	Total Hours
Second Semester	Sem. Hrs.
CAD-401	Electrical CAD**
ELE-167	Industrial Electrical Systems3
ELE-195	Motor Control
IND-106	Industrial Pumps & Drive Systems2
IND-116	Pneumatic & Hydraulic Systems2
IND-127	Shop Operations1
ELE-170	Power Distribution2
WEL-122	Beginning Welding2
	Total Hours
Required	Sem. Hrs.
ELE-932	Internship <u>4</u>
	Total Hours 4
Third Semester	Sem. Hrs.
ELE-156	National Electrical Code II2
MFG-256	Introduction to Lathe Operations2
	later duration to Mill (Ne castions)
IVII 0-200	Introduction to Will Operations2
IND-128	Blueprint Reading
IND-128 IND-184	Blueprint Reading
IND-128 IND-184 IND-185	Blueprint Reading
IND-128 IND-184 IND-185 ELE-187	Blueprint Reading       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4
IND-128 IND-184 IND-185 ELE-187	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3
IND-128 IND-184 IND-185 ELE-187	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18
IND-128 IND-184 IND-185 ELE-187	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18
Fourth Semester	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2
Fourth Semester ELE-149	Blueprint Reading       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         UL and Electrical Safety       2
Fourth Semester ELE-149 WEL-213	Blueprint Reading       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         VL and Electrical Safety       2         Fabrication, Layout, Estimating       2
Fourth Semester ELE-149 WEL-213	Introduction to Mill Operations       2         Blueprint Reading       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         Fabrication, Layout, Estimating       2         Or       2
Fourth Semester ELE-187 WEL-213 WEL-214	Introduction to Mill Operations       2         Blueprint Reading       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         UL and Electrical Safety       2         Fabrication, Layout, Estimating       2         or       2         Advanced Fabrication       2
Fourth Semester ELE-187 WEL-213 WEL-214 WEL-214 UND 192	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         Fabrication, Layout, Estimating       0         Advanced Fabrication       2         Maintenance Welding       2         Maintenance Welding       4
Fourth Semester ELE-187 Fourth Semester ELE-149 WEL-213 WEL-214 WEL-340 IND-183 MEC 505	Introduction to Mill Operations       2         Blueprint Reading       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         Fabrication, Layout, Estimating       0         or       Advanced Fabrication       2         Maintenance Welding       2         Industrial Machine Maintenance       4
Fourth Semester ELE-187 Fourth Semester ELE-149 WEL-213 WEL-214 WEL-340 IND-183 MFG-505 PHY 194	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         VL and Electrical Safety.       2         Fabrication, Layout, Estimating       0r         Advanced Fabrication       2         Maintenance Welding       2         Industrial Machine Maintenance       4         Lean Manufacturing       1
Fourth Semester ELE-187 Fourth Semester ELE-149 WEL-213 WEL-214 WEL-340 IND-183 MFG-505 PHY-184	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       1         UL and Electrical Safety.       2         Fabrication, Layout, Estimating or       2         Advanced Fabrication       2         Maintenance Welding       2         Industrial Machine Maintenance       4         Lean Manufacturing.       1         Applied Physics*       4         Mumanities/Social Science Elective*       3
Fourth Semester ELE-187 Fourth Semester ELE-187 WEL-213 WEL-214 WEL-340 IND-183 MFG-505 PHY-184	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         Fabrication, Layout, Estimating       2         or       Advanced Fabrication       2         Maintenance Welding       2         Industrial Machine Maintenance       4         Lean Manufacturing       1         Applied Physics*       4         Humanities/Social Science Elective*       3
Fourth Semester ELE-187 Fourth Semester ELE-149 WEL-213 WEL-214 WEL-340 IND-183 MFG-505 PHY-184	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         Fabrication, Layout, Estimating       2         or       Advanced Fabrication       2         Maintenance Welding       2       2         Industrial Machine Maintenance       4         Lean Manufacturing       1         Applied Physics*       4         Humanities/Social Science Elective*       3         Total Hours       18
Fourth Semester ELE-187 Fourth Semester ELE-187 WEL-213 WEL-214 WEL-340 IND-183 MFG-505 PHY-184	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         Fabrication, Layout, Estimating       2         or       Advanced Fabrication       2         Maintenance Welding       2       2         Industrial Machine Maintenance       4       4         Lean Manufacturing       1       4         Applied Physics*       4       4         Humanities/Social Science Elective*       3       3         Total Hours       18       5
Fourth Semester ELE-187 Fourth Semester ELE-187 WEL-213 WEL-214 WEL-340 IND-183 MFG-505 PHY-184 Optional BUS-113	Blueprint Reading.       1         Mechanical Processes       2         Predictive/Preventative Maintenance       2         Advanced Industrial Electrical Sys       4         Communications Elective*       3         Total Hours       18         Sem. Hrs.       2         Fabrication, Layout, Estimating       2         or       Advanced Fabrication       2         Maintenance Welding       2         Industrial Machine Maintenance       4         Lean Manufacturing       1         Applied Physics*       4         Humanities/Social Science Elective*       3         Total Hours       18

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: ELE, IND.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

\*\*Course may be substituted with CAD-101 Introduction to CAD with approval of the program coordinator.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 76 Campus: Fort Dodge Department: Industrial Technology CIP#: 4701050200

# **Emergency Medical Services**

### Associate of Applied Science (AAS)/Certificate

The Emergency Medical Services (EMS) program readies the student for a career in an exciting and expanding health care field. Graduates of the program are prepared to initiate and maintain treatment for medical, trauma, and cardiac emergencies following physician's orders or standard protocols. Successful completion of course requirements allow the students to take the National Registry examinations.

Program Requirements: Students must earn a grade of a "C" or better in all Paramedic program of study courses and meet the necessary prerequisites to progress in the program.

Student Responsibilities: Students receive clinical practice and field experience at a variety of health care settings. Transportation to the clinical site is the responsibility of the student. A medical health form and CPR certification must be completed prior to clinical. Successful completion of course requirements allows the student to take the National Registry examinations. All EMS students must complete a Criminal Record/Child and Adult Abuse check prior to attending clinical.

Admission Requirements: The following criteria is required for applicants in the Paramedic program: minimum of a high school diploma (GPA of 2.5) or equivalent (GED of 550) or HiSET 15, ACT score of 18 in reading, English, and 16 in math, Compass scores (writing 65, reading 80, (Placement Doman number of pre-algebra 34 or algebra 0), or ASSET scores of 40 in each category writing and reading and 38 in numeric. All health science students must complete a Criminal Record/Child and Adult Abuse Check prior to attending clinical.

Accreditation: The Iowa Central Community College Paramedic program, on the Fort Dodge campus, is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). Commission on Accreditation of Allied Health Education Programs, 25400 US Highway 19 N., Suite 158, Clearwater, FL 33763, 727-210-2350, www.caahep.org. To contact CoAEMSP, 8301 Lakeview Parkway Suite 111-312, Rowlett, TX 75088, 214-703-8445, FAX 214-703-8992, www.coaemsp.org.

#### Program of Study - Paramedic Degree

Pre-requisites **EMS-200 #BIO-168 *#HSC-113	EMT Human Anatomy and Physiology I w/la Medical Terminology Total Hours	Sem. Hours 
First Semester BIO-173 EMS-760	Human Anatomy and Physiology II w/l NSC Paramedic I Total Hours	Sem. Hours ab4 
Second Semester ENG-105 EMS-761 EMS-810	Composition I NSC Paramedic II Advanced Cardiac Life Support Total Hours	Sem. Hours. 
Summer Semester ENG-106	Composition II or	Sem. Hours.
SPC-112 EMS-762	Public Speaking NSC Paramedic III Total Hours	3 <u>6.5</u> <b>9.5</b>
Third Semester PSY-111 EMS-763 EMS-815	Introduction to Psychology NSC Paramedic IV Pediatric Advanced Life Support Total Hours	Sem. Hours 
Fourth Semester EMS-764 EMS-820	NSC Paramedic V Pre-hospital Trauma Life Support Social Science or Humanities Elective . Total Hours	Sem. Hours 8.5 1 3 12.5

\*Test out option is available. See Dean of Health Sciences or Program Coordinator. \*\*These courses are pending approval.

#Pre-requisite for NSC Paramedic. Cannot take in conjunction with NSC Paramedic I. NSC = National Standard Curriculum

Enrollment Date: Fall Semester Minimum Required Credits: 76 Campus: Fort Dodge Department: Health Sciences CIP#: 5109046200

#### EMS Certificate Programs EMT - CIP#5109042000

**EMS-200	EMT8 Total Hours	
Optional EMR Cou	rse	

#### 

# Engineering

### Associate of Arts (AA)

Engineering has always been a popular field for people who are mathematically and scientifically inclined. Obtaining a solid mathematical and scientific background at lowa Central can be your first step on the road that leads to a career in engineering. In addition to mastering a full range of math and science courses, pre-engineering students are expected to learn how to use technological tools such as computer algebra systems, graphing calculators and spreadsheets. Students at lowa Central have the opportunity to use the Maple computer algebra system in many of their math classes. Pre-engineering students use this technology to reduce the amount of tedious, manual work as they explore and learn more about mathematics.

Graphing calculators are also used extensively in math classes at lowa Central. They have revolutionized the presentation of mathematics in the classroom since they allow for much greater participation by students and less formal lecturing by instructors. Students are expected to have their own graphing calculators in pre-calculus, calculus and differential equations classes and are encouraged to use them in several other math and science classes. Spreadsheets and several special purpose computer programs are used in such courses as Engineering Problems.

#### Suggested Program of Study:

#### First Semester ENG-105

C

Thir

NG-105	Composition I		3
MAT-210	Calculus I		4
MAT-180	Engineering Problems		2
HM-165	General Chemistry I		4
CIS-162	C++		4
SDV-108	The College Experience		<u>1</u>
	Total Hours		18
omostor		Som	Hre

Second Semester		Sem. Hrs.
ENG-106	Composition II	
MAT-216	Calculus II	4
CIS-153	Data Structures	4
	Science Elective	4
	Humanities Elective	3
	Total Hours	

d Semester		Sem. Hrs.
SPC-112	Public Speaking	3
MAT-157	Statistics	4
PHY-212	Classical Physics I	4
PSY-111	Introduction to Psychology	3
	Humanities Elective	3
	Total Hours	

Fourth Semester		Sem. Hrs
MAT-226	Differential Equations	
PHY-222	Classical Physics II	∠
POL-121	International Relations	3
ECN-130	Principles of Microeconomics	3
	Humanities Elective	
	Total Hours	

\*Calculus III is recommended.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

# **Engineering & Design Technology**

### Diploma/Associate of Applied Science (AAS)

Pr

Sem Hrs

The Engineering & Design Technology program provides students with technical training needed to enter the various fields of computer aided drafting and design. The focus of the program is to give students experience in developing media to industry standards using computers. Included are drafting fundamentals & techniques, software applications, math and communication skills, and object representation using 2-D and 3-D principles. The diploma program is 38 weeks in length. Upon successful completion of the program, graduates will be awarded a diploma in Engineering & Design Technology. Students may continue to third and fourth semesters to complete an Associate of Applied Science degree.

ogram of Study:		
First Semester MAT-743 CAD-101 CAD-155 EGT-400 IND-126 WEL-122 IND-127	Technical Math* Introduction to CAD Engineering Graphics I Introduction to Engineering & Design Precision Measurements Lab Beginning Welding Shop Operations <b>Total Hours</b>	Sem. Hrs. 3 3 3 3 1 2 1 1 6
Second Semester		Sem. Hrs.
MAI 748 CAD-156	Iechnical Math II* Engineering Graphics II	3
CAD-138	Virtual Modeling	2
CAD-164	Solid Modeling I	2
EG I-410 MEG-256	Principles of Engineering	3 2
MFG-266	Introduction to Mill	<u>2</u>
	Total Hours	17
Summer Session		Sem Hrs.
CAD-157	Engineering Graphics III	3
CAD-166	Solid Modeling II	2
CAD-174	Total Hours	<u>∠</u> 7
Third Somostor		Som Hrs
MAT-749	Technical Math III	
CAD-217	Engineering Mechanics I	3
CAD-198	Applied Geometry & Technology	2
EGT-450	Computer Integrated Manufacturing	2
	Communication Elective*	<u>3</u>
	Total Hours	17
Fourth Semester	Total Hours	17 Sem. Hrs.
Fourth Semester CAD-218	Engineering Mechanics II	17 Sem. Hrs.
Fourth Semester CAD-218 CAD-158 CAD-232	Total Hours Engineering Mechanics II Engineering Graphics IV Virtual Modeling II	
Fourth Semester CAD-218 CAD-158 CAD-232 CAD-275	Total Hours         Engineering Mechanics II         Engineering Graphics IV         Virtual Modeling II         Applied Logical Processes	<b>Sem. Hrs.</b> 3 
Fourth Semester CAD-218 CAD-158 CAD-232 CAD-275 WEL-213	Total Hours Engineering Mechanics II Engineering Graphics IV Virtual Modeling II Applied Logical Processes Fabrication, Layout, & Estimating	<b>Sem. Hrs.</b> 3 2 2 2 2 2
Fourth Semester CAD-218 CAD-158 CAD-232 CAD-275 WEL-213 MFG-506 CAD-230	Total Hours         Engineering Mechanics II         Engineering Graphics IV         Virtual Modeling II         Applied Logical Processes         Fabrication, Layout, & Estimating         Quality Assurance         Geometric Dimensioning & Tolerancing	<b>Sem. Hrs.</b> 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Fourth Semester CAD-218 CAD-232 CAD-232 CAD-275 WEL-213 MFG-506 CAD-230	Total Hours Engineering Mechanics II Engineering Graphics IV Virtual Modeling II Applied Logical Processes Fabrication, Layout, & Estimating Quality Assurance. Geometric Dimensioning & Tolerancing . Humanities/Social Science Elective*	<b>Sem. Hrs.</b> 3 2 2 2 2 2 2 1 1 2 3
Fourth Semester CAD-218 CAD-158 CAD-232 CAD-275 WEL-213 MFG-506 CAD-230	Total Hours Engineering Mechanics II Engineering Graphics IV Virtual Modeling II Applied Logical Processes Fabrication, Layout, & Estimating Quality Assurance Geometric Dimensioning & Tolerancing . Humanities/Social Science Elective* Total Hours	17           Sem. Hrs.           3           2           2           2           2           1           2           3           1           2           3           1           2           3           1           2           3           1           1           1           1           1           1           1           1           1           1           1
Fourth Semester CAD-218 CAD-158 CAD-232 CAD-275 WEL-213 MFG-506 CAD-230	Total Hours Engineering Mechanics II Engineering Graphics IV Virtual Modeling II Applied Logical Processes Fabrication, Layout, & Estimating Quality Assurance Geometric Dimensioning & Tolerancing . Humanities/Social Science Elective* Total Hours	
Fourth Semester CAD-218 CAD-158 CAD-232 CAD-275 WEL-213 MFG-506 CAD-230 <b>Optional</b> BUS-113	Total Hours Engineering Mechanics II Engineering Graphics IV Virtual Modeling II Applied Logical Processes Fabrication, Layout, & Estimating Quality Assurance Geometric Dimensioning & Tolerancing . Humanities/Social Science Elective* Total Hours Workplace Readiness	

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefixes: CAD, EGT, MAT.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Fall Semester Minimum Required Credits: 40 (Diploma), 74 (AAS) Campus: Fort Dodge Department: Industrial Technology CIP#: 150000200

# **English/Communication**

### Associate of Arts (AA)

The Language Arts Department offers a variety of classes in many different areas of study. Whether you are interested in advertising, writing, teaching, human resources, journalism, business, literature, or communications, a class suited to your needs is available here at Iowa Central.

We currently carry classes that deal with many issues surrounding the workplace, daily life, and social changes happening throughout the world. Within these classes decision making, critical thinking, comparison, and analysis are used to provide you with a greater understanding of the world in which we live.

The literature courses provide an avenue for understanding the history, and possible futures, of America and the world. By presenting imaginative writing styles such as short story, drama, poetry, and novel, and studying the great authors in all genres, we hope to expand your mind so you can accomplish anything you wish.

The Broadcasting department has long been known for its student run radio station, 88.1 KICB-FM. 88 1 The Point caters towards an audience between the ages of 13-34 with mainly Alternative music being broadcast. The lively atmosphere and immediate "on air" experience make this program bettered by none. You could also work on the college's award winning newspaper, The Collegian. The Collegian is a student-run publication allowing the students to be responsible for content, design, and production of the newspaper.

#### Suggested Program of Study for Literature:

ggested i logid	in or study for Encluture.	
First Semester		Sem. Hrs.
ENG-105	Composition I	3
LIT-101	Introduction to Literature	3
CSC-110	Introduction to Computers	3
SDV 108	The College Experience	1
301-100	Math an Calanza Flanting	1
	Wath or Science Elective	
	Iotal Hours	14
Second Semester	:	Sem. Hrs.
ENG-106	Composition II	3
LIT-114	American Literature	3
PSY_111	Introduction to Psychology	3
131-111	History Elective	
	Math an Calanza Flanting	
	Wath or Science Elective	
	Iotal Hours	
Third Semester		Sem. Hrs.
Third Semester SPC-112	Public Speaking	Sem. Hrs.
Third Semester SPC-112 PSY-121	Public Speaking	Sem. Hrs.
Third Semester SPC-112 PSY-121 HUM-133	Public Speaking Developmental Psychology Evoloring the Humanities	Sem. Hrs.
Third Semester SPC-112 PSY-121 HUM-133 PHI 145	Public Speaking Developmental Psychology Exploring the Humanities	Sem. Hrs. 
Third Semester SPC-112 PSY-121 HUM-133 PHI-145	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts	Sem. Hrs. 
Third Semester SPC-112 PSY-121 HUM-133 PHI-145	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies	Sem. Hrs. 
Third Semester SPC-112 PSY-121 HUM-133 PHI-145	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies History Elective	Sem. Hrs. 
Third Semester SPC-112 PSY-121 HUM-133 PHI-145	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies History Elective Total Hours	Sem. Hrs. 3 3 3 3 3 3 3 18
Third Semester SPC-112 PSY-121 HUM-133 PHI-145	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies History Elective Total Hours	Sem. Hrs. 3 3 3 3 3 3 18 Sem. Hrs.
Third Semester SPC-112 PSY-121 HUM-133 PHI-145 Fourth Semester ENG-220	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies History Elective Total Hours	Sem. Hrs. 3 3 3 3 3 3 3 3 18 Sem. Hrs.
Third Semester SPC-112 PSY-121 HUM-133 PHI-145 Fourth Semester ENG-220 ANIT 105	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies History Elective Total Hours	Sem. Hrs. 3 3 3 3 3 3 3 3 3 18 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester SPC-112 PSY-121 HUM-133 PHI-145 Fourth Semester ENG-220 ANT-105 POI 111	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies History Elective <b>Total Hours</b> Creative Writing Cultural Anthropology	Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester SPC-112 PSY-121 HUM-133 PHI-145 Fourth Semester ENG-220 ANT-105 POL-111	Public Speaking Developmental Psychology Exploring the Humanities Introduction to Ethical Conflicts Cultural Studies History Elective <b>Total Hours</b> Creative Writing Cultural Anthropology American National Government	Sem. Hrs. 3 3 3 3 3 3 3 3 3 5 8 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3

# Family & Consumer Sciences

### Associate of Arts (AA)

#### Iowa State University

Students planning to enter the College of Family and Consumer Sciences at lowa State University should plan to complete the following core requirements plus enough elective credits to total 64-65 hours.

Mathematical Disciplines	13 sem hrs.
(Biology, Chemistry, Mathematics,	
Statistics, Zoology)	
Social Sciences	9 sem. hrs.
(Sociology, Psychology, Economics,	
Political Science)	
Humanities	9 sem hrs.
(History, Literature, Art History,	
Foreign Languages)	
English Composition,	
Speech, and Library	11 sem. hrs.

These are core requirements for all departments within the College of Family and Consumer Sciences. Programs of study include:

Apparel Merchandising, Design, and Production, B.S. Child and Family Services, B.S. Dietetics, B.S. Early Childhood Education, B.S. Family and Consumer Sciences Education, B.S. Food Science, B.S. Hotel, Restaurant, and Institution, Management, B.S. Housing & the Near Environment, B.S. Nutritional Science, B.S. Studies in Family and Consumer Sciences, B.S.

For specific information regarding requirements for any of these programs contact the College of Family of Consumer Science, Iowa State University, 124 MacKay Hall, Ames, IA 50011. (515-294-7243) or 800-522-0683, email: cfcsinfo@iastate. edu, website: www.fcs.iastate.edu

#### University of Northern Iowa

Students planning to enter the College of Social & Behavioral Sciences at the University of Northern Iowa should refer to the web page at: http://csbsnt.csbs. uni.edu/dept/dfcs for information regarding majors in Dietetics, Family Services, Interior Design, or Textile and Apparel.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

SPC-132

# **Fire Science**

### Associate of Applied Science (AAS)

The decision to work in public safety is a commendable and selfless sacrifice. It takes a special man or woman to take on the unique challenge of a career in public service and safety.

The Iowa Central Community College Fire Science program provides the knowledge, training and skills necessary for a rewarding career in Fire Fighting Field. The training our students receive can be beneficial to help students enter the field of Fire Fighting or if they are already in the field, the training is beneficial for career advancement. Students also have the opportunity to receive National Certification in Firefighter I & II, Driver Operator Pumper, and entry level Wildland Firefighter.

#### Associate in Applied Science in Fire Science

The Associate in Applied Science in Fire Science is a comprehensive two-year program designed to allow students to gain college credit hours for specific training that will help them enter the field of Fire Fighting. This program is rich in general education courses to facilitate pursuit of a baccalaureate degree and possesses the requisite technical and managerial courses to provide the foundation for leadership in the Fire Science Profession.

**Program Requirements:** Students must earn a grade of a "C" or better in all Fire Science courses (FIR) and meet the necessary prerequisites to progress in the program. Students are required to complete National Background check and State Adult & Child Abuse check.

#### Program of Study:

First Semester FIR-127 FIR-144 FIR-213 ENG-105	Sem. Hrs.         Fire Behavior and Combustion
Second Semester FIR-124 FIR-200 FIR-221 PSY-111 *CRJ-XXX	Sem. Hrs.         Building Construction
Third Semester FIR-214 FIR-235 FIR-226 FIR-400 *CRJ-XXX	Sem. Hrs.         Legal Aspects of the Emergency Services       3         Fire Investigation I
Fourth Semester FIR-145 FIR-149 FIR-152 FIR-236	Sem. Hrs.         Fire Strategies and Tactics

\*Must take 2 of 3, CRJ-141, CRJ-160, and CRJ-300 OR EMS-200 EMT (8 credits)

\*\*Math elective from general education course list.

# Geography

### Associate of Arts (AA)

Geography is defined by its concern with place. Geographers strive to answer spatial questions regarding the earth's surface; to describe and explain the character of regions; to ascertain the ways in which historical and contemporary humans have used and shaped the earth's surface; and to understand the interactions of physical, biotic, and human systems within our global environment.

Students of geography find that they develop insights and methods of inquiry that are particularly applicable to understanding many of the complex problems confronting societies. For instance, the distribution and consumption of natural resources, air and water pollution, processes and management of natural environments, growth and development of urban areas, increasing populations, transportation problems, spatial inequalities, location of services, and conflicts between nations are some of the issues dealt with by geographers.

Students interested in majoring in Geography can complete their first two years of coursework at Iowa Central and then transfer to a public or private college for the remaining two years.

#### Suggested Program of Study:

Enrollment Date: Fall Semester Minimum Required Credits: 61.5 Campus: Fort Dodge Department: Health Science CIP#: 4302030200

# **Graphics Technology**

### Diploma/Associate of Applied Science (AAS)

The Graphics Technology Program combines the most essential skills from desktop publishing and graphic design to prepare students for a career in one of the top six fastest growing careers in the nation. Through hands-on projects, students will study and apply the techniques and tools it takes to create powerful and intelligent visual communications. Students build skill in developing the images used in a variety of creative projects including brochures, posters and advertisements as well as the skill for design, layout, and formatting of these materials. Students build a strong foundation for a career by learning design techniques, visual thinking, and typography through applied learning.

#### Program of Study: First Semester

Se

Semester		Sem. Hrs.
CIS-256	Dreamweaver I	3
CIS-265	Photoshop I	3
CIS-254	Basic Multimedia Design	2
GRA-111	Vector Graphics I	2
GRA-176	Layout Design I	3
ART-115	Graphic Design I	<u>3</u>
	Total Hours	

cond Semester		Sem. Hrs.
CIS-266	Photoshop II	3
GRA-115	Vector Graphics II	2
GRA-177	Layout Design II	2
ART-160	Typography	2
ART-116	Graphic Design II	3
ADM-258	Professional Development	1
	Social Science/Humanities Elective	3
	Total Hours	

Students can graduate with a diploma in Graphics Technology after successful completion of first and second semester. Students can continue to third and fourth semesters to complete an Associate of Applied Science Degree (AAS).

Third Semester		Sem. Hrs.
CIS-277	Portfolio I	3
CIS-194	Layout Design III	3
MKT-110	Principles of Marketing	3
BUS-112	Business Math*	3
ENG-105	Composition I	3
	Total Hours	
Fourth Semester		Sem. Hrs.
CIS-278	Portfolio II	3
CIS-195	Layout Design Projects	3
GRA-166	Web Animation	<u>3</u>
ART-184	Photography	3
	English/Speech Elective*	3
	Total Hours	

\*Course may be substituted with a related course from either AA, AS, or approved general education list for Applied Science and Technology.

\*\*Program requirements: Must pass all classes with a prefix of ART, CIS, and GRA with a "C" or better for Graduation.

# Health & Beauty Management

### Associate of Applied Science (AAS)

The Health and Beauty Management program will provide students with a comprehensive program to prepare them for professions in the health and beauty fields. By incorporating college level business courses along with the courses required to prepare students to pass the state board exams, this degree will give the students opportunities to progress further within their field and give them the essential skills that will help them be successful as self employed cosmetologists. Iowa Central Community College and La James International Colleges have formed a partnership for the delivery of this program that combines licensure with an associate in applied science degree component.

#### Program of Study:

Courses that will be taught during the

**Diploma in Cosmetology at LaJames International College:** Theory of Applied Art Design Decisions Applied Principles

Career Essentials Core Life Sciences Salon Tech/Practicum

#### Iowa Central Courses Required for Graduation

BUS-121	Business Communication*	3
BUS-112	Business Mathematics*	3
MGT-101	Principles of Management	3
BUS-161	Human Relations*	3
MKT-110	Principles of Marketing	3
BUS-130	Introduction to Entrepreneurship	<u>3</u>
	Total Hours	18

\*Course may be substituted with a related course from the approved general education course list.

#### **Program Graduation Requirements:**

To graduate with an AAS in Health and Beauty Management from Iowa Central Community College a student must complete the following:

1. Student must have graduated from La James International College with a diploma in either:

- a) Cosmetology, or
- b) Massage Therapy and Esthetics
- A copy of the La James transcript must be sent to Iowa Central Community College
- 2. Student must hold a current state license from Iowa or Nebraska in either:
  - a) Cosmetology, or b) Massage Therapy and Esthetics
  - A copy of the state license must be sent to Iowa Central Community College

3. Student must complete the 18 credits required by Iowa Central Community College

Enrollment Date: Fall Semester Minimum Required Credits: 32 (Diploma), 64 (AAS) Campus: Fort Dodge Department: Business CIP#: 1003030200

# Health Care Administration

### Associate of Professional Studies (APS)

The Health Care Administration program will provide graduates with an Associate of Professional Studies degree. The purpose of the program is to prepare students entering and those currently in health care related careers with expanded opportunities within the health care profession. The program will include the following topics: the health care system in the U.S., legal and ethical issues dealing with health care, economics and how it affects health care, professional opportunities related to health care, informational technology used in health care and general principles of the financial aspects of health care. This program is only offered in the 8-week online program.

#### Program of Study: First Semester Sem Hrs SDV-108 College Experience or SDV-118 Online College Experience ......1-3 ENG-105 ECN-120 Principles of Macroeconomics or \*PHI-145 Introduction to Ethical Conflicts..... Total Hours...... 16-18 Second Semester Sem. Hrs. HSC-113 Medical Terminology.....2 PSY-111 Introduction to Psychology ......3 \*\*HCA-153 Career Opportunities in Health Care ......3 \*\*HCA-155 Technology and Health Care......3 Total Hours...... 17 **Third Semester** Sem. Hrs. Principles of Management ......3 MGT-101 \*\*HCA-157 Health Care and Economics......3 Math Elective ......3 Total Hours...... 15 Fourth Semester Sem, Hrs. \*\*HCA-161 Legal Issues in Health Care ......3 ACC-146 Distributed Elective.....<u>3</u> Total Hours...... 18 \*Course may be substituted with a Humanities course from the approved APS degree

\*Course may be substituted with a Humanities course from the approved APS degree requirements.

\*\*All Courses with a prefix of HCA must be completed with a "C" grade or higher.

# Heating, Ventilation, Air Conditioning and Refrigeration Maintenance Technology/Technician

### **Associate of Applied Science (AAS)**

The HVAC Technology/Technician program will concentrate on heating, air conditioning, ventilation and refrigeration systems that control the air quality in many types of buildings that control the temperature, humidity, and overall air quality in homes, businesses, and other buildings. This program prepares students for entry into the following occupations: commercial heating/air conditioning controls technician; commercial heating/air conditioning service technician; heating/air conditioning lab technician; heating/air conditioning service representative.

#### Program of Study:

First Semester		Sem. Hrs.
MAT-743	Technical Math*	3
HCR-102	Introduction to HVAC-R	3
HCR-104	HVAC-R Tools and Terminology	2
ELE-111	AC Fundamentals	3
ELE-114	DC Fundamentals	3
IND-127	Shop Operations	1
IND-110	CPR, First Aid, and Safety	1
	Total Hours	
Second Semester		Sem. Hrs.
WEL-122	Beginning Welding	2
HCR-210	Residential Air Conditioning Systems	4
HCR-240	Troubleshooting Air Conditioning System	ns3
HCR-308	Refrigeration Fundamentals	5
	Humanities/Social Science Elective*	<u>3</u>
	Total Hours	17
Summer Session	(Required)	Sem Hrs.
Summer Session HCR-932	<b>(Required)</b> Internship	Sem Hrs. 4
Summer Session HCR-932 Third Semester	(Required) Internship	Sem Hrs. 4 Sem. Hrs.
Summer Session HCR-932 Third Semester HCR-150	(Required) Internship Commercial Heating Systems	Sem Hrs. 4 Sem. Hrs. 5
Summer Session HCR-932 Third Semester HCR-150 HCR-510	(Required) Internship Commercial Heating Systems Sheet Metal Fabrication	Sem Hrs. 
Summer Session HCR-932 Third Semester HCR-150 HCR-510 HCR-802	(Required) Internship Commercial Heating Systems Sheet Metal Fabrication Control Systems for HVAC	Sem Hrs. 4 Sem. Hrs. 5 
Summer Session HCR-932 Third Semester HCR-150 HCR-510 HCR-802 HCR-155	(Required) Internship Commercial Heating Systems Sheet Metal Fabrication Control Systems for HVAC Troubleshooting Heating Systems	Sem Hrs. Sem. Hrs. 5 2 4 3
Summer Session HCR-932 Third Semester HCR-150 HCR-510 HCR-802 HCR-155	(Required) Internship Commercial Heating Systems Sheet Metal Fabrication Control Systems for HVAC Troubleshooting Heating Systems Communication Elective*	Sem Hrs. 5 5 2 4 3 3
Summer Session HCR-932 Third Semester HCR-150 HCR-510 HCR-802 HCR-155	(Required) Internship Sheet Metal Fabrication Control Systems for HVAC Troubleshooting Heating Systems Communication Elective* Total Hours	Sem Hrs. 4 Sem. Hrs. 2 4 3 3 17
Summer Session HCR-932 Third Semester HCR-150 HCR-510 HCR-802 HCR-155	(Required) Internship Commercial Heating Systems Sheet Metal Fabrication Control Systems for HVAC Troubleshooting Heating Systems Communication Elective* Total Hours	Sem Hrs. 4 Sem. Hrs. 2 4 3 3 3 17 Sem. Hrs.
Summer Session HCR-932 Third Semester HCR-150 HCR-510 HCR-802 HCR-155	(Required) Internship Sheet Metal Fabrication Control Systems for HVAC. Troubleshooting Heating Systems Communication Elective* Total Hours	Sem Hrs. 4 Sem. Hrs. 2 4 3 3 3 3 7 7 Sem. Hrs. 4
Summer Session HCR-932 Third Semester HCR-150 HCR-510 HCR-802 HCR-155 Fourth Semester PHY-184 HCR-235	(Required) Internship Sheet Metal Fabrication Control Systems for HVAC Troubleshooting Heating Systems Communication Elective* Total Hours Applied Physics* Commercial Air Conditioning Systems	Sem Hrs. 4 Sem. Hrs. 2 4 3 3 3 17 Sem. Hrs. 4 5
Summer Session HCR-932 Third Semester HCR-510 HCR-510 HCR-155 Fourth Semester PHY-184 HCR-235 HCR-923	(Required) Internship Sheet Metal Fabrication Control Systems for HVAC Troubleshooting Heating Systems Communication Elective* Total Hours Applied Physics* Commercial Air Conditioning Systems Systems Design	Sem Hrs. 4 Sem. Hrs. 2 4 3 3 3 17 Sem. Hrs. 5 5 
Summer Session HCR-932 Third Semester HCR-510 HCR-510 HCR-802 HCR-155 Fourth Semester PHY-184 HCR-923 HCR-923 HCR-923	(Required) Internship Sheet Metal Fabrication Control Systems for HVAC Troubleshooting Heating Systems Communication Elective* Total Hours Applied Physics* Commercial Air Conditioning Systems Systems Design Oil and Hydronic Heating	Sem Hrs. 4 Sem. Hrs. 2 4 3 3 17 Sem. Hrs. 4 5 3 3 3 3 3

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefixes: HCR.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Varies Minimum Required Credits: 66 Campus: Online Only Department: Health Science CIP#: 5107010200 ITSO: 03 11 11 03

Enrollment Date: Fall Semester Minimum Required Credits: 70 Campus: Fort Dodge Department: Industrial Technology CIP#: 150000200

# **History**

### Associate of Arts (AA)

Iowa Central's History curriculum is designed to prepare students for a major in History at a senior institution. The curriculum provides a broad perspective of historical issues, methods of historical study, and research techniques. Skills of analysis also provide a means to study related areas in the Social Sciences such as Political Science/Government, Sociology, Anthropology, Psychology, Economics, Geography, and Religion. Students interested in majoring in History at the senior college level can complete their first two years of coursework at Iowa Central and then transfer to a public or private college for the remaining two years.

#### Suggested Program of Study:

,		
First Semester		Sem. Hrs.
ENG-105	Composition I	3
ANT-105	Cultural Anthropology	3
HIS-151	U.S. History to 1877	3
SDV-108	The College Experience	1
PSY-111	Introduction to Psychology	
SOC-110	Introduction to Sociology	
	Total Hours	
cond Semester		Sem. Hrs.
ENG-106	Composition II	3
POL-111	American National Government	3
HIS-152	U.S. History since 1877	3
HIS-112	Western Civ: Ancient-Early Modern	4
MAT-157	Statistics	4
	Total Hours	
Third Semester		Sem. Hrs.
SPC-112	Public Speaking	
POL-121	International Relations	
CSC-110	Introduction to Computers	
HIS-113	Western Civ: Early Modern to Present	4
	Total Hours	

#### Fourth Semester

Se

Semester		Sem. Hrs.
REL-105	Introduction to Religion	3
BIO-102	Introductory Biology	3
BIO-103	Introductory Biology Lab	
GEO-121	World Regional Geography	
	Cultural Studies	
	Cultural Studies	
	Total Hours	

### Human Services

### Associate of Professional Studies (APS)

The Human Services program prepares the student for a helping career in the human services field. The goal of this program is to prepare the student for their future employment as a human services generalist. Students who study human services typically should enjoy working with people. They are passionate about the potential for human growth and change. The students feel a commitment to improve the overall quality of people's lives. Their interests may also include advocating for social justice. The Human Services Program provides a core course foundation that expands the student's basic knowledge and skills. The student will complete additional classes in psychology and sociology that allow them to focus and pursue their own special interests. Additional class work will include studies in substance abuse, victim advocacy, disability services, working with youth, families, and the elderly. Counseling courses develop the students' abilities to interview and assist clients in making changes in their lives. A field practicum placement allows the students to explore a human services career with a hands-on experience at a community human services agency setting. The Human Services Club is a campus organization that provides a gathering point for students that have a common interest in pro-social activities on campus and in the community. Members will learn about community agencies and services, along with participating in exciting service projects. A Human Services student can complete two years at Iowa Central and begin their professional career. Students will also have the option to transfer to another institution of higher education as they pursue their four year degree in Human Services or Social Work.

#### **Program of Study:**

PSY-251

SOC-115 SOC-120 SOC-130

SOC-200

to take HSV-854 and HSV-855

	Com Hrs
ENG-105 ENG-106 SPC-112 CSC-110 SDV-108	Composition I       3         Composition II       3         Public Speaking       3         Introduction to Computers       3         The College Experience       1         Mathematics Elective       3         Science Elective       3         Humanities Elective       3         Social Science Elective       3         Distributive Studies       9         General Education Requirements       34
COC 150	Sem. Hrs.
SOC-150	Introduction to Human Services
SOC-140	Human Behavior in the Social Environment
HSV-162	Introduction to Disabilities Services
HSV-180	Ethics for Human Services Professionals1
HSV-220	Introduction to Counseling3
HSV-850	Field Experience*2
PSY-111	Introduction to Psychology
	Ruman Service Requirements
	Sem. Hrs.
	Choose 12 hours from the following courses
HSV-135	Women's Issues
HSV-229	Addictive Disease Concents
HSV-275	Social Justice and Advocacy 3
HSV-285	Case Management
HSV-928	Independent Studies 1 to 3
HSV-949	Special Topics 1 to 3
PSY-121	Developmental Psychology
PSY-222	Child Psychology
PSY-241	Addrescent i sychology
1 31-241	, contentian i sychology

Graduation Requirement ...... 67

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 67

\*On campus students are required to take HSV-850 and online students are required

# Industrial Business

### Associate of Applied Science (AAS)

The Industrial Business Degree Program is a one-year program tht will help students develop additional business and communication skills essential for management and supervision in the technical fields. It is a second-year option to one-year diploma programs, and students will earn an AAS degree upon completion.

The Industrial Business Degree program can be used in addition to the following one-year diploma programs -

Baking & Pastry Arts Carpentry Engineering & Design Technology Industrial Mechanics Welding

### **Program of Study:**

3
3
3
es** <u>6</u>
15*
Sem. Hrs.
3
· · · · · · · · · · · · · · · · · · ·

\*Course must be chosen or substituted with a related course from the approved general education course list.

Business or Industrial Technology Electives\*\*......6 Total Hours......15\*

\*\* Credits in addition to the diploma program

# Industrial Mechanics

### Diploma

Ν

The Industrial Mechanics Program provides training essential for entry-level positions as a machine repairer, or building and plant maintenance technician. The program will provide basic skills in welding, fabrication, pneumatics & hydraulics, blueprint reading, lean manufacturing, and predictive and preventive maintenance. Students will utilize hands-on training to install, maintain and troubleshoot the equipment currently utilized by today's industries. Upon completion of the program, the graduates will be awarded a Diploma in Industrial Mechanics. All courses taken will also satisfy some of the requirements for other Industrial Technology Associate Degree programs.

Program of Study:	
First Semester	Sem. Hrs.
ELE-114	DC Fundamentals
MAT-743	Technical Math*3
IND-126	Precision Measurements Lab1
IND-127	Shop Operations1
IND-128	Blueprint Reading1
IND-184	Mechanical Processes2
IND-185	Predictive & Preventative Maintenance2
MFG-256	Introduction to Lathe Operations2
WEL-122	Beginning Welding2
	Total Hours17
Second Semester	Sem. Hrs.
WEL-213	Fabrication, Layout & Estimating
	or
WEL-214	Advanced Fabrication2
WEL-340	Maintenance Welding2
IND-106	Industrial Pumps and Drive Systems2
IND-110	CPR, First Aid and OSHA1
IND-116	Pneumatic and Hydraulic Systems2
IND-183	Industrial Machine Maintenance4
IND-314	Computer Maintenance Management Systems1
MFG-266	Introduction to Mill Operations2
MFG-505	Lean Manufacturing <u>1</u>
	Total Hours17
Optional	
IND-932	Internship4
MEG-257	Advanced Lathe 2

IND-932	Internship	4
MFG-257	Advanced Lathe	2
MFG-238	Machine Processes	2
BUS-114	Workplace Communications	3
BUS-113	Workplace Readiness	1.5

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefixes: IND, MFG, ELE.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge Department: Industrial Technology CIP#: 3099991200

Enrollment Date: Fall Semester Minimum Required Credits: 34 Campus: Fort Dodge Department: Industrial Technology CIP#: 4703030100

# **Industrial Robotics and Automation**

### Associate of Applied Science (AAS)

The Industrial Robotics and Automation program will provide students training in an industrial setting in topics such as assembling, installation, programming, troubleshooting, maintaining and operating industrial robotic systems. Students will develop skills in industrial controls, programming, vision systems, fluid power, multi axis motion control, and automation integration. Upon successful completion, students are awarded an Associate of Applied Sciences Degree.

Program of Study: First Semester MAT-150 NET-110 ELE-114 ELE-111 ELE-164 ATR-253	Discrete Math* Microcomputer Fundamentals* DC Fundamentals AC Fundamentals Residential Wiring Robotic Programming Total Hours	Sem. Hrs. 3 3 3 3 3 3 2 2 3 17
Second Semester CAD-401 ELE-167 ELE-195 ELE-170 IND-184 EGT-450	Electrical CAD Industrial Electrical Systems Motor Control Power Distribution Mechanical Process Computer Integrated Manufacturing Total Hours	Sem. Hrs. 3 3 3 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
Summer Semester ELE-932	Internship Total Hours	Sem. Hrs. <u>4</u> <u>4</u>
Third Semester ELE-204 ELE-187 ELE-155 ELE-198 ATR-270	Programmable Logic Theory Advanced Industrial Electrical System National Code I Solid State Motor Controls Vision Systems Communications Elective* Total Hours	Sem. Hrs. 
Fourth Semester IND-116 ELE-205 ELE-221 ELE-245 ATR-265	Pneumatic & Hydraulic Systems Adv. Programmable Controllers Instrumentation Integrated Motion Control & Robotics Robotics and Automation Humanities/SS Elective* Total Hours	Sem. Hrs. 2 3 4 3 3 4 3 18
Optional BUS-113 EGT-400 NET-191 WEL-122 WEL-710 IND-106 IND-110 IND-127 IND-185 IND-314	Workplace Readiness Intro to Engineering & Design Network Cabling CISCO Networking Beginning Welding Robotic Welding Industrial Pumps & Drives CPR, First Aid and OSHA Shop Operations Predictive Preventative Maintenance Computer Maintenance Management Sy	Sem. Hrs. 

\*Course must be chosen or substituted with a related course from the approved general education course list.

# **Liberal Arts & Sciences**

### Assciate of Arts (AA)

Students interested in a liberal arts program can normally complete one half of their work at Iowa Central. Each college and university has somewhat different requirements, but the first two years are usually very similar. Completion of Associate in Arts requirements will serve as the general education component at many colleges. Major and minor course requirements can be studied while a student attends Iowa Central, but higher level course requirements must be completed at the senior college. Below are a wide range of majors that often fall into the area of liberal arts.

Anthropology Art Astronomy Bacteriology Biochemistry **Biophysics** Biology Chemistry Computer Science Earth Science Economics English Geography Geology History Journalism Life Science Mathematics

Metallurgy Meteorology Microbiology Modern Language Music Philosophy Physical Education Physics Political Science Psychology Religion Science Social Work Sociology Speech Pathology Statistics Theatre Zoology

Enrollment Date: Fall Semester Minimum Required Credits: 71 Campus: Fort Dodge Department: Industrial Technology CIP#: 1504050200

# Mathematics

### Associate of Arts (AA)

lowa Central provides a wide selection of courses to help students develop the mathematical background that is needed for many majors such as Mathematics, Actuarial Science, Computer Science and Statistics. Students should consult with their advisor for help in planning a program for their first two years.

The following schedule is a guide to obtain an Associate of Arts Degree from Iowa Central Community College. Additional developmental courses may be required before you can take a college-level English or math course. Check with transfer institution on specific requirements.

Suggested Program First Semester	m of Study for Mathematics/Ac	tuarial Science Sem. Hrs.
ENG-105	Composition I	3
CIS-162	C++	4
MAT-210	Calculus I	4
CSC-110	Introduction to Computers	3
SDV-108	The College Experience	1
	Humanities Elective	<u>3</u>
	Total Hours	
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
CIS-604	Visual Basic	
IVIA1-216	Calculus II	4
		4 2
	Total Hours	<u>3</u> 17
Third Semester		Sem. Hrs.
SPC-112	rublic speaking	3
MAI-15/	Statistics	4
IVIA1-219		4
	Humanities Elective	
	Total Hours	<u>ು</u> 17
Fourth Semester		Sem. Hrs.
MAT-158	Statistics II	3
MAT-226	Differential Equations	3
	Science Elective	4
	Humanities Elective	3
	Social Science Elective	<u>3</u>
	Total Hours	
Suggested Program First Semester	m of Study for Computer Science	ce: Sem. Hrs.
CI3-102 MAT 127	Callege Algebra and Trigonometry	4 E
IVIAI-127	College Algebra and Trigonometry .	ع ر
IVIAI-157	The College Experience	4
3DV-100	Total Hours	
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
MAT-158	Statistics II	3
CIS-153	Data Structures	4
MAT-210	Calculus I	4
CSC-110	Introduction to Computers	<u>3</u>
	Total Hours	17
Third Semester		Sem. Hrs.
SPC-112	Public Speaking	3
MAT-216	Calculus II	4
	Social Science Elective	3
	Humanities Elective	3
	Science Elective	<u>4</u>
	Total Hours	17
Fourth Semester	\/.  D.	Sem Hrs.
CIS-604	Visual Basic	3
MAI-226		3
		3
		/

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

Total Hours ...... 15

Suggested Progra	m of Study for Math Education:	
First Semester		Sem. Hrs.
ENG-105	Composition I	3
MAT-127	College Algebra and Trigonometry	
SDV-108	The College Experience	1
	Humanities Elective	3
	Social Science Elective	<u>3</u>
	Iotal Hours	
Second Semester		Sem Hrs.
EDU-213	Introduction to Education	3
ENG-106	Composition II	3
MAT-157	Statistics	4
MAT-210	Calculus I	4
	Humanities Elective	<u>3</u>
	Total Hours	17
Third Semester		Sem. Hrs.
Third Semester SPC-112	Public Speaking	Sem. Hrs.
Third Semester SPC-112 MAT-158	Public Speaking Statistics II	<b>Sem. Hrs.</b> 
Third Semester SPC-112 MAT-158 MAT-216	Public Speaking Statistics II Calculus II	Sem. Hrs. 
Third Semester SPC-112 MAT-158 MAT-216	Public Speaking Statistics II Calculus II Social Science Elective	Sem. Hrs. 
Third Semester SPC-112 MAT-158 MAT-216	Public Speaking Statistics II Calculus II Social Science Elective Science Elective	Sem. Hrs. 3 3 4 3 3 3
Third Semester SPC-112 MAT-158 MAT-216	Public Speaking Statistics II Calculus II Social Science Elective Science Elective <b>Total Hours</b>	Sem. Hrs. 
Third Semester SPC-112 MAT-158 MAT-216 Fourth Semester	Public Speaking Statistics II Calculus II Social Science Elective Science Elective <b>Total Hours</b>	Sem. Hrs. 3 4 3 3 3 16 Sem. Hrs.
Third Semester SPC-112 MAT-158 MAT-216 Fourth Semester CSC-110	Public Speaking Statistics II Calculus II Social Science Elective Science Elective <b>Total Hours</b> Introduction to Computers	Sem. Hrs. 3 4 3 16 Sem. Hrs. 3
Third Semester SPC-112 MAT-158 MAT-216 Fourth Semester CSC-110 HIS-211	Public Speaking Statistics II Calculus II Social Science Elective Science Elective <b>Total Hours</b> Introduction to Computers Modern Asian History	Sem. Hrs. 3 4 3 4 3 16 Sem. Hrs. 3 3
Third Semester SPC-112 MAT-158 MAT-216 Fourth Semester CSC-110 HIS-211	Public Speaking Statistics II Calculus II Social Science Elective Science Elective Total Hours Introduction to Computers Modern Asian History Science Elective	Sem. Hrs. 3 4 3 3 4 3 3 5 5 6 Sem. Hrs. 3 4 4 5 6 5 6 5 6 5 6 4 4 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6
Third Semester SPC-112 MAT-158 MAT-216 Fourth Semester CSC-110 HIS-211	Public Speaking Statistics II Calculus II Social Science Elective Science Elective <b>Total Hours</b> Introduction to Computers Modern Asian History Science Elective Humanities Elective	Sem. Hrs. 3 4 3 3 4 3 16 Sem. Hrs. 3 3 4 3 3 3 3 3 3 3 3 3 3 3 4 3 3 3 4 5 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6
Third Semester SPC-112 MAT-158 MAT-216 Fourth Semester CSC-110 HIS-211	Public Speaking Statistics II Calculus II Social Science Elective Science Elective <b>Total Hours</b> Introduction to Computers Modern Asian History Science Elective Humanities Elective Social Science Elective	Sem. Hrs. 3 4 3 4 3 16 Sem. Hrs. 3 3 4 4 3 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6

# **Medical Assistant**

### Diploma/Associate of Applied Science (AAS)

Medical assistants work alongside physicians, mainly in outpatient or ambulatory care facilities, such as medical offices and clinics. Employers are seeking medical assistants because they are the only allied health professional trained to perform both administrative and clinical duties. The majority of medical assistants work full-time with benefits. Medical assistants usually work weekdays during normal business hours when physician's offices are open to see patients.

The Medical Assistant Program at Iowa Central Community College prepares the student with theory and entry-level competence in the per-formance of administrative and clinical duties. The diploma program includes two semesters of theory and lab, followed by a 30 day summer practicum. The program begins in the fall and concludes in the summer. Students must earn a passing grade (as outlined in individual course syllabi) in all Medical Assistant curriculum courses and meet the prerequisites to progress in the program. Upon successful completion of all program requirements, the graduate is eligible to make application to take the CMA (AAMA) Certification Examination. Students may opt to continue their education to obtain an AAS degree in Medical Assisting, completing an addition 13 credit hours of required coursework and 6 credit hours of elective coursework beyond the diploma requirements.

**Program Mission Statement:** The Iowa Central Community College Medical Assistant Program is committed to meeting the educational needs of students preparing for a career as a medical assistant. Program graduates become competent medical assistants who are able to meet the expectations of area health care providers and employers and contribute to the health and well-being of their patients and the communities within which they live and work.

Student Responsibilities: The following additional requirements will be discussed with accepted students at Medical Assistant Program Orientation: Pre-Entrance Medical Record, Criminal Background Search, Iowa Child/Dependent Adult Abuse Search, Provider Level CPR and First Aid Certification (obtained through The American Red Cross, The American Heart Association, The American Safety and Health Institute, or The National Safety Institute), Mandatory Reporter Child/Dependent Adult training and certification, HIPAA training and certification, and Bloodborne Pathogens training and certification.

Accreditation: The Iowa Central Community College Medical Assistant Diploma Program on the Fort Dodge campus is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 U.S. Highway 19 North, Suite 158, Clearwater, Florida 33763, (727) 210-2350, www.caahep.org, upon the recommendation of the Medical Assisting Education Review Board (MAERB), 20 North Wacker Drive, Suite 1575, Chicago, Illinois 60606 (800) 228-2262, www. maerb.org.

Admission Requirements: The following criteria is required for admission: Minimum of a high school diploma (GPA  $\geq$  2.5), GED (score  $\geq$  550), or 8 hours of college credit (GPA  $\geq$  2.0); ACT scores  $\geq$  18 in each category (writing and reading), COMPASS scores (writing  $\geq$  65 and reading  $\geq$  80), or ASSET scores of  $\geq$  40 in each category (writing and reading); previous college credit, if applicable (GPA  $\geq$  2.0 or HiSET 15). Early application to the program is encouraged. Twenty five students are accepted each fall. The Program Coordinator grants acceptance to the first 25 students that meet the above admission criteria. Applicants may not begin the program until ALL of the admission criteria have been completed.

Program of Study -	Medical Assistant Diploma	CIP#5108010100
First Semester		Sem.Hrs.

First Semester		Sem.Hrs.
MAP-542	The Human Body in Health & Disease I.	3
MAP-322	Examination Room Techniques I	3.5
MAP-221	Medical Laboratory Procedures I	1.5
MAP-115	Medical Office Management I	6
*HSC-113	Medical Terminology	2
MAP-435	Interpersonal Relations in Health Care	<u>2</u>
	Total Hours	18
Second Semester		Sem.Hrs.

MAP-555	The Human Body in Health & Disease II	5
MAP-325	Examination Room Techniques II	5.5
MAP-226	Medical Laboratory Procedures II	1.5
MAP-120	Medical Office Management II	6
	Total Hours	18

Summer Session (8 w	ks.)	Sem.Hrs.
MAP-610	Practicum	
**ENG-105	Composition I	
	Total Hours	6.5

#### AAS Degree Option ......CIP#5108010200

After completion of the diploma program, students may opt to continue their education to obtain an AAS degree in Medical Assisting, completing an additional 13 credit hours of required coursework and 6 credit hours of elective coursework (listed below).

	Sem.Hrs
PSY-111 Introduction to Psychology	ogy
PSY-121 Developmental Psychol	ogy3
ENG-106 Composition II	
BIO-168 Human Anatomy and Pl	nysiology I w/lab4

Elective courses that will be accepted include courses listed on the approved general education course list, or other relevant courses that receive prior approval from the Program Coordinator.

\*Advanced standing option is available for HSC 113. See Dean of Health Sciences or Program Coordinator for more information.

The Medical Assistant Diploma Program may be completed over two years with an individual curriculum plan as determined by the student and Program Coordinator. The following courses may be taken during the first year: MAP-542, MAP 555, HSC 113, and ENG-105.

Enrollment Date: Fall Semester Minimum Required Credits: 42.5 (Diploma), 61.5 (AAS) Campus: Fort Dodge Department: Health Science CIP#: 5108010100

# **Medical Laboratory Technician**

### Associate of Applied Science (AAS)

**Program of Study** 

The Medical Laboratory Technician (MLT) program prepares the student to perform a full range of laboratory tests - from a simple blood glucose test to complex tests to uncover diseases such as HIV and cancer. Medical Laboratory Technicians must work guickly and accurately. The information they give to the doctors influences the medical treatment a patient receives. In their search for data on a patient's health, MLTs obtain blood samples from patients of all ages. They analyze blood, urine and other body fluids using a microscope or other complex precision instruments.

Program Mission Statement: The Medical Laboratory Technician Program (MLT) provides a learning environment conducive to preparing students to function at entry level laboratory careers.

Program Requirements: Students must earn a grade of a "C" or better in all Medical Laboratory Technician program of study courses and meet the necessary prerequisites to progress in the program. Students must complete the program with a grade point average of 2.0 or better. (Effective Fall 2009)

Student Responsibilities: Students receive clinical practice at a clinical site determined by the MLT Coordinator. All MLT students must complete a Medical Health form and a Criminal Record/Child and Adult Abuse Check prior to attending clinical. Students must begin the hepatitis immunization series during their enrollment in Fundamentals of Laboratory Science. Transportation to the clinical site is the responsibility of the student. Graduates of the program are eligible to take the MLT Board of Certification Exam (BOC) administered by the American Society of Clinical Pathologists (ASCP). Granting of the AAS degree is not contingent on students passing any external examination or certification.

Accreditation: The Medical Laboratory Technician Program is accredited by the NAACLS, National Accrediting Agency for Clinical Laboratory Science, 5600 N. River Rd., Suite 720, Rosemont, IL 60018, 773-714-8880, 773-714-8886 (fax).

Admission Requirements: Successful completion of high school Biology and Algebra or equivalent is required. Required courses must be taken prior to entering the program. (High School chemistry is highly recommended). Chemistry may be taken the first semester in the MLT program. The following criteria is required for applicants: minimum of a high school diploma (GPA 2.5) or equivalent (GED 550) or HISET 15, ACT scores of 18 in reading, English, and math; COMPASS scores (writing 65, reading 80, pre-algebra 39, algebra 46); ASSET scores of 40 in each category (writing, reading, numeric) or ALEKS score of 20 or higher.

Advanced Standing: Individuals accepted into the MLT program who have an understanding of and prior experience in the operations of the medical laboratory may qualify to complete a proficiency exam to "test out" of the Fundamentals of Laboratory Science course.

First Semester	Sem. Hrs.	Third Semester		Sem. Hrs.
MLT-120	Urinalysis	MLT-234	Leukocyte Hematology/Coagulation	4
BIO-168	Human Anatomy & Physiology I w/lab4	MLT-250	Clinical Microbiology	
CHM-110	Introduction to Chemistry	MIT-241	Clinical Chemistry I	4.5
CHM-111	Introduction to Chemistry Lab1	MIT-260	Immunohematology	4
**HSC-113	Medical Terminology		Total Hours	16 5
**MLT-111	Fundamentals of Lab Science			
	Total Hours	Fourth Semester		Sem. Hrs.
		MIT-243	Clinical Chemistry II	2
Second Semester	Sem. Hrs.	MIT-253	Parasitology & Mycology	2
BIO-186	Microbiology w/lab4	MIT-280	Clinical Practicum I	8
BIO-173	Human Anatomy & Physiology II w/lab	11121 200	Total Hours	<u>0</u> 12
MLT-133	Erythrocyte Hematology			
MLT-171	Immunology & Serology	Summer Session (9 w	veeks)	Sem Hrs
	Total Hours 14	MIT-290	Clinical Seminar & Review	2
		MIT-281	Clinical Practicum II	2
Summer Session	Sem Hrs.	14121-201	Total Hours	<u>4.5</u>
ENG-105 PSY-111	Composition I3 Introduction to Psychology			0.5
	or			
PSY-121	Developmental Psychology <u>3</u>			

\*Electives: CHM-165, CHM-131, ENG-106, MAT-102, SOC-110, PSY-121, HUM-113, LIT-101, CSC-110

Total Hours...... 6

\*\*Test out option is available. See Dean of Health Sciences or Program Coordinator.

\*\*\*Students may extend the Medical Laboratory Technician Program over three years by taking partial semester class loads. See the MLT Coordinator.

# Medicine

### Associate of Arts (AA)

Most medical schools today recommend that students complete a baccalaureate program prior to entering a college of medicine. Students who have not decided for sure which college of medicine they are going to apply to should pursue a rigorous science program while attending lowa Central Community College. To assist students in planning a program of this nature, the following is recommended for transfer to a senior college.

The following schedule is a guide to obtain an Associate of Arts Degree from lowa Central Community College. Additional developmental courses may be required before you can take a college-level English or Math course. Check with transfer institution on specific requirements.

#### Suggested Program of Study:

First Semester	-	Sem. Hrs.
ENG-105	Composition I	3
MAT-210	Calculus I	
CHM-165	General Chemistry I	4
BIO-112	General Biology I	4
SDV-108	The College Experience	1
	Total Hours	
Second Semester		Sem. Hrs.
PSY-111	Introduction to Psychology	3
ENG-106	Composition II	3
BIO-113	General Biology II	4
CHM-175	General Chemistry II	4
CSC-110	Introduction to Computers	3
	Humanities Elective	<u>3</u>
	Total Hours	20
<b>T</b> I: 16		<b>6</b> 11
Third Semester		Sem. Hrs.
Third Semester SPC-112	Public Speaking	<b>Sem. Hrs.</b>
Third Semester SPC-112 CHM-261	Public Speaking Organic Chemistry I	Sem. Hrs.
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Social Science Elective	Sem. Hrs. 3 
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I. College Physics I. Social Science Elective Humanities Elective	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Social Science Elective Humanities Elective Total Hours	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Social Science Elective Humanities Elective Total Hours	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester MAT-157	Public Speaking Organic Chemistry I College Physics I Social Science Elective Humanities Elective <b>Total Hours</b>	Sem. Hrs. 4 4 3 3 17 Sem Hrs. 4
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester MAT-157 CHM-271	Public Speaking Organic Chemistry I College Physics I Social Science Elective Humanities Elective <b>Total Hours</b> Statistics Organic Chemistry II.	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester MAT-157 CHM-271 PHY-172	Public Speaking Organic Chemistry I College Physics I Social Science Elective Humanities Elective <b>Total Hours</b> Statistics Organic Chemistry II College Physics II.	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester MAT-157 CHM-271 PHY-172	Public Speaking Organic Chemistry I College Physics I Social Science Elective Humanities Elective Total Hours Statistics Organic Chemistry II College Physics II Social Science Elective	Sem. Hrs. 3 4 4 3 3 17 Sem Hrs. 4 4 3 3 4 4 3 3 4 4 3 3 4 4 3 3 4 4 3 3 4 4 3 3 4 4 4 3 3 4 4 4 5 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester MAT-157 CHM-271 PHY-172	Public Speaking Organic Chemistry I College Physics I Social Science Elective Humanities Elective <b>Total Hours</b> Statistics Organic Chemistry II College Physics II Social Science Elective Humanities Elective	Sem. Hrs. 3 4 3 3 3 17 Sem Hrs. 4 4 4 3 3 3 3 3 4 4 3 3 4 4 4 3 3 4 4 3 3 4 4 4 3 3 4 4 4 5 4 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6

# **Modern Languages**

### Associate of Arts (AA)

Modern Language Study is the study of another language and the culture of its people. Iowa Central Community College believes that the opportunity to study another language must be offered. Through this study the students will improve their ability to communicate, not only in the newly acquired language, but also in their native language. The college further believes that Modern Language Education develops an understanding of other cultures through its international focus. Modern Language Education provides students with a well-rounded, broad-based education allowing them to pursue their life's goals.

Students need to be aware of the Modern Language requirements at a number of the colleges and universities. The University of Iowa requires four years of high school study of one language or two years of college study for graduation from the College of Liberal Arts. Iowa State University requires three years of high school study of one language or one year of college language study in the College of Liberal Arts. The University of Northern Iowa requires two years of high school language study for entrance. This is only a sample of the modern language requirements. It is important to examine the requirements of individual majors within the transfer institution.

Modern Language study compliments many majors. Today in the fields of international business and marketing, health sciences, law enforcement, journalism, and mass communications the knowledge of another language is especially critical. Beginning language study early is important.
## **Mortuary Science**

### Associate of Arts (AA)

College programs in mortuary science usually last from one to four years depending on the school. Two academic years with a minimum of 60 credit hours of instruction is necessary to enter a mortuary science program. There are forty mortuary science programs accredited by the American Board of Funeral Services Education, which is the funeral service accrediting agency in the United States. Funeral directors must pass a state board licensing examination in most states.

The following schedule is a guide to obtain an Associate of Arts Degree from lowa Central Community College. Additional developmental courses may be required before you can take a college-level English or math course. Check with transfer institution on specific requirements.

### Suggested Program of Study:

	2	
First Semester		Sem. Hrs.
BUS-102	Introduction to Business	
ENG-105	Composition I	
BIO-112	General Biology I	4
CHM-165	General Chemistry I	4
SDV-108	The College Experience	
	Humanities Elective	
	Total Hours	
10		C

Second Semester		Sem. Hrs.
ENG-106	Composition II	3
BIO-113	General Biology II	4
CHM-175	General Chemistry II	4
CSC-110	Introduction to Computers	
	Math Elective	
	Total Hours	

Third Semester		Sem. Hrs.
PSY-111	Introduction to Psychology	3
SPC-112	Public Speaking	3
BIO-168	Human Anatomy & Physiology I w/Lab	4
PHY-162	College Physics I	4
	Humanities Elective	<u>3</u>
	Total Hours	

Fourth Semester		Sem. Hrs.
BIO-186	Microbiology w/lab	4
ECN-130	Principles of Micro Economics	3
PHY-172	College Physics II	4
	Humanities Elective	3
	Social Science Elective	
	Total Hours	

## Music

### Associate of Arts (AA)

lowa Central can provide the first two years of educational experience to those who are interested in Performing Arts. Students can obtain the educational background for the following majors and then transfer to their selected senior institution.

ſ

### Suggested Program of Study for Music

First Semester		Sem. Hrs.
MUS-122	Music Theory I	3
MUS-118	Sight Singing and Ear Training I	2
	Performance Ensemble (Choir/Band)	1
	Applied Music (Vocal/Instrumental)	1
MUA-120	Applied Piano (Proficiency)	1
SDV-108	The College Experience	1
ENG-105	Composition I	3
MAT-157	Statistics	4
	or	
MAT-111	Math for Liberal Arts	4
	Total Hours	
Second Semester		Som Hrs
MUS-123	Music Theory II	3em. m3. γ
MUS-123	Sight Singing and Ear Training II	ວ າ
1003-117	Porformance Encomble (Chair/Pand)	∠۲ 1
	Applied (Vecal/Instrumental)	ا۱ 1
MUA 120	Applied (Vocal/Instrumental)	ا۱ 1
MUA-120	Applied Plano (Proficiency)	ا۱
ENG-106		3
MUS-104	Exploring Music	3
MAI-158	Statistics II	3
	or	
	Social Science/Humanities Elective	<u>3</u>
	Total Hours	17
First Year Summer		Sem. Hrs.
		2
	Social Science/Humanities Elective	
	Social Science/Humanities Elective	
Third Semester	Social Science/Humanities Elective	Sem. Hrs.
Third Semester MUS-220	Music Theory III	<b>Sem. Hrs.</b> 3
Third Semester MUS-220 MUS-218	Music Theory III Sight Singing and Ear Training III	Sem. Hrs.
Third Semester MUS-220 MUS-218	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band)	Sem. Hrs. 3 2
Third Semester MUS-220 MUS-218	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental)	Sem. Hrs. 3 2 1 1
Third Semester MUS-220 MUS-218 SPC-112	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking	Sem. Hrs. 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Introductory of Biology	Sem. Hrs. 3 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Introductory of Biology Lab	Sem. Hrs. 3 2 1 1 3 3 3 3 3 3 1
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Lab Introductory of Biology Lab Introduction to Computers	Sem. Hrs. 3 2 1 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Lab Introductory of Biology Lab Introductory of Computers Total Hours	Sem. Hrs. 3 2 1 1 3 3 3 3 3 3 1 1 7 7
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Introductory of Biology Lab Introduction to Computers Total Hours	Sem. Hrs. 3 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Lab Introductory of Biology Lab Introductor to Computers Total Hours	Sem. Hrs. 3 
Third Semester MUS-220 MUS-218 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Lab Introductory of Biology Lab Introductor to Computers Total Hours Music Theory IV	Sem. Hrs. 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Introductory of Biology Lab Introductor to Computers <b>Total Hours</b> Music Theory IV Sight Singing and Ear Training IV	Sem. Hrs. 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III Sight Singing and Ear Training III Performance Ensemble (Choir/Band) Applied Music (Vocal/Instrumental) Public Speaking Introductory of Biology Lab Introductory of Biology Lab Introductory of Biology Lab Introductor to Computers <b>Total Hours</b> Sight Singing and Ear Training IV Performance Ensemble (Choir/Band)	Sem. Hrs. 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 3 2 3 2 1 3 3 3 3 1 <b>Sem. Hrs.</b> 3 2 <b>Sem. Hrs.</b> 3 17 <b>Sem. Hrs.</b> 1 3 17 <b>Sem. Hrs.</b> 1 1 1 1 1 1 1 1 1 1 1 1 1
Third Semester MUS-220 MUS-218 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 
Third Semester MUS-220 MUS-218 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 
Third Semester MUS-220 MUS-218 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 3 2 1 1 3 3 3 1 17 Sem. Hrs. 3 2 17 Sem. Hrs. 3 3 2 17 Sem. Hrs. 3 2 1 17 Sem. Hrs. 3 2 17 17 19 19 19 19 19 19 19 19 19 19
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 3 2 3 2 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5
Third Semester MUS-220 MUS-218 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 3 2 1 1 3 3 3 3 3 17 Sem. Hrs. 3 2 1 1 3 3 17 Sem. Hrs. 3 3 19 Sem. Hrs. 3 3 3 19 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester MUS-220 MUS-218 SPC-112 BIO-102 BIO-103 CSC-110 Fourth Semester MUS-221	Music Theory III	Sem. Hrs. 3 2 1 3 3 3 3 1 1 3 3 3 5 5 5 5 5 5 1 1 1 3 3 3 1 1 1 1 3 3 1 1 1 3 3 1 1 1 3 3 3 1 1 1 3 3 3 3 1 1 1 3 3 3 1 1 1 3 3 3 1 1 1 3 3 3 1 1 1 3 3 3 1 1 1 3 3 3 1 1 1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1

Total Credit Hours for Music Major ......75

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

## **Nursing - Associate Degree**

### Associate of Applied Science (AAS)

The Associate Degree Nursing program will prepare students for this exciting career with concentrated classroom studies and extensive clinical work (720 hours) based in a wide-range of health care settings. The first two semesters are identical in both the Practical Nursing (PN) program and the Associate Degree Nursing program enabling students to finish with the PN diploma after the first summer, and/or continue in the ADN program.

Program Mission Statement: The Associate Degree Nursing (ADN) program is committed to providing quality nursing education to aid students to meet their diverse learning needs in preparing for a career as a Registered Nurse.

Program Requirements: Students must earn a grade of a "C" or better in all Associate Degree Nursing program of study courses and meet the necessary prerequisites to progress in the program. Students who have not completed a practical nursing program and would like to re-enter the nursing program, must retake any nursing (PNN & ADN) courses completed over three years ago.

Student Responsibilities: A medical health form, certification in basic cardiac life support, and other immunization requirements must be completed prior to starting the nursing courses. Transportation to the clinical site is the student's responsibility. Uniforms are purchased by the students and worn to clinical. All nursing students must complete a Criminal Record/Child and Adult Abuse check prior to attending clinical. Any student with a felony conviction must notify the Iowa Board of Nursing after they have completed requirements for licensure including completion of a course of study and filing an application. Upon completion of the program, graduates are qualified to take the National Council Licensure Exam (NCLEX).

Accreditation: The ADN program is approved by the Iowa Board of Nursing.

Admission Requirements: This program is a selective, limited enrollment program. Students who would like to be considered for admission must complete an additional nursing application packet. Students must also be enrolled in, or have previously completed any pre-requisites of the program with a "C" or higher before they will be considered for the program. Students must submit proof of their enrollment in/or completion prior to the application deadline. The following criteria is required for applicants: a minimum of a high school diploma (GPA 2.5) or equivalent (GED 550) or HiSET 15, minimum ASSET scores of 40 in writing and reading and 46 in math, COMPASS (writing 65, reading 80, pre-algebra 64, or algebra 51), ALEKS score of 30 or higher, or ACT scores of 18 in reading, English, and 20 in math. For students who are non-native speaker of "American English" will be required to submit TOEFL scores of 17 or above in each section-Reading, Listening, Speaking, and Writing. High School Biology, Algebra, English and Chemistry are highly recommended. Licensed Practical Nurses (LPN) may enter the ADN program as Advanced Standing students and continue in the second year to complete the requirements of the ADN program. Licensed Practical Nursing students must submit an Advanced Standing nursing application and submit a copy of their LPN license. All science courses are suggested to be completed within the past five years.

### Program of Study - Fort Dodge & Webster City:

HSC-172 BIO-168	75 Hour Nurse Aide 17905 or equivalent Nurse (Student must pass state certification e Human Anatomy & Physiology I w/lab	Aide course3 exams)
First Semester PNN-127 *HSC-112 PNN-121 PNN-206 PSY-121 BIO-151 BIO-173 SDV-035	Fundamentals of Nursing in Health Ca Medical Terminology Clinical Practicum 1 Medication Administration for Nurses. Developmental Psychology Nutrition Human Anatomy & Physiology II w/lab Classroom Assistant Total Hours	Sem. Hours re
Second Semester PNN-621 PNN-622	Life Span Health Care Clinical Practicum 2 Total Hours	Sem. Hours 
Summer Session PSY-111 BIO-186	Introduction to Psychology Microbiology Total Hours	Sem. Hours 3 4 7
Third Semester** ADN-405 ADN-407 ADN-465 ADN-466	Maternal Child Health Care (7.5 weeks Clinical Practicum 3 (7.5 weeks) Psychiatric/Mental Health Care (7.5 we Clinical Practicum 4 (7.5 weeks) Total Hours	Sem. Hours. .)6 
Fourth Semester** ADN-511 ADN-512 SOC-110 ENG-105	Adult Health Care Clinical Practicum 5 Introduction to Sociology Composition 1 Total Hours.	Sem. Hours. 8.5 4 3 
Summer Session (6 w ADN-805 ADN-806	<b>ks)</b> Management in Health Care Clinical Practicum 6 <b>Total Hours</b>	Sem. Hours 1 

Program of Study	- Storm Lake:	Sem Hours
HSC-172	75 Hour Nurse Aide T9905 or equivalent Nurse	e Aide course3
BIO-168	Human Anatomy & Physiology I w/lab.	ms) 4
First Semester PNN-127 HSC-112 PNN-121 PNN-206 PSY-121 BIO-151 BIO-173 SDV-035	Fundamentals of Nursing in Health Car Medical Terminology* Clinical Practicum 1 Medication Administration for Nurses. Developmental Psychology Nutrition Human Anatomy & Physiology II w/lab Classroom Assistant. <b>Total Hours</b>	Sem. Hours e5 1 1.5 
Second Semester PNN-621 PNN-622 PSY-111	Life Span Health Care Clinical Practicum 2 Introduction to Psychology Total Hours	Sem. Hours 
Summer Session ADN-465 ADN-466	Psychiatric/Mental Health Care (6 week Clinical Practicum 4 (6 weeks) Total Hours	Sem. Hours (15)5 (2)
Summer Session ADN-465 ADN-466 Third Semester ADN-405 ADN-407 ENG-105 BIO-186	Psychiatric/Mental Health Care (6 week Clinical Practicum 4 (6 weeks) Total Hours	Sem. Hours 5 2 7 Sem. Hours. 6 2 3 3 
Summer Session ADN-465 ADN-466 Third Semester ADN-405 ADN-407 ENG-105 BIO-186 Fourth Semester ADN-511 ADN-512 SOC-110	Psychiatric/Mental Health Care (6 week Clinical Practicum 4 (6 weeks)	Sem. Hours 5 2 7 Sem. Hours. 6 2 3 4 15 Sem. Hours. 8.5 5 Sem. Hours. 8.5 3 15.5

\*\*At the Fort Dodge Center, the third and fourth semesters are interchangeable \*Test out option is available. See Health Science Dean or Program Coordinator.

Enrollment Date: Fall and/or Spring Semester in Fort Dodge; Fall Semester in Webster City, Storm Lake Minimum Required Credits: 83 Campus: Fort Dodge, Storm Lake, Webster City Department: Health Science CIP#: 5116010200

## **Nursing - Practical**

### Diploma

The Practical Nursing (PN) program prepares students for entry-level positions, to provide nursing care under the supervision of a Registered Nurse or Physician. The first two semesters are identical in both the Practical Nursing (PN) program and the Associate Degree Nursing (ADN) program, enabling students to finish the Practical Nursing program after the first summer, or to continue in the Associate Degree Nursing program. The Practical Nursing program will educate you for this career in concentrated classroom studies, along with extensive clinical work (360 hours) based in a wide-range of health care settings.

Program Mission Statement: The Practical Nursing (PN) program is committed to providing quality nursing education to aid students to meet their diverse learning needs in preparing for a career as a Licensed Practical Nurse.

**Program Requirements:** Students must earn a grade of a "C" or better in all Practical Nursing program of study courses and meet the necessary prerequisites to progress in the program. Students must retake any nursing (PNN) courses completed over three years ago.

Student Responsibilities: A medical health form, certification in basic cardiac life support, and other immunization requirements must be completed prior to starting the nursing courses. Transportation to the clinical site is the student's responsibility. Uniforms are purchased by the students and worn to clinical. All nursing students must complete a Criminal Record/Child and Adult Abuse check prior to attending clinical. Any student with a felony conviction must notify the Iowa Board of Nursing after they have completed requirements for licensure including completion of a course of study and filing an application. Upon completion of the program, graduates are qualified to take the National Council Licensure Exam (NCLEX).

Approval: The Practical Nursing program is approved by the Iowa Board of Nursing.

Admission Requirements: This program is a selective, limited enrollment program. Students who would like to be considered for admission must complete an additional nursing application packet. Students must also be enrolled in, or have previously completed any pre-requisites of the program with a "C" or higher before they will be considered for the program. Students must submit proof of their enrollment in/or completion prior to the application deadline. The following criteria is required for applicants: minimum of a high school diploma (GPA 2.5) or equivalent (GED 550) or HiSET 15; minimum ASSET scores of 40 in writing and reading and 46 in math, COMPASS (writing 65, reading 80, pre-algebra 64, or algebra 51), ALEKS score of 30 or higher, or ACT scores of 18 in reading, English, and 20 in math. For students who are non-native speaker of "American English" will be required to submit TOEFL scores of 17 or above in each section-Reading, Listening, Speaking, and Writing. High School Biology, Algebra, English and Chemistry are highly recommended. All science courses are suggested to be completed within the past five years.

### Program of Study - Fort Dodge, Storm Lake, Webster City

e-requisite	Sem. Hours
HSC-172	75 Hour Nurse Aide T9905 or equivalent Nurse Aide course3
	(Student must pass state certification exams)
BIO-168	Human Anatomy & Physiology I w/lab4

First Semester	Sem. Hours
PNN-127	Fundamentals of Nursing in Health Care5
*HSC-112	Medical Terminology1
PNN-121	Clinical Practicum 11.5
PNN-206	Medication Administration for Nurses1
PSY-121	Developmental Psychology3
BIO-151	Nutrition3
BIO-173	Human Anatomy & Physiology II w/lab4
SDV-035	Classroom Assistant <u>1</u>
	Total Hours 19.5
Second Semester	Sem. Hours
Second Semester PNN-621	Sem. Hours Life Span Health Care
Second Semester PNN-621 PNN-622	Sem. Hours Life Span Health Care
Second Semester PNN-621 PNN-622	Sem. Hours           Life Span Health Care         8.5           Clinical Practicum 2         4           Total Hours         12.5
Second Semester PNN-621 PNN-622 Spring (Fort Dodge of	Sem. Hours           Life Span Health Care
Second Semester PNN-621 PNN-622 Spring (Fort Dodge of Summer (Fort Dodge	Sem. Hours Life Span Health Care

PNN-811	Selected Clinical Nursing	. 1
PNN-731	Clinical Practicum2	.5
PNN-311	PN Issues & Trends	.1
	Total Hours 4.	.5

\*Test out option is available. See Health Science Dean or Program Coordinator.

Students may extend the Practical Nursing program over two years by taking the Arts and Science courses during the first year and the nursing courses during the second year.

## Optometry

### Associate of Arts (AA)

Optometry is the general health care concerned with the health of the eyes and the detection and treatment of vision problems. In this profession there are different areas of specialization but most patients see optometrists. There is some separation between optometry and ophthalmology. These two professions differ in that ophthalmologists are required to have a medical degree. An optometrist is usually not licensed to prescribe drugs or trained to perform surgery, although some states allow them to use topical drugs for therapeutic purposes. Optometrists are licensed medical professionals trained to prescribe and fit lenses needed for improved vision as well as treat various eye diseases.

Students desiring to pursue an optometry degree should have a strong interest in science and have excellent communication skills. They can obtain an Associate of Arts Degree after their two years of study at Iowa Central Community College before transferring to a four-year school to complete their Bachelor's Degree. Courses in physics, chemistry, biology, mathematics and English should be taken to prepare for admission to optometry school. In the United States a prospective optometrist must complete a four-year course of study after acceptance to graduate school, including a year of internship at a school that offers the Doctor of Optometry (OD) degree. At this time there are only 17 schools in the United States and all have very competitive admissions standards. A state board examination must then be passed before the optometrist can receive their license to begin to practice.

### Suggested Program of Study:

First Semester ENG-105 BIO-112	Composition I General Biology I	Sem. Hrs.
SDV-108	The College Experience	4
MAT-210	Calculus	4
	Total Hours	
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
BIO-113	General Biology II	4
CHM-175	General Chemistry II	4
CSC-110 PHI 1/15	Introduction to Computers	
111-145	Total Hours	
Inira Semester		Sem. Hrs.
CHM-261	Organic Chemistry I	Sem. Hrs.
CHM-261 BIO-168 SPC 112	Organic Chemistry I Human Anatomy & Physiology I	Sem. Hrs. 
CHM-261 BIO-168 SPC-112 MAT-157	Organic Chemistry I Human Anatomy & Physiology I Public Speaking	Sem. Hrs. 
CHM-261 BIO-168 SPC-112 MAT-157	Organic Chemistry I Human Anatomy & Physiology I Public Speaking Statistics History Elective*	Sem. Hrs. 
CHM-261 BIO-168 SPC-112 MAT-157	Organic Chemistry I Human Anatomy & Physiology I Public Speaking Statistics. History Elective* Total Hours	Sem. Hrs. 4 3 4 3 4 18
CHM-261 BIO-168 SPC-112 MAT-157	Organic Chemistry I Human Anatomy & Physiology I Public Speaking Statistics History Elective* Total Hours	Sem. Hrs. 4 4 3 4 3 18 5em. Hrs.
Fourth Semester Poy-104 Fourth Semester PSY-111	Organic Chemistry I Human Anatomy & Physiology I Public Speaking Statistics History Elective* <b>Total Hours</b> Introduction to Psychology	Sem. Hrs. 4 4 3 4 3 5 8 5 8 5 8 8 5 8 3

		Total Hours 1	16
		Humanities Elective	
		Social Science Elective	3
BI	D-173	Human Anatomy & Physiology II	4
LO	11-150		

PHY-162 College Physics I (needed if you did not have 1 yr h.s. physics) BIO-186 Microbiology w/lab is a recommended summer class

To ensure best transfer, student and advisor should confirm math and science classes with transfer institution.

\*Course must be chosen from appropriate AA/AS general education list.

## Pharmacy

### Associate of Arts (AA)

To become licensed, a prospective pharmacist must graduate from one of the seventy-two colleges accredited by the American Council of Pharmaceutical Education, complete about 1500 hours of internship under a registered pharmacist and pass the state pharmacy board examination. Students who enter lowa Central Community College should pursue a rigorous science program.

The following schedule is a guide to obtain an Associate of Arts Degree from Iowa Central Community College. Additional developmental courses may be required before you can take a college-level English or math course. Check with transfer institution on specific requirements.

Suggested Progra First Semester ENG-105 BIO-112 CHM-165 SDV-108 MAT-210	m of Study: Composition I General Biology I General Chemistry I The College Experience Calculus. Total Hours	Sem. Hrs. 
Second Semester ENG-106 BIO-113 CHM-175 CSC-110 PHI-145	Composition II General Biology II General Chemistry II Introduction to Computers Introduction to Ethical Conflict Total Hours	Sem. Hrs. 3 4 4 3 3 3 17
Third Semester CHM-261 PHY-162 SPC-112 MAT-157	Organic Chemistry I College Physics I Public Speaking Statistics. Humanities Elective* Total Hours	Sem. Hrs. 4 3 4 3 4 3 18

BIO-186 Microbiology w/lab is a recommended summer class.

\*Must be selected from areas I-IV section of AA degree sheet.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

## **Physical Education**

### Associate of Arts (AA)

If you are an individual who enjoys (1) physical activity, (2) fitness, (3) sports activity, (4) working with people (young and old) and who is interested in their personal health and the health of others, then physical education is the discipline for you.

Ask physical educators to identify the most important aspect of their jobs and you'll likely be told that, first and foremost, they are responsible for helping young people acquire the skills and self-confidence they need to participate in a wide variety of physical activities - while in school and beyond.

Iowa Central's Physical Education curriculum combines courses in health, fitness, wellness, athletic training and emergency care, coaching, and sports activities. Professional courses in education are implemented with the physical education curriculum. The Physical Education curriculum provides general education coursework, specific skills training, and direct experience working with young people in a school setting. To be a teacher of Physical Education a student must graduate from an accredited teacher training institution. Students can attend lowa Central for their first two years and then transfer to a public or private college for the remaining two years.

### Suggested Program of Study:

	-	
First Semester		Sem. Hrs.
EDU-213	Introduction to Education	3
PSY-111	Introduction to Psychology	3
ENG-105	Composition I	3
CSC-110	Introduction to Computers	3
POL 111	American National Government	2
CDV 100	The Cellere Europrise	
SDV-106		<u> </u>
	Iotal Hours	16
Second Semester		Sem. Hrs.
PSY-121	Developmental Psychology	3
ENG-106	Composition II	3
PEH-185	Contemporary Health Issues	3
PSY-281	Educational Psychology	
MAT-157	Statistics	4
111/11/10/	Total Hours	16
		10
Third Semester		Sem. Hrs.
Third Semester SPC-112	Public Speaking	<b>Sem. Hrs.</b>
Third Semester SPC-112 HIS-112	Public Speaking Western Civ: Ancient to Early Modern	Sem. Hrs. 
Third Semester SPC-112 HIS-112 REL-105	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion	Sem. Hrs. 
Third Semester SPC-112 HIS-112 REL-105 PEC-121	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function	Sem. Hrs. 
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology.	Sem. Hrs. 
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology	Sem. Hrs. 3 4 3 2 3 1
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103 PEC-127	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Introductory Biology Lab Care and Prevention of Athlatic Injuries	Sem. Hrs. 
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103 PEC-127	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Introductory Biology Lab Care and Prevention of Athletic Injuries.	Sem. Hrs. 
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103 PEC-127	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Introductory Biology Lab Care and Prevention of Athletic Injuries. <b>Total Hours</b>	Sem. Hrs. 3 4 2 3 3 1 1 2 3 1 8
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103 PEC-127 Fourth Semester	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Care and Prevention of Athletic Injuries. <b>Total Hours</b>	Sem. Hrs. 3 4 3 2 3 1 2 18 Sem. Hrs.
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103 PEC-127 Fourth Semester EDU-115	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Introductory Biology Lab Care and Prevention of Athletic Injuries. <b>Total Hours</b> Education and the Teaching Process	Sem. Hrs. 3 4 3 2 3 1 1 2 3 3 1 1 8 Sem. Hrs. 4
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-102 BIO-103 PEC-127 Fourth Semester EDU-115 HIS-113	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Introductory Biology Lab Care and Prevention of Athletic Injuries <b>Total Hours</b> Education and the Teaching Process Western Civ: Early Modern to Present	Sem. Hrs. 3 4 3 2 3 1 2 18 Sem. Hrs. 4 4 4
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103 PEC-127 Fourth Semester EDU-115 HIS-113 PEC-111	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Lab Care and Prevention of Athletic Injuries. <b>Total Hours</b> Education and the Teaching Process Western Civ: Early Modern to Present Techniques and Theory of Coaching	Sem. Hrs. 3 4 3 2 3 1 2 18 Sem. Hrs. 4 4 2 2 3 18 Sem. Hrs. 4 2 3 18 Sem. Hrs. 4 4 4 4 4 4 4 5 18 Sem. 4 4 4 19 19 10 10 10 10 10 10 10 10 10 10
Third Semester SPC-112 HIS-112 REL-105 PEC-121 BIO-102 BIO-103 PEC-127 Fourth Semester EDU-115 HIS-113 PEC-111	Public Speaking Western Civ: Ancient to Early Modern Introduction to Religion Body Structure and Function Introductory Biology Introductory Biology Lab Care and Prevention of Athletic Injuries. <b>Total Hours</b> Education and the Teaching Process Western Civ: Early Modern to Present Techniques and Theory of Coaching Physical Science.	Sem. Hrs. 3 4 3 2 3 3 2 1 2 18 Sem. Hrs. 4 4 4 4 4 4 4 4 4 4 4 4 4

Total Hours ......17

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

# **Physical Therapy**

### Associate of Arts (AA)

Physical Therapy is one of the fastest growing health areas with responsibility for treating and correcting all types of physical disorders. The treatment you receive in physical therapy may be needed when certain health problems make it hard to move around or do certain tasks needed in everyday life. It can also help patients to recover faster after surgeries either through long or short-term care. Common health issues that may require physical therapy include back pain, tendon/ligament problems, arthritis, and multiple sclerosis, however there are many other conditions that may require treatment such as cancer, lung/breathing difficulties, nervous system problems, and people that have experienced major burns, bone breaks, and other wounds. Some patients may be receiving routine physical therapy care associated with former athletic injuries or everyday issues that arise simply from aging.

Typically physical therapists examine their patients and make treatment plans to help with flexibility, strength, endurance, coordination, and balance. This may require that patients do core exercises, stretch, lift weights, walk, swim, receive ultrasound and/ or electrical stimulation, apply heat or cold treatments, or receive manual therapy. They tried to teach their patients exercises and tasks that can be practiced at home. The goal of these treatments is to make daily tasks and activities easier but also help to restore physical function and for some, increase the level of fitness.

Students interested in majoring in Pre-Physical Therapy can complete their first two years of coursework at Iowa Central and then transfer to a public or private college to complete their bachelor's degree. Although your undergraduate degree can be in any area of study, many students select a program related to science. Most students complete four to five years of undergraduate course work before applying to physical therapy school. To qualify for admission to a program at a senior institution, applicants must plan to complete a baccalaureate degree before enrollment. Graduate level physical therapy programs are very competitive so maintaining a high college GPA is crucial. Before applying to physical therapy schools, check each institutions graduate program course requirements. Completion of physical therapy school can take 6 1/2 years or more from start to finish.

### Suggested Program of Study:

Se

First Semester		Sem. Hrs.
ENG-105	Composition I	3
MAT-127	College Algebra & Trigonometry	5
BIO-112	General Biology I	4
CHM-165	General Chemistry I	4
CT 101-103	The Cellege Experience	
3DV-100		······⊥ 17
Second Semester		Sem Hrs
PSY_111	Introduction to Psychology	3
ENG 104	Composition II	
EING-100	Composition II	3
BIO-113	General Biology II	4
CHIVI-175	General Chemistry II	4
	Humanities Elective*	<u>3</u>
	Iotal Hours	1/
Third Semester		Sem Hrs
		•••••••
PSY-121	Developmental Psychology	3
PSY-121	Developmental Psychology	3 1
PSY-121 PHY-162	Developmental Psychology College Physics I	3 4
PSY-121 PHY-162 CSC-110	Developmental Psychology College Physics I Introduction to Computers	
PSY-121 PHY-162 CSC-110 BIO-168	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I	
PSY-121 PHY-162 CSC-110 BIO-168	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective*	
PSY-121 PHY-162 CSC-110 BIO-168	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* Total Hours	
PSY-121 PHY-162 CSC-110 BIO-168	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* Total Hours	
PSY-121 PHY-162 CSC-110 BIO-168 Fourth Semester	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* Total Hours	
PSY-121 PHY-162 CSC-110 BIO-168 Fourth Semester SPC-112 MAT 157	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* <b>Total Hours</b>	
PSY-121 PHY-162 CSC-110 BIO-168 Fourth Semester SPC-112 MAT-157 PHY 172	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* <b>Total Hours</b> Public Speaking Statistics Collage Physics II	3 4 3 4 3 17 <b>Sem. Hrs.</b> 3 4
PSY-121 PHY-162 CSC-110 BIO-168 Fourth Semester SPC-112 MAT-157 PHY-172 DIO 173	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* Total Hours Public Speaking Statistics College Physics II	
PSY-121 PHY-162 CSC-110 BIO-168 Fourth Semester SPC-112 MAT-157 PHY-172 BIO-173	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* <b>Total Hours</b> Public Speaking Statistics College Physics II Human Anatomy & Physiology II	3 4 3 3 17 Sem. Hrs. 3 3 4 4 4 4 4
PSY-121 PHY-162 CSC-110 BIO-168 Fourth Semester SPC-112 MAT-157 PHY-172 BIO-173	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* <b>Total Hours</b> Public Speaking Statistics College Physics II Human Anatomy & Physiology II Social Science Elective*	3 4 3 4 4 3 7 7 <b>Sem. Hrs.</b> 3 4 4 4 4 4 3
PSY-121 PHY-162 CSC-110 BIO-168 <b>Fourth Semester</b> SPC-112 MAT-157 PHY-172 BIO-173	Developmental Psychology College Physics I Introduction to Computers Human Anatomy & Physiology I Humanities Elective* <b>Total Hours</b> Public Speaking Statistics College Physics II Human Anatomy & Physiology II Social Science Elective* Humanities Elective*	3 4 3 3 4 4 3 7 7 5em. Hrs. 3 4 4 4 4 4 3 3 3

Other highly recommended courses are Abnormal Psychology and Medical Terminology. To ensure best transfer, student and advisor should confirm math and science

\*Course must be chosen from appropriate AA/AS general education list.

classes with transfer institution.

## **Political Science/Government**

### Associate of Arts (AA)

Are you interested in American politics? International affairs? Critical issues such as health care, the environment, crime, and civil rights? Do you want to study these subjects and pursue a career based on your interest? If so, you should select Political Science as a major. Political Science is the study of government, public policy and the political behavior of individuals and groups. Political Science uses both humanistic and scientific perspectives and skills to examine the United States, all countries and regions of the world, and international relations.

Iowa Central's Political Science/Government curriculum is designed to prepare students for a major in Political Science, Government, Public Administration, Law, or International Relations at a senior institution. The curriculum provides a broad perspective of political issues, methods of political study, and research techniques. Skills of analysis also provide a means to study related areas in the Social Science department such as History, Sociology, Cultural Anthropology, Psychology, Economics, Geography, and Religion. Students interested in majoring in Political Science or Government can complete their first two years of coursework at Iowa Central and then transfer to a public or private college for the remaining two years.

### Suggested Program of Study:

First Semester		Sem Hrs
ENG-105	Composition I	3
POL-111	American National Government	
SDV-195	Student Government	1
SDV-108	The College Experience	1
MAT-111	Math for Liberal Arts	Ц Д
CSC-110	Introduction to Computers	3
030-110	History Elective	3
	Total Hours	18
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
POL-112	American State and Local Government .	3
SDV-195	Student Government	
PSY-111	Introduction to Psychology	3
SPC-112	Public Speaking	3
	History Elective	3
	Total Hours	
Third Semester		Sem. Hrs.
SOC-110	Introduction to Sociology	3
POL-121	International Relations	3
SOC-115	Social Problems	3
SDV-195	Student Government	1
PHI-145	Introduction to Ethical Conflict	3
	Humanities Elective	<u>3</u>
	Total Hours	16
Fourth Semester		Sem Hrs
SPC_122	Interpersonal Communication	ری ج
SOC-200	Minority Group Relations	3
300-200	minority Group relations	

	Introductory Riology Lab	1
BIO-102	Introductory Biology	
SDV-175	Student Government	ا۱
SDV-195	Student Government	
SOC-200	Minority Group Relations	

## **Pre-Law**

### Associate of Arts (AA)

Students planning to pursue a career in law can complete two years of their general studies at Iowa Central Community College. Most colleges of law require a bachelor's degree prior to beginning legal studies. A bachelor's degree in a field such as Political Science, History, Psychology, Economics, Accounting, or Business Management helps to prepare undergraduates for the successful pursuit of a legal career. Depending on their area of interest, Pre- Law students at Iowa Central are encouraged to select additional courses relating to Criminal Law and/or Business Law.

Iowa Central's Pre-Law curriculum helps to develop communication and critical thinking skills, and a basic understanding of institutions, economics, and human values. Whether it is for preparation for admission to law school, a career as a legal assistant, or other careers requiring legal training, Pre-Law coursework at Iowa Central helps to provide the skills necessary for understanding the legal complexities of government, politics, business, and the criminal justice system.

Som Hra

#### Suggested Program of Study: Eirc+ C

Se

ENG-105	Composition I	
PHI-145	Introduction to Ethical Conflicts	3
SDV-108	The College Experience	1
POL-111	American National Government	3
CSC-110	Introduction to Computers	3
SOC-110	Introduction to Sociology	3
SDV-195	Student Government	<u>1</u>
	Total Hours	17
		<b>.</b>
Second Semester		Sem. Hrs.
ENG-106	Composition II	
POL-112	American State and Local Government	3
MAT-111	Math for Liberal Arts	4
BUS-185	Business Law I	3
PSY-111	Introduction to Psychology	3
SDV-195	Student Government	<u>1</u>
	Total Hours	17
<b>TI: IC</b>		<b>c</b> 11
I nird Semester		Sem. Hrs.
POL-121	International Relations	
	or	2
AN I-105	Cultural Anthropology	3
SPC-112	Public Speaking	3
	Introductory Biology	
BIO-102	introductory biology	
BIO-102 BIO-103	Introductory Biology Lab	1
BIO-102 BIO-103 BUS-186	Introductory Biology Lab Business Law II	1 3
BIO-102 BIO-103 BUS-186 SDV-195	Introductory Biology Lab Business Law II Student Government	1 
BIO-102 BIO-103 BUS-186 SDV-195	Introductory Biology Lab Business Law II Student Government History Elective	1 
BIO-102 BIO-103 BUS-186 SDV-195	Introductory Biology Lab Business Law II Student Government History Elective Total Hours	
BIO-102 BIO-103 BUS-186 SDV-195	Introductory Biology Lab Business Law II Student Government History Elective Total Hours	
BIO-102 BIO-103 BUS-186 SDV-195	Introductory Biology Lab Business Law II Student Government History Elective Total Hours	
BIO-102 BIO-103 BUS-186 SDV-195	Introductory Biology Lab Business Law II Student Government History Elective Total Hours	
BIO-102 BIO-103 BUS-186 SDV-195 Fourth Semester HUM-185 SPC-122	Introductory Biology Lab Business Law II Student Government History Elective Total Hours Tech and Social Change Interpersonal Communication	
BIO-102 BIO-103 BUS-186 SDV-195 Fourth Semester HUM-185 SPC-122 SOC-115	Tech and Social Change Interpreter Social Change	
BIO-102 BIO-103 BUS-186 SDV-195 Fourth Semester HUM-185 SPC-122 SOC-115 SOC-200	Introductory Biology Lab Business Law II Student Government History Elective Total Hours Tech and Social Change Interpersonal Communication Social Problems Minority Group Relations	1 3 1 3 <b>5em. Hrs.</b> 3 3 3 3 3
BIO-102 BIO-103 BUS-186 SDV-195 Fourth Semester HUM-185 SPC-122 SOC-115 SOC-200 CRJ-132	Introductory Biology Lab Business Law II Student Government History Elective <b>Total Hours</b> Tech and Social Change Interpersonal Communication Social Problems Minority Group Relations Constitutional Law	1 3 1 3 3 7 5em. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
BIO-102 BIO-103 BUS-186 SDV-195 Fourth Semester HUM-185 SPC-122 SOC-115 SOC-200 CRJ-132 REL-105	Tech and Social Change	1 3 1 3 3 7 5 8 m. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
BIO-102 BIO-103 BUS-186 SDV-195 Fourth Semester HUM-185 SPC-122 SOC-115 SOC-200 CRJ-132 REL-105 SDV-195	Tech and Social Change Ninority Group Relations	1 3 1 3 3 7 7 5em. Hrs. 3 3 3 3 3 3 3 3 3 3 1

\*See current A.A. degree requirements

## **Process Plant Technology**

### Associate of Applied Science (AAS)/Diploma

The Process Plant Technology program is a program that introduces students to a wide variety of process plant technologies and troubleshooting techniques. This includes plant equipment and instrumentation. Plant processes such as fermentation, distillation, dehydration, evaporation, plant cooling, and plant heating are also part of the course study. The Process Plant Technology Program also gives the students exposure to the chemical side of process plants. This is achieved with an applied chemistry course emphasizing plant laboratory analysis and general chemistry understanding. Other areas included, that greatly increase the student's knowledge, are emissions, piping and instrumentation diagrams, material balance and Distributed Control Systems (DCS). A majority of the knowledge gained in the program is through hands-on classroom labs, projects, and field trips. Textbooks are chosen to encompass new technologies as they emerge.

Completion of these courses, which were industry driven, will enable an operator to be gainfully employed at the many new and growing process plants that have become a vital part of our state and national economy. Graduates will understand the many systems that are intertwined and how they are ultimately controlled.

#### Program of Study - AAS Degree Fi

Seco

Third

Sem. Hrs.		rst Semester
	Discrete Math*	MAT 150
	DC Fundamentals	ELE 114
	AC Fundamentals	ELE 111
4	Intro to Process Technology	BPT 300
2	Basic Fermentation	BPT 335
2	Technical Diagrams	BPT 305
	Total Hours	
<b>6</b> 11		nd Somostor
Sem. Hrs.		nu semester
Sem. Hrs. 3	Motor Control	ELE 195
<b>Sem. Hrs</b> . 3	Motor Control Applied Chemistry	ELE 195 CHT 105
Sem. Hrs. 3 4 3	Motor Control Applied Chemistry Process Steam and Heating	ELE 195 CHT 105 BPT 315
Sem. Hrs. 	Motor Control Applied Chemistry Process Steam and Heating Process Cooling System	ELE 195 CHT 105 BPT 315 BPT 320
Sem. Hrs. 3 	Motor Control Applied Chemistry Process Steam and Heating Process Cooling System CPR, First Aid and OSHA	ELE 195 CHT 105 BPT 315 BPT 320 IND 110
Sem. Hrs. 3 4 	Motor Control Applied Chemistry Process Steam and Heating Process Cooling System CPR, First Aid and OSHA Distillation & Evaporation Theory	ELE 195 CHT 105 BPT 315 BPT 320 IND 110 BPT 129
Sem. Hrs. 	Motor Control Applied Chemistry Process Steam and Heating Process Cooling System CPR, First Aid and OSHA Distillation & Evaporation Theory Total Hours	ELE 195 CHT 105 BPT 315 BPT 320 IND 110 BPT 129

Third Semester		Sem. Hrs.
BPT 113	Process Instrumentation	3
BPT 340	Adv. Process Technology	4
BPT 310	Material Balance	2
IND 184	Mechanical Processes	2
IND 185	Predictive & Preventative Maintenance	2
	Communication Elective*	3
	Total Hours	16
Fourth Semester		Sem. Hrs.

	Humanities/SS Elective*	
BPT 325	Emission Control System	2
IND 106	Industrial Pumps & Drive Systems	2
PHY184	Applied Physics*	4
BPT 331	DCS & SCADA Control System	3
CSC125	Microsoft Fundamentals	2
	Total Hours	16
Optional		Sem. Hrs.
BUS-113	Workplace Readiness	1.5
IND-932	Internship	4

### Program of Study - Process Plant Operator (Diploma)

First Semester		Sem. Hrs.
MAT 150	Discrete Math*	3
ELE 114	DC Fundamentals	3
ELE 111	AC Fundamentals	3
BPT 300	Intro to Process Technology	4
BPT 335	Basic Fermentation	2
BPT 305	Technical Diagrams	<u>2</u>
	Total Hours	17
Second Semester		Sem. Hrs.
Second Semester ELE 195	Motor Control	<b>Sem. Hrs.</b> 3
Second Semester ELE 195 CHT 105	Motor Control Applied Chemistry*	<b>Sem. Hrs.</b> 
Second Semester ELE 195 CHT 105 BPT 315	Motor Control Applied Chemistry* Process Steam and Heating	Sem. Hrs. 
Second Semester ELE 195 CHT 105 BPT 315 BPT 320	Motor Control Applied Chemistry* Process Steam and Heating Process Cooling System	Sem. Hrs. 3 
Second Semester ELE 195 CHT 105 BPT 315 BPT 320 IND 110	Motor Control Applied Chemistry* Process Steam and Heating Process Cooling System CPR, First Aid and OSHA	Sem. Hrs. 3 4 3 2 1
Second Semester ELE 195 CHT 105 BPT 315 BPT 320 IND 110 BPT 129	Motor Control Applied Chemistry* Process Steam and Heating Process Cooling System CPR, First Aid and OSHA Distillation & Evaporation Theory	Sem. Hrs. 3 4 3 2 

\*Course must be chosen or substituted with a related course from the approved general education course list.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 33 (Diploma), 65 (AAS) Campus: Fort Dodge Department: Industrial Technology CIP#: 4103030200

### PROGRAMS OF STUDY

## **Professional Photography**

### Associate of Applied Science (AAS)

The Professional Photography program at Iowa Central Community College will provide students with an in-depth knowledge of the photo industry and all the requisite skills to go into the business of photography. Students will be prepared to gain entry-level jobs in the areas of commercial photography, event photography, photojournalism, and portraiture. Students will receive a strong education in Professional Photography by participating in hands-on learning and classroom discussions in Iowa Central's state-of-the-art studios, classrooms, and computer labs. Instruction will focus on digital applications of photography, but students will also have an opportunity to learn analog darkroom techniques for a fully-rounded photographic education.

### Program of Study:

	Sem. Hrs	÷.
PHT-183	Photography	3
SPC-122	Interpersonal Communication or	
	any general education equivalent	3
ART-151	Design I	3
SDV-108	College Experience	1
JOU-210	Media Law and Ethics	3
CSC-110	Introduction to Computers	3
	or	
GRA-176	Layout Design I	3
CIS-265	Photoshop I (optional)	3
	Total Hours	9
Second Semester	Sem. Hrs	5.
PHT-185	Photography II	3
BUS-102	Introduction to Business	3
BUS-112	Business Math or	
	any general education equivalent	4
ART-115	Graphic Design	3
PSY-111	Introduction to Psychology	
	or social science equivalent	3
CIS-266	Photoshop II (optional)	3
	T . LU	-
	Iotal Hours15/16/18/19	9
Third Semester	Sem. Hrs	9 i.
Third Semester PHT-189	Sem. Hrs	9 5. 3
Third Semester PHT-189 PHT-195	Sem. Hrs Photography III.	<b>9</b> 5. 3
<b>Third Semester</b> PHT-189 PHT-195 PHT-250	Sem. Hrs Photography III. Basic Set and Prop Design I. Marketing in Photography	9 5. 3 3 2
Third Semester PHT-189 PHT-195 PHT-250 PHT-233	Photography III. Basic Set and Prop Design I. Marketing in Photography.	9 33223
Third Semester PHT-189 PHT-195 PHT-250 PHT-233 SMM-170	Photography III. Basic Set and Prop Design I Marketing in Photography. Commercial Photography. Social Media Campaigns	9 332333
Third Semester PHT-189 PHT-195 PHT-250 PHT-233 SMM-170 PHT-288	Iotal Hours       15/16/18/11         Sem. Hrs       Sem. Hrs         Basic Set and Prop Design I       Marketing in Photography.         Commercial Photography.       Social Media Campaigns         Photography in Journalism       Photography in Comparison	<b>9</b> 3. 3 3 2 3 3 3 3
Third Semester PHT-189 PHT-195 PHT-250 PHT-233 SMM-170 PHT-288	Iotal Hours       15/16/18/19         Sem. Hrs       Sem. Hrs         Basic Set and Prop Design I       Marketing in Photography         Commercial Photography       Social Media Campaigns         Photography in Journalism       Photography	<b>9</b> <b>5</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester PHT-189 PHT-195 PHT-250 PHT-233 SMM-170 PHT-288	Iotal Hours       15/16/18/11         Sem. Hrs       Sem. Hrs         Photography III.       Basic Set and Prop Design I         Marketing in Photography.       Commercial Photography.         Social Media Campaigns       Social Media Campaigns         Photography in Journalism       Business Elective (optional)         Total Hours       17/20	<b>9</b> <b>5</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester PHT-189 PHT-195 PHT-250 PHT-233 SMM-170 PHT-288	Total Hours       15/16/18/19         Sem. Hrs       Sem. Hrs         Basic Set and Prop Design I       1         Marketing in Photography       1         Commercial Photography       1         Social Media Campaigns       1         Photography in Journalism       1         Business Elective (optional)       17/20	<b>9</b> <b>5.</b> 3 3 2 3 3 3 3 3 <b>3</b> <b>3</b> <b>3</b> 3 3 <b>3</b> <b>3</b> 3 3 <b>3</b> 3 3 <b>3</b> 3 3 3 <b>3</b> 3 3 3 3
Third Semester PHT-189 PHT-195 PHT-250 PHT-233 SMM-170 PHT-288	Total Hours       15/16/18/19         Sem. Hrs       Sem. Hrs         Basic Set and Prop Design I       10/18/19         Marketing in Photography.       Commercial Photography.         Social Media Campaigns       10/18/19         Photography in Journalism       Business Elective (optional).         Total Hours       17/20         Sem. Hrs       Sem. Hrs	<b>9</b> <b>5</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester           PHT-189           PHT-195           PHT-250           PHT-233           SMM-170           PHT-288           Fourth Semester           PHT-192	Iotal Hours       15/16/18/19         Sem. Hrs       Sem. Hrs         Photography III.       Basic Set and Prop Design I         Marketing in Photography.       Commercial Photography.         Commercial Photography.       Social Media Campaigns.         Photography in Journalism.       Business Elective (optional).         Total Hours       17/20         Sem. Hrs       Photography IV.	<b>9</b> <b>5</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester           PHT-189           PHT-195           PHT-250           PHT-233           SMM-170           PHT-288	Iotal Hours       15/16/18/11         Sem. Hrs       Sem. Hrs         Photography III.       Basic Set and Prop Design I         Marketing in Photography.       Commercial Photography.         Commercial Photography.       Social Media Campaigns.         Photography in Journalism.       Photography in Journalism.         Business Elective (optional).       17/20         Sem. Hrs       Photography IV.         Basic Set and Prop Design II.       Sem. Hrs	<b>9</b> <b>5</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester           PHT-189           PHT-195           PHT-250           PHT-233           SMM-170           PHT-288   Fourth Semester PHT-192 PHT-196 PHT-299	Iotal Hours         Iotal Hours         Sem. Hrs         Photography III.         Basic Set and Prop Design I         Marketing in Photography.         Commercial Photography.         Social Media Campaigns         Photography in Journalism.         Business Elective (optional).         Total Hours       17/20         Sem. Hrs         Photography IV.         Basic Set and Prop Design II.         Photography Portfolio Development	<b>9</b> <b>.</b> 3 3 2 3 3 3 <u>3</u> <b>D</b> <b>.</b> 3 3 1
Third Semester PHT-189 PHT-250 PHT-233 SMM-170 PHT-288 Fourth Semester PHT-192 PHT-196 PHT-299 PHT-258	Total Hours         Sem. Hrs         Sem. Hrs         Photography III.         Basic Set and Prop Design I         Marketing in Photography.       Commercial Photography.         Social Media Campaigns       Photography in Journalism.         Business Elective (optional).       Total Hours         Total Hours       17/20         Sem. Hrs       Photography IV.         Basic Set and Prop Design II       Photography Portfolio Development         Business of Photography.       Sem. Hrs	<b>9</b> <b>5</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester           PHT-189           PHT-195           PHT-250           PHT-233           SMM-170           PHT-288           Fourth Semester           PHT-196           PHT-299           PHT-298	Iotal Hours         Iotal Hours         Sem. Hrs         Photography III.         Basic Set and Prop Design I         Marketing in Photography.       Commercial Photography.         Social Media Campaigns       Photography in Journalism.         Business Elective (optional).       Total Hours         Total Hours       17/20         Sem. Hrs       Photography IV.         Basic Set and Prop Design II.       Photography Portfolio Development         Business of Photography.       Advanced Portraiture.	<b>9</b> <b>5</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester           PHT-189           PHT-195           PHT-250           PHT-233           SMM-170           PHT-288           Fourth Semester           PHT-192           PHT-298           PHT-298           PHT-200           ACC-111	Iotal Hours         Sem. Hrs         Photography III.         Basic Set and Prop Design I         Marketing in Photography.       Commercial Photography.         Commercial Photography.       Social Media Campaigns.         Photography in Journalism.       Business Elective (optional)         Total Hours       17/20         Sem. Hrs       Photography IV.         Basic Set and Prop Design II.       Photography Portfolio Development.         Business of Photography.       Advanced Portraiture.         Introduction to Accounting       Introduction to Accounting	<b>9</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b> <b>3</b>
Third Semester           PHT-189           PHT-195           PHT-250           PHT-233           SMM-170           PHT-288           Fourth Semester           PHT-192           PHT-192           PHT-299           PHT-258           PHT-200           ACC-111           ART-116	Iotal Hours         Sem. Hrs         Photography III.         Basic Set and Prop Design I         Marketing in Photography.       Commercial Photography.         Commercial Photography.       Social Media Campaigns.         Photography in Journalism.       Business Elective (optional)         Total Hours	9      332333330      3312333

# Psychology

### Associate of Arts (AA)

Psychology is the science that seeks to understand behavior and mental processes, and to apply that understanding in the service of human welfare. Psychologists are involved in studying, predicting, improving, or explaining some aspect of behavior and mental processes.

To begin to appreciate all that can fall within the realm of *behavior and mental process*, take a moment to jot down an answer to this question: Who are you?

Perhaps you described you personality or your 20/20 vision, your interests or your aspirations, your skills or your accomplishments, your IQ or your cultural background. You could have listed these and dozens of other things about yourself, and every one of them would reflect some aspect of what psychologists mean by behavior and mental processes.

What is Psychology about? Learning that --

- 1. We're all different, yet very much the same.
- 2. Human lives are continually changing.
- 3. Human behavior is motivated and has many different causes.
- 4. People play an active part in creating their own experiences.

### Suggested Program of Study:

First Semester PSY-111 ENG-105 SDV-108 CSC-110 SOC-115	Introduction to Psychology Composition I The College Experience Introduction to Computers Social Problems Humanities Elective	Sem. Hrs. 
Second Semester ENG-106 BIO-102 BIO-103 PSY-121 REL-105	Total Hours         Composition II         Introductory Biology         Introductory Biology Lab         Developmental Psychology         Introduction to Religion         History Elective         Total Hours	Sem. Hrs. 3 3 1 3 3 3 3 3 3 16
Third Semester SPC-112 PSY-222 MAT-157 SOC-110 POL-111	Public Speaking Child Psychology Statistics Introduction to Sociology American National Government Total Hours	Sem. Hrs. 3 4 3 3 16
Fourth Semester PSY-224 MAT-158 PSY-251 SOC-120	Adolescent Psychology Statistics II Social Psychology	Sem. Hrs.

Enrollment Date: Fall Semester Minimum Required Credits: 75 Campus: Fort Dodge Department: Liberal Arts & Sciences CIP#: 5004060200

## **Radiologic Technology**

### Associate of Applied Science (AAS)

The Radiologic Technology program is an intensive program which prepares students to become skilled professionals in performing imaging examinations and accompanying responsibilities. Students receive clinical experience in radiology departments of health care affiliates located throughout Northwest and North Central Iowa. The program provides the students with entry level skills consistent with career opportunities nationwide.

Program Mission Statement: The Radiologic Technology program prepares students to become skilled entry level diagnostic Radiologic Technologist. The program provides an excellent learning environment while preparing students for this profession.

**Program Requirements:** Students must earn a grade of a "C" or better in all Radiologic Technology program of study courses and meet the necessary prerequisites to progress in the program. The student must complete the program with a grade point average of 2.0 or better. The student must complete all radiology specific courses within three years.

Student Responsibilities: Students receive clinical experience in a variety of clinical settings. A medical health form, certification in basic cardiac life support, and other immunization requirements must be completed prior to attending clinical. Transportation to the clinical site is the student's responsibility. Uniforms are purchased by the student and worn to clinical. Graduates of the program are academically eligible to take the exam administered by the American Registry of Radiologic Technologists. Upon successful completion of this exam, they become a Registered Radiologic Technologist R.T. (R) All radiology students must complete a Criminal Record/Child and Adult Abuse Check prior to attending clinical. Students with a felony or misdemeanor conviction must notify the American Registry of Radiologic Technologists prior to entering the program, to ensure they are eligible to take the Registry's Examination.

Accreditation: The Radiologic Technology Program is accredited by The Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 2850, Chicago, Illinois, 60606-3182. Telephone number: 312-704-5300.

Admission Requirements: This program is a selective, limited enrollment program. Students who would like to be considered for admission must complete an additional application packet. Students must also be enrolled in, or have previously completed any pre-requisites of the program with a "C" or higher before they will be considered for the program. Students must submit proof of their enrollment in/or completion prior to the application deadline. The following criteria is required for applicants: a minimum of a high school diploma (GPA 2.5) or equivalent (GED 550) or HiSET 15; minimum Asset scores of 40 in writing, reading, and 46 in math, Compass (writing 65, reading 80, pre-algebra 64 or algebra 51), or ACT scores of 18 in reading, english, and 20 in math. High school Biology, Algebra, English, and Chemistry are highly recommended.

### **Program of Study**

Pre-requisites		Sem. Hrs.
BIO-168	Human Anatomy & Physiology Lw/lab	∠ک
DIO-100	College Math Elective	3
First Semester		Sem. Hrs.
HSC-104	Introduction to Health Care	2
DIO-173	munian Anatomy & Physiology II whab	4 2
RAD-320	Radiographic Procedures I	۲
RAD-122 RAD-210	Clinical Education I	4
NAD-210	Total Hours	<u>+</u> 16
Second Semester		Sem. Hrs.
PSY-111	Introduction to Psychology	
PSY-111	Introduction to Psychology or	
PSY-111 PSY-112	Introduction to Psychology or Psychology of Human Relations	3
PSY-111 PSY-112 RAD-430	Introduction to Psychology or Psychology of Human Relations Radiographic Physics	3
PSY-111 PSY-112 RAD-430 RAD-365	Introduction to Psychology or Psychology of Human Relations Radiographic Physics Imaging II	3 
PSY-111 PSY-112 RAD-430 RAD-365 RAD-142	Introduction to Psychology or Psychology of Human Relations Radiographic Physics Imaging II Radiographic Procedures II	3 3 2 4
PSY-111 PSY-112 RAD-430 RAD-365 RAD-142 RAD-230	Introduction to Psychology or Psychology of Human Relations Radiographic Physics Radiographic Procedures II Clinical Education II	
PSY-111 PSY-112 RAD-430 RAD-365 RAD-142 RAD-230	Introduction to Psychology or Psychology of Human Relations Radiographic Physics Imaging II Radiographic Procedures II Clinical Education II Total Hours	
PSY-111 PSY-112 RAD-430 RAD-365 RAD-142 RAD-230 Third Semester (Sum	Introduction to Psychology or Psychology of Human Relations Radiographic Physics Imaging II Radiographic Procedures II Clinical Education II <b>Total Hours</b> <b>mer Session</b> )	3 3 2 4 4 16 Sem. Hrs.
PSY-111 PSY-112 RAD-430 RAD-365 RAD-142 RAD-230 Third Semester (Sum RAD-163	Introduction to Psychology or Psychology of Human Relations Radiographic Physics Imaging II Radiographic Procedures II Clinical Education II <b>Total Hours</b> <b>mer Session)</b> Radiographic Procedures III	
PSY-111 PSY-112 RAD-430 RAD-365 RAD-142 RAD-230 Third Semester (Sum RAD-163 RAD-270	Introduction to Psychology or Psychology of Human Relations Radiographic Physics Radiographic Procedures II Clinical Education II <b>Total Hours</b> <b>mer Session)</b> Radiographic Procedures III Clinical Education III	3 3 2 4 4 16 Sem. Hrs. 2.5 3.5

Fourth Semester		Sem. Hrs.
ENG-105	Composition 1	3
RAD-770	Film Critique & Evaluation	2.5
RAD-896	Quality Assurance	2
RAD-510	Clinical Education IV	6
	Computer Course	<u>2</u>
	Total Hours	15.5
Fifth Semester		Sem. Hrs.
RAD-570	Clinical Education V	8
RAD-738	Radiologic Pathology	2
RAD-850	Radiation Protection & Biology	<u>3</u>
	Total Hours	13
Sixth Somostor (9 W/s	ock Summer Session)	Som Hrs
Sixth Semester (4 We		Sem. rrs.
RAD-690	Cross Sectional Anatomy	1
RAD-946	Seminar	2
RAD-620	Clinical Education VI	<u>4.5</u>
	Total Hours	

### **CT/MRI/US** Internship

lowa Central is partnering with the University of Iowa in the radiation sciences to offer Computed Tomography (CT), Magnetic Resonance Imaging (MRI) and Ultrasound (US) internships. The agreement will allow students to receive their clinical education through Iowa Central while taking classes online through the University of Iowa. Students will receive a certificate upon successful completion of the program. Students have the opportunity to continue and complete a Bachelors degree online from the University of Iowa. See program coordinator or Iowa Central website for internship application

Electives: ENG-106, CHM-110 & CHM-111, SPC-112, FLS-111, PEC-127, PEC-121, SOC-110, ART-101

\*Test out option is available. See Dean of Health Sciences or Program Coordinator.

\*\*Students may extend the Radiologic Technology Program over three years by taking the Arts and Science courses the first year and the Radiologic Technology courses during the second and third years.

Enrollment Date: Fall Semester Minimum Required Credits: 85 Campus: Fort Dodge Department: Health Science CIP#: 5109110200

## **Religious Studies**

### Associate of Arts (AA)

Religion is a complex network of ideas and actions (ethical and ritual) that express a group's sense of the ultimate meaning of life. The academic study of religion examines how the beliefs and values of contemporary and historical cultures shape and are shaped by societal factors, long-standing traditions, and distinctive forms of literary and artistic expression. Religion scholars ask not whether certain beliefs are true but what they mean to those who hold them to be true, how they came to have a particular form and content, and what impact they have on their intellectual and social environments. Skill in close reading of texts and critical analysis of concepts and historical relationships are among the benefits of such study, which has been found helpful by many preparing for careers in theology, education, law, medicine, journalism, international business, government, and social work.

lowa Central's Religious Studies curriculum helps to develop communication and critical thinking skills, and a basic understanding of religious institutions, ethics, and human values. Students planning to pursue a major in Religious Studies can complete their first two years of coursework at Iowa Central before transferring to a public or private college for the remaining two years.

### Suggested Program of Study:

uggesteu i rogia	in or study.	
First Semester		Sem. Hrs.
ENG-105	Composition I	3
REL-105	Introduction to Religion	3
SOC-110	Introduction to Sociology	
SDV-108	The College Experience	1
PSV 111	Introduction to Psychology	3
COC 115	Secial Problems	J
50C-115		<u>ə</u>
	Iotal Hours	
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
PHI-145	Introduction to Ethical Conflicts	3
BIO 102	Introductory Biology	3
DIO-102 DIO 102	Introductory Diology	
DIU-103		······
PS1-251	Social Psychology	3
CSC-110	Introduction to Computers	<u>3</u>
	Total Hours	16
Third Semester		Sem. Hrs.
SPC-112	Public Speaking	3
POL 121	International Relations	3
COC 200	Minerity Creve Deletiers	ວ
30C-200		
HIS-IIZ	western Civ: Ancient to Early Wodern	4
HUM-185	Iechnology and Social Change	<u>3</u>
	Total Hours	16
Fourth Semester		Sem. Hrs.
POI -111	American National Government	3
SOC-125	Marriage and Family	З З
LIC 113	Wastern Cive Early Modern to Present	
1113-113	Mail C. L'I. LAN	4
MAI-111	Iviath for Liberal Arts	

Total Hours ...... 14

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

## Sciences

### Associate of Arts (AA)

Students can complete their first two years of study for several science majors in preparation for transferring to a senior institution. Majors include but are not limited to:

BiochemistryFisBiologyFoBotanyGeChemistryMiDieteticsPhEntomologyVirEnvironmental StudiesZoGeneticsGenetics

Fisheries and Wildlife Forestry Geology Microbiology Physics Virology Zoology

The following schedule is a guide to obtain an Associate of Arts Degree from lowa Central Community College. Additional developmental courses may be required before you can take a college-level English or math course. Check with transfer institution on specific requirements.

### Suggested Program of Study for a Biology Transfer

First Semester		Sem ris.
ENG-105 MAT-127	College Algebra and Trigonometry	
BIO-112	General Biology I	4
CHM-165	General Chemistry I	4
SDV-108	The College Experience	<u>1</u>
	Iotal Hours	
Second Semester	Composition II	Sem. Hrs.
MAT-210	Calculus I	4
BIO-113	General Biology II	4
CHM-175	General Chemistry II	
	Total Hours	<u>ර</u> 18
Third Semester		Sem. Hrs.
BIO-168	Human Anatomy & Physiology I w/Lab	4
CHM-261 PUV 142	Organic Chemistry I	
CSC-110	Introduction to Computers	
000110	Social Science Elective	<u>3</u>
	Total Hours	
Fourth Somostor		Som Hrs
BIO-186	Microbiology w/lab	Jen. 113.
PHY-172	College Physics II	4
CHM-271	Organic Chemistry II	4
	Social Science Elective	
	Total Hours	
Suggested Progra	m of Study for Chemistry:	
Suggested Progra First Semester	m of Study for Chemistry:	Sem. Hrs.
Suggested Progra First Semester ENG-105	m of Study for Chemistry:	<b>Sem. Hrs.</b>
Suggested Progra First Semester ENG-105 MAT-210 CHM 145	m of Study for Chemistry: Composition I Calculus I	<b>Sem. Hrs.</b> 
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108	m of Study for Chemistry: Composition I Calculus I General Chemistry I The College Experience	Sem. Hrs. 
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108	m of Study for Chemistry: Composition I Calculus I General Chemistry I The College Experience Social Science Elective	Sem. Hrs. 3 4 4 1 3
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108	m of Study for Chemistry: Composition I Calculus I General Chemistry I The College Experience Social Science Elective Humanities Elective	Sem. Hrs. 3 4 4 1 3 3
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 1 3 3 3 18
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 1 3 3 
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 3 3 3 18 Sem. Hrs. 3
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC 110	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 3 4 3 3 4 3 3 4 3 3 4 3 3 4 3 3 4 3 3 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6
Suggested Progra First Semester ENG-105 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110	m of Study for Chemistry: Composition I. Calculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours. Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours.	Sem. Hrs. 3 4 4 3 3 18 Sem. Hrs. 3 4 4 3 3 17
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110	m of Study for Chemistry: Composition I. Calculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 3 4 3 3 17 5 5 17 5 17 5 17 5 17 5 18 18 5 18 5 18 5 18 5 18 5 18 5 18 5 18 5 18 5 18 5 18 5 18 5 18 5 18 19 19 19 19 19 19 19 19 19 19
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 3 17 Sem. Hrs. 3 3 17 Sem. Hrs.
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester SPC-112 CHM-261	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 3 3 17 Sem. Hrs. 3 3 4 3 3 3 4 4 3 3 3 5 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester SPC-112 CHM-261 PHY-212	m of Study for Chemistry: Composition I. Calculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours Public Speaking. Organic Chemistry I. Classical Physics I.	Sem. Hrs. 3 4 1 3 3 3 5 Sem. Hrs. 3 4 3 3 17 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester SPC-112 CHM-261 PHY-212	m of Study for Chemistry: Composition I. Calculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours Public Speaking. Organic Chemistry I. Classical Physics I. Social Science Elective.	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 3 17 Sem. Hrs. 3 4 4 3 3 17 Sem. Hrs. 3 4 5 5 6 17 Sem. Hrs. 3 3 18 3 19 10 10 10 10 10 10 10 10 10 10
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester SPC-112 CHM-261 PHY-212	m of Study for Chemistry: Composition I. Calculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours Public Speaking. Organic Chemistry I. Classical Physics I. Social Science Elective. Total Hours	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 3 5 Sem. Hrs. 3 4 5 Sem. Hrs. 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester SPC-112 CHM-261 PHY-212 Fourth Semester	m of Study for Chemistry: Composition I	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 3 5 Sem. Hrs. 3 4 5 5 Sem. Hrs. 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 4 4 5 Sem. Hrs. 3 3 4 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 5 Sem. Hrs. 5 Se
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 CHM-175 CSC-110 Third Semester SPC-112 CHM-261 PHY-212 Fourth Semester CHM-271	m of Study for Chemistry: Composition I. Galculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours Public Speaking. Organic Chemistry I. Social Science Elective. Total Hours Organic Chemistry II. Organic Chemistry II. Organic Chemistry II. Organic Chemistry II. Considered Elective. Total Hours	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 4 3 3 17 Sem. Hrs. 3 4 5 5 Sem. Hrs. 3 4 5 5 Sem. Hrs. 4 5 5 Sem. Hrs. 4 5 5 5 Sem. Hrs. 4 5 5 5 5 5 5 5 5 5 5 5 5 5
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester SPC-112 CHM-261 PHY-212 Fourth Semester CHM-271 PHY-222	m of Study for Chemistry: Composition I. Galculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours Public Speaking. Organic Chemistry I. Classical Physics I. Social Science Elective. Total Hours Organic Chemistry II. Classical Physics I. Social Science Elective. Total Hours Organic Chemistry II. Classical Physics I. Social Science Elective. Total Hours	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 3 4 3 3 17 Sem. Hrs. 3 3 4 5 Sem. Hrs. 3 3 15 Sem. Hrs. 3 3 3 4 5 Sem. Hrs. 3 3 3 4 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 5 Sem. Hrs. 5 Sem. Hrs.
Suggested Progra First Semester ENG-105 MAT-210 CHM-165 SDV-108 Second Semester ENG-106 MAT-216 CHM-175 CSC-110 Third Semester SPC-112 CHM-261 PHY-212 Fourth Semester CHM-271 PHY-222	m of Study for Chemistry: Composition I. Galculus I. General Chemistry I. The College Experience. Social Science Elective. Humanities Elective. Total Hours Composition II. Calculus II. General Chemistry II. Introduction to Computers. Humanities Elective. Total Hours Public Speaking. Organic Chemistry I. Classical Physics I. Social Science Elective. Total Hours Organic Chemistry II. Classical Physics I. Social Science Elective. Total Hours Composition I. Classical Physics I. Social Science Elective. Total Hours Corganic Chemistry II. Classical Physics I. Social Science Elective. Humanities Elective. Mumanities Elective. Corganic Chemistry II. Classical Physics I. Social Science Elective. Humanities Elective. Mumanities Electi	Sem. Hrs. 3 4 4 1 3 3 18 Sem. Hrs. 3 4 4 3 3 17 Sem. Hrs. 3 4 5 Sem. Hrs. 3 5 Sem. Hrs. 3 4 5 Sem. Hrs. 3 3 3 18 Sem. Hrs. 3 3 3 5 Sem. Hrs. 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 5 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3

## **Social Sciences**

### Associate of Arts (AA)

The Social Sciences are intimately concerned with human behavior in all of its complexity and with the various kinds of social relationships which influence individuals throughout their lives. Social Scientists are interested in discovering the ways in which people are affected by their associations with various human groups, both large and small, including the multiplicity of organizations and institutions that characterize modern society. Through the social sciences, the history of social institutions and the continuing process of social change are studied.

lowa Central's Social Science Department offers numerous courses from a wide range of social science fields, including Psychology, Political Science, History, Sociology, Anthropology, Economics, Geography, Religion, Criminal Justice, Human Services, and Contemporary Issues. Students interested in pursuing a bachelor's degree in the Social Sciences generally or in a social science field specifically can complete their first two years of coursework at Iowa Central and then transfer to a public or private college for the remaining two years.

### Suggested Program of Study:

First Semester	-	Sem. Hrs.
ENG-105	Composition I	
HIS-151	U.S. History to 1877	
SDV-108	The College Experience	
PSY-111	Introduction to Psychology	
SOC-110	Introduction to Sociology	3
REL-105	Introduction to Religion	<u>3</u>
	Total Hours	

Second Semester		Sem. Hrs.
ENG-106	Composition II	3
HIS-152	U.S. History since 1877	3
POL-121	International Relations	3
MAT-111	Math for Liberal Arts	4
CSC-110	Introduction to Computers	<u>3</u>
	Total Hours	

Third Semester		Sem. Hrs
SPC-112	Public Speaking	3
HIS-112	Western Civ: Ancient to Early Modern	∠
PSY-251	Social Psychology	3
PSY-121	Development Psychology	
ANT-105	Cultural Anthropology	
	Total Hours	

	Sem. Hrs.
Western Civ: Early Modern to Present	4
Introductory Biology	3
Introductory Biology Lab	
Social Problems	3
Minority Group Relations	
Total Hours	
	Western Civ: Early Modern to Present Introductory Biology Introductory Biology Lab Social Problems Minority Group Relations Total Hours

# Sociology

### Associate of Arts (AA)

Sociology is the application of scientific principles and procedures to understand and solve the problems of social groups, organizations, and institutions. Sociologists study how people relate to each other and how groups influence individuals.

lowa Central's Sociology curriculum is designed to prepare students for a major in Sociology at a senior institution. The curriculum provides a broad perspective of sociological issues, methods of sociological study and research techniques. Skills of analysis also provide a means to study related areas in the Social Sciences such as Anthropology, Psychology, Religion, History, Political Science/ Government, Geography, and Economics.

Students interested in majoring in Sociology can complete their first two years of coursework at Iowa Central and then transfer to a public or private college for the remaining two years. Students planning to major in Sociology or Anthropology are encouraged to take additional elective courses in the Social Sciences.

### Suggested Program of Study:

First Semester		Sem. Hrs.
ENG-105	Composition I	3
SOC-110	Introduction to Sociology	3
SDV-108	The College Experience	1
PSY-111	Introduction to Psychology	3
CSC-110	Introduction to Computers	3
REL-105	Introduction to Religion	<u>3</u>
	Total Hours	16
Second Semester		Sem. Hrs.
MAT-111	Math for Liberal Arts	4
ENG-106	Composition II	3
SOC-115	Social Problems	3
PHI-145	Introduction to Ethical Conflict	3
	History Elective	<u>3</u>
	Total Hours	
Third Semester		Sem. Hrs.
Third Semester PSY-251	Social Psychology	<b>Sem. Hrs.</b>
Third Semester PSY-251 SPC-112	Social Psychology Public Speaking	Sem. Hrs. 
Third Semester PSY-251 SPC-112 GEO-121	Social Psychology Public Speaking World Regional Geography	Sem. Hrs. 
Third Semester PSY-251 SPC-112 GEO-121 POL-121	Social Psychology Public Speaking World Regional Geography International Relations	Sem. Hrs. 
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102	Social Psychology Public Speaking World Regional Geography International Relations. Introductory Biology	Sem. Hrs. 
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102 BIO-103	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab	Sem. Hrs. 
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102 BIO-103	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab Total Hours	Sem. Hrs. 3 3 3 3 3 3 1 1 6
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102 BIO-103	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab Total Hours	Sem. Hrs. 3 3 3 3 3 1 16 Sem. Hrs.
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102 BIO-103	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab Total Hours Exploring the Humanities	Sem. Hrs. 3 3 3 3 1 16 Sem. Hrs. 3
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102 BIO-103 Fourth Semester HUM-113 SOC-200	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab <b>Total Hours</b> Exploring the Humanities	Sem. Hrs. 3 3 3 3 3 1 16 Sem. Hrs. 3 3
Third Semester           PSY-251           SPC-112           GEO-121           POL-121           BIO-102           BIO-103   Fourth Semester HUM-113 SOC-200 ANT-105	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab <b>Total Hours</b> Exploring the Humanities Minority Group Relations Cultural Anthropology	Sem. Hrs. 3 3 3 3 3 1 16 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102 BIO-103 Fourth Semester HUM-113 SOC-200 ANT-105 SOC-120	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab <b>Total Hours</b> Exploring the Humanities Minority Group Relations Cultural Anthropology Marriage & Family	Sem. Hrs. 3 3 3 3 1 16 Sem. Hrs. 3 3 3 3 3 3 3 3 3 3 3 3 3
Third Semester PSY-251 SPC-112 GEO-121 POL-121 BIO-102 BIO-103 Fourth Semester HUM-113 SOC-200 ANT-105 SOC-120	Social Psychology Public Speaking World Regional Geography International Relations Introductory Biology Introductory Biology Lab Total Hours Exploring the Humanities Minority Group Relations Cultural Anthropology Marriage & Family Total Hours	Sem. Hrs. 3 3 3 3 3 3 3 16 Sem. Hrs. 3 3 3 12

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

## Supply Chain Management

### Associate of Applied Science (AAS)/Diploma/Certificate

Supply Chain Management is a discipline concerned with the efficient and effective flow of materials through the supply chain system. Supply Chain Management assume the "supply chain system" approach to the management of activities such as purchasing, material management, inventory management, operations, packaging, warehousing, transportation, and customer service.

The two-year program culminates with the internship (on-the-job training) in a logistics or transportation related position. The internship program provides students with the opportunity to gain valuable, real-world experience linking logistics and transportation theories and practices with the working world.

Ρ

Ρ

First Semester MGT-260 MGT-261 BUS-102 CSC-110 MGT-101	Sem. Hrs.         Introduction to Business Logistics         Principles of Transportation Management
Second Semester MGT-262 MGT-263 ENG-105 BUS-161 PSY-112 BUS-185	Sem. Hrs.         Principles Purchasing & Logistics       3         Principles Distribution & Warehouse Management       3         Composition I       3         Human Relations       3         or       Psychology of Human Relations         Business Law I       3         Total Hours       15
Third Semester	Sem. Hrs.
MGT-264 SPC-112 PHI-145 ECN-120 ACC-111 SOC-110	Demand Planning & Inventory Management       3         Public Speaking       3         Introduction to Ethical Conflict       3         Principles of Macroeconomics       3         Introduction to Accounting       3         Introduction to Sociology       3         Total Hours       18

rogram of Study	- Certificate:
First Semester	Sem. Hrs.
MGT-260	Introduction to Business Logistics
MGT-261	Principles of Transportation Management3
Select 2 of the f	following "elective courses for total of 6 credits:
NG 1-262	Principles Purchasing & Logistics
NG 1-203	Principles Distribution & Warehouse Management
NG 1-204	International Transportation and Lociation
MGT 270	Operations Production Management
BLIS-932	Internshin**
D03-732	Total Hours 12
rogram of Study	- Diploma:
First Semester	Sem. Hrs.
MGT-260	Introduction to Business Logistics
MGT-261	Principles of Transportation Management3
MGT-264	Demand Planning & Inventory Management
BUS-114	Workplace Communications3
BUS-112	Business Math3
ACC-111	Introduction to Accounting*** <u>3</u>

Second Semester	Sem. H	Hrs.
MGT-262	Principles Purchasing & Logistics	3
MGT-263	Principles Distribution & Warehouse Management.	3
MGT-265	International Transportation and Logistics	3
MGT-270	Operations Production Management	3
BUS-932	Internship**	3
	Total Hours	. 15

Total Hours...... 15

\*Course may be substituted with a related course from either AA, APS, or approved general education list for Applied Science and Technology.

\*\*On campus students are required to take BUS-932 and online students are required to take MGT-280.

\*\*\*Course may be replaced by a completed higher level Math or Accounting course.

Pending approval from the Iowa Department of Education.

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 30 (Diploma), 63 (AAS) Campus: Fort Dodge Department: Business CIP#: 5202030200

## Theatre

### Associate of Arts (AA)

Iowa Central can provide the first two years of educational experience to those who are interested in Performing Arts. Students can obtain the educational background for the following majors and then transfer to their selected senior institution.

Dramatic Arts Theatre Education Theatre Management Technical Theatre

### Suggested Program of Study for Theatre: First

	0
DRA-130 Acting I	
DRA-101 Introduction to Theatre	3
SDV-108 The College Experience	1
ENG-105 Composition I	3
MAT-157 Statistics	4
or	
MAT-156 Math for Liberal Arts	<u>4</u>
Total Hours	14

Second Semester		Sem. Hrs.
DRA-132	Acting II	3
ENG-106	Composition II	3
CSC-110	Introduction to Computers	3
	Social Science Elective	3
	Humanities Elective	
	Total Hours	

#### **Third Semester**

Semester		Sem. Hrs.
SPC-140	Oral Interpretation	3
DRA-154	Theatre Production	3
SPC-112	Public Speaking	3
BIO-102	Introductory of Biology	3
BIO-103	Introductory of Biology Lab	1
	Social Science Elective	3
	Total Hours	

Fourth Semester		Sem. Hrs.
DRA-254	Theatre Production II	3
	Social Science Elective	3
	Social Science Elective	3
	Social Science/Humanities Elective	
	Remaining Elective Courses	
	Total Hours	

Total Credit Hours for Theatre Major ...... 60-62

## **Turfgrass Management**

### Associate of Applied Science (AAS)/Associate of Arts (AA)/Diploma

The Turfgrass Management program includes topics of interest in Turfgrass Management, Pesticide Application, Irrigation Systems, Landscaping, Soils, and Plants. The program will utilize facilities on campus, such as the athletic complexes, residential life building landscaping, as well as general field and campus landscaping maintenance. The student will leave the program with valuable knowledge and experience to be able to maintain personal residences, golf courses, athletic fields and parks.

A second option of study allows the student to take the four core Turfgrass Management Classes: Principles of Horticulture, Woody Plants and Trees, Herbaceous Plant Materials, and Landscape Design Techniques I. The student will also take general education classes, such as Biology, Chemistry, Finite Math, Economics and Western Civilization, which will allow him/her to start in the Turfgrass Management program at a university.

This program will give the students hands-on experience of taking skills learned in the classroom directly to Willow Ridge Golf Course for implementations.

### Program of Study - AAS Degree:

First Semester		Sem. Hrs.
AGH-112	Introduction to Turfgrass Management	3
AGH-221	Principles of Horticulture	3
AGH-124	Woody Plants/Trees	3
BIO 102	Introductory Biology	3
DIO-102		
BIO-103	Introductory Biology Lab	I
CSC-110	Introduction to Computers	<u>3</u>
	Iotal Hours	
Second Semester		Sem. Hrs.
AGH-211	Advanced Turfgrass Management	3
AGH-152	Landscape Design Tech	
AGA-380	Int Pest Management	4
RUS_112	Business Math*	3
DUS-112 DUC 121	Pusiness Communications	2
D03-121		<u>)</u> 14
	Iotal Hours	
Summer Session		Sem. Hrs.
AGH-805	Horticulture Internship I	3
Third Semester		Sem. Hrs.
AGH-180	Turforass Facilities Management	2
AGH-120	Herbaceous Plant Materials	3
AGH 156	Langdecapa Dosign II	2
AG1-130	Eurodemontale of Sail Saianaa	
AGA-154		
AGA-155	Fundamentals of Soil Science Lab	
	Iotal Hours	12
Fourth Semester		Sem. Hrs.
AGH-141	Equipment Operations	3
AGH-161	Irrigation Systems	
AGH-172	Landscape Maintenance	ع ۲
A01-172	Humanities/Social Science Elective	
	Pueinana Elective**	J
		<u>)</u>

\*Course may be substituted with a related course from the approved general education course list.

\*\*Choose one of the following courses: **BUS-121 Business Communications** ACC-111 Introduction to Accounting ECN-130 Microeconomics BUS-130 Introduction to Entreprenuership BUS-102 Introduction to Business

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 40 (Diploma), 62 (AAS) Campus: Fort Dodge Department: Business CIP#: 0106070200

Program of Study	- AA Degree:	
First Semester	5	Sem. Hrs.
ENG-105	Composition I	3
BIO-112	General Biology	4
AGH-124	Woody Plants/Trees	3
AGH-221	Principles of Horticulture	3
SDV-108	College Experience	<u>1</u>
	Total Hours	14
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
BIO-113	General Biology II	4
AGH-152	Landscape Design Technology	3
CSC-110	Introduction to Computers	3
ECN-130	Microeconomics	<u>3</u>
	Total Hours	16
Third Semester		Sem. Hrs.
Third Semester CHM-165	General Chemistry I	Sem. Hrs. 4
Third Semester CHM-165 AGH-120	General Chemistry I Herbaceous Plant Materials	Sem. Hrs. 4
Third Semester CHM-165 AGH-120 MUS-104	General Chemistry I Herbaceous Plant Materials Exploring Music	Sem. Hrs. 4 3 3
Third Semester CHM-165 AGH-120 MUS-104 SPC-112	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking	Sem. Hrs. 4 3 3 3
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math	Sem. Hrs. 
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math Total Hours	Sem. Hrs. 4 3 3 3 3 4 16
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140 Fourth Semester	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math Total Hours	Sem. Hrs. 4 3 3 3 3 3 16 Sem. Hrs.
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140 Fourth Semester SOC-110	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math Total Hours Introduction to Sociology	Sem. Hrs. 4 3 3 3 3 16 Sem. Hrs. 3
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140 Fourth Semester SOC-110 CHM-175	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math Total Hours Introduction to Sociology General Chemistry II	Sem. Hrs. 4 3 3 3 3 16 Sem. Hrs. 3 4
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140 Fourth Semester SOC-110 CHM-175 ECN-120	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math <b>Total Hours</b> Introduction to Sociology General Chemistry II Macroeconomics	Sem. Hrs. 
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140 Fourth Semester SOC-110 CHM-175 ECN-120 PHI-145	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math <b>Total Hours</b> Introduction to Sociology General Chemistry II Macroeconomics Introduction to Ethical Conflict	Sem. Hrs. 
Third Semester CHM-165 AGH-120 MUS-104 SPC-112 MAT-140 Fourth Semester SOC-110 CHM-175 ECN-120 PHI-145 HIS-112	General Chemistry I Herbaceous Plant Materials Exploring Music Public Speaking Finite Math <b>Total Hours</b> Introduction to Sociology General Chemistry II Macroeconomics Introduction to Ethical Conflict Western Civilization	Sem. Hrs. 4 3 3 3 4 5 5 6 5 6 5 6 5 6 4 3 3 4 3 4 3 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6

### Program of Study - Turfgrass Technician (Diploma) Fi

ogram of Study	- Turigrass reclinician (Dipionia).	
First Semester		Sem. Hrs.
AGH-112	Introduction to Turfgrass Management	
AGH-161	Irrigation Systems	
AGH-120	Herbaceous Plant Materials	
AGH-141	Equipment Operations	
AGH-255	Applicator License Prep	
AGH-340	Turfgrass Professionalism	
BUS-112	Business Math*	
	Total Hours	
Second Semester		Sem. Hrs.
AGH-211	Advanced Turfgrass Management	3
AGH-152	Landscape Design Technology	3
AGH-221	Principles of Horticulture	
AGH-156	Lansdscape Design Technology II	
AGH-124	Woody Plants and Trees	
AGH-350	Turfgrass Professionalism	<u>1</u>
	Total Hours	16
Summer Cossien		Com Hua
Summer Session		Sem. rrs.
AGH-805	Horticulture Internship I	d
AGH-1/2	Landscape iviaintenance	d
AUT-121	Small Engines	<u>1</u>
	Iotal Hours	7

## TV and Radio Production

### Associate of Applied Science (AAS)

lowa Central's Radio Broadcasting Program provides thorough, hands-on training and experience for a career in the radio industry. From writing to announcing, sales to sports, digital audio production to programming, we'll teach you the skills you need in order to succeed in this highly competitive field.

lowa Central's Broadcasting Program offers an intense and practical blend of classroom studies and hands-on experience. The two-year program includes a summer internship session. During the eight-week summer internship, students work at a professional radio station, gaining valuable experience and networking with industry professionals. During their time at lowa Central, students may also take advantage of part-time opportunities at one of eight professional radio stations in Fort Dodge and the surrounding area. Upon completion of the program graduates receive an Associate in Applied Science Degree.

Graduates of our program learn how to prepare effective resumes and audition tapes. They gain valuable "real life" interviewing experience. And they can take advantage of our job placement service. Course credits are also transferable to four-year institutions for students wishing to continue their education at the university level.

KICB-FM (88.1 FM) is a fully-licensed, 240-watt radio station, broadcasting seven days a week from the Iowa Central campus. KICB is the only student-staffed, student-managed community college radio station in the state. The station has been on the air since 1971. KICB operates under the supervision of the department's professional teaching staff, all of whom have years of professional experience in the industry.

### Program of Study:

	Sem. Hrs.
MKT-131 Social Media Marketing	3
MMS-145 Broadcast Writing	3
MMS-171 Audio Production	2
MMS-172 Video Production	2
MMS-120 Media Practices L.	
Social Science or Humanities Elective	3
Total Hours	16
econd Semester	Sem. Hrs.
MMS-190 Broadcasting Promotions	3
MMS-173 Advanced Audio Production	2
MMS-173 Advanced Video Production	2 2
MMC 154 TV and Padia Appaulation	Z
MMC 140 Create Departies	ວ
WINS-149 Sports Reporting	
MMS-121 Media Practices II	3
Iotal Hours	
TILLC	<b>C</b> 11
Inira Semester	Sem. Hrs.
IVINS-191 IV and Radio Production I	4
MINS /III Madia Practices III	
	-
JOU-121 News Gathering and Reporting	3
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics	3
JOU-221 Mews Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing	3 3 <u>3</u>
JOU-221 News Gathering and Reporting JOU-221 Media Law and Ethics MKT-110 Principals of Marketing Total Hours	
JOU-221 Mews Gathering and Reporting JOU-221 Media Law and Ethics MKT-110 Principals of Marketing Total Hours	
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours	3 3 3 16 Sem. Hrs.
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours fourth Semester MMS-241 Public Relations/Marketing	3 3 16 Sem. Hrs.
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours fourth Semester MMS-241 Public Relations/Marketing MMS-192 TV and Radio Production II	3 3 16 Sem. Hrs. 3 4
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours Fourth Semester MMS-241 Public Relations/Marketing MMS-192 TV and Radio Production II MMS-203 Media Practices IV	3 3 16 Sem. Hrs. 3 4 3
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours MMS-241 Public Relations/Marketing MMS-192 TV and Radio Production II MMS-203 Media Practices IV BUS-112 Business Math*	3 3 16 Sem. Hrs. 3 4 3 3
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours MMS-241 Public Relations/Marketing MMS-192 TV and Radio Production II MMS-192 Wedia Practices IV BUS-112 Business Math* ENG-105 Composition I	3 3 3 16 Sem. Hrs. 3 4 3 3 3
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours MMS-241 Public Relations/Marketing MMS-192 TV and Radio Production II MMS-203 Media Practices IV BUS-112 Business Math* ENG-105 Composition I Total Hours	3 3 3 16 Sem. Hrs. 3 4 3 3 3 3 16
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours fourth Semester MMS-241 Public Relations/Marketing MMS-192 TV and Radio Production II MMS-203 Media Practices IV BUS-112 Business Math* ENG-105 Composition I Total Hours	3 3 3 16 Sem. Hrs. 3 4 3 3 3 3 16 Sem. Hrs
JOU-121 News Gathering and Reporting JOU-210 Media Law and Ethics MKT-110 Principals of Marketing Total Hours MMS-241 Public Relations/Marketing MMS-192 TV and Radio Production II MMS-203 Media Practices IV BUS-112 Business Math* ENG-105 Composition I Total Hours Summer Session	3 3 3 16 Sem. Hrs. 3 4 3 3 3 16 Sem. Hrs.

\*Course may be substituted with a related course from the approved general education course list.

## **Veterinary Medicine**

### Associate of Arts (AA)

Veterinary Medicine is a widely practiced science that specializes in the prevention, diagnosis, and treatment of injury, illness, disease, and disorders in animals. This role is equivalent to doctors in human medicine. Veterinarians can treat all kinds of different species of animals including wild and exotic animals, although most treat domestic animals. There are different specializations including large animal medicine that includes livestock and horses, laboratory medicine, dermatology, internal medicine, and surgery.

Many veterinarians have nurses, technicians, or assistants that work within their practice, but the tasks they perform to assist depends completely on the skill level and qualifications they have. Iowa Central's Pre-Veterinary Program is the first two years to become a veterinarian.

Pre-veterinary students are strongly encouraged to complete a bachelor's degree before enrolling in a College of Veterinary Medicine. Most veterinary medicine schools require applicants to have completed a minimum of 60 credits in specific course areas, with a minimum GPA of 2.5 before they are accepted. In recent years, however, the average GPA of successful candidates has been between 3.5 and 3.6. Veterinary Medicine colleges seek students with diverse backgrounds having a solid foundation in the sciences. When deciding which major to pursue as an undergraduate, the pre-veterinary student should consider the area of veterinary medicine in which they intend to emphasize when they become a veterinarian. For example, those interested in food animal practice may wish to pursue a degree in biological science, animal science, agricultural economics or business. Future companion animal practitioners may wish to consider a biological science, physical science, business, social science, or humanities degree. After completion of graduate school, you must have your degree in Veterinary Medicine and a state license to practice.

### Suggested Program of Study:

First Semester		Sem. Hrs.
ENG-105	Composition I	3
BIO-112	General Biology I	4
CHM-165	General Chemistry I	4
SDV-108	The College Experience	1
PSY-111	Introduction to Psychology	3
	Humanities Elective*	<u>3</u>
	Total Hours	18
Second Semester		Sem. Hrs.
ENG-106	Composition II	3
BIO-113	General Biology II	4
CHM-175	General Chemistry II	4
CSC-110	Introduction to Computers	3
MAT-157	Statistics	<u>4</u>
	Total Hours	18
Third Semester		Sem. Hrs.
Third Semester SPC-112	Public Speaking	Sem. Hrs.
Third Semester SPC-112 CHM-261	Public Speaking Organic Chemistry I	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Humanities Elective*	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective*	Sem. Hrs. 3 4 4 4 3 3
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective* Total Hours	Sem. Hrs. 3 4 4 3 3 17
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective* Total Hours.	Sem. Hrs. 3 4 4 3 3 17
Third Semester SPC-112 CHM-261 PHY-162	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective* Total Hours	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester BIO-186 CHM 271	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective* Total Hours	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester BIO-186 CHM-271 PHY 172	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective* <b>Total Hours</b> Microbiology w/Lab Organic Chemistry II Collace Bharise II	Sem. Hrs. 
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester BIO-186 CHM-271 PHY-172	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective* <b>Total Hours</b> Microbiology w/Lab Organic Chemistry II. College Physics II	Sem. Hrs. 3 4 3 3 17 Sem. Hrs. 4 4 4 4 4 2
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester BIO-186 CHM-271 PHY-172	Public Speaking Organic Chemistry I College Physics I Humanities Elective* Social Science Elective* <b>Total Hours</b> Microbiology w/Lab Organic Chemistry II College Physics II Humanities Elective*	Sem. Hrs. 3 4 3 3 3 17 Sem. Hrs. 4 4 4 3 3 3 17 Sem. Hrs. 4 4 3 3 3 17 Sem. Hrs. 4 4 4 3 3 17 Sem. Hrs. 4 4 4 3 3 17 Sem. Hrs. 4 4 4 4 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4
Third Semester SPC-112 CHM-261 PHY-162 Fourth Semester BIO-186 CHM-271 PHY-172	Public Speaking Organic Chemistry I. College Physics I Humanities Elective* Social Science Elective* Total Hours Microbiology w/Lab Organic Chemistry II. College Physics II Humanities Elective* Social Science Elective* Total Hours.	Sem. Hrs. 3 4 3 3 3 17 Sem. Hrs. 4 4 3 3 19

Human Anatomy & Physiology I and II are recommended.

To ensure best transfer, student and advisor should confirm math and science classes with transfer institution.

\*Course must be chosen from appropriate AA/AS general education list

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 60 Campus: Fort Dodge, Storm Lake, and Webster City Department: Liberal Arts & Sciences CIP#: 2401010200

Enrollment Date: Fall and/or Spring Semester Minimum Required Credits: 64 Campus: Fort Dodge Department: Business CIP#: 1002020200

## Web Technology

### **Diploma/Associate of Applied Science (AAS)**

The Web Technology program is a great opportunity to combine your artistic abilities with complex technological skills. The Associate in Applied Science (AAS) in Web Technology provides an understanding of the fundamental building blocks of web site creation and design. This includes the use of HTML, CSS, scripting to add functionality, server-side programming to handle web forms and allow interactions with database servers, plus digital image manipulation, audio, video, and animation to enhance the appearance and effectiveness of web content. This essential knowledge is ideally suited to those designing a web presence for small organizations with the goal of offering website visitors a more professional look and feel.

#### Program of Study First Semester

t Semester		Sem. Hrs
CIS-256	Dreamweaver I	
CIS-265	Photoshop I	
CIS-254	Basic Multimedia Design	
CIS-253	HTML Basics	
GRA-111	Vector Graphics I	
GRA-176	Lavout Design I	
	Total Hours	

#### Second Semester

CIS-266	Photoshop II	3
CIS-258	Dreamweaver II	
CIS-260	Web Databases	3
GRA-115	Vector Graphics II	2
GRA-177	Layout Design II	2
ADM-258	Professional Development	1
	Social Science/Humanities Elective	<u>3</u>
	Total Hours	17

Sem. Hrs.

Students can graduate with a diploma in Web Technology after successful completion of first and second semester. Students can continue to third and fourth semesters to complete an Associate in Applied Science Degree (AAS).

Third Semester		Sem. Hrs.
CIS-277	Portfolio I	3
CIS-259	Dreamweaver III	3
GRA-158	Web Multimedia	3
MKT-110	Principles of Marketing	3
ENG-105	Composition I	<u>3</u>
	Total Hours	15
Fourth Semester		Sem. Hrs.

Summer Session	(Required)	Sem. Hrs.
	Total Hours	15
	English/Speech Elective*	<u>3</u>
BUS-112	Business Math*	3
GRA-166	Web Animations	3
CIS-262	Dreamweaver Projects	3
CIS-278	Portfolio II	3

BUS-932 Internship......2 \*Course may be substituted with a related course from either AA, AS, or approved

general education list for Applied Science and Technology.

\*\*Program requirements: Must pass all classes with a prefix of ART, CIS, and GRA with a "C" or better for Graduation.

## Welding Technology

### **Diploma/Certificate**

The Welding Technology Program is designed to teach fundamental techniques and principles. The program also provides for an overview of related topics such as metallurgy and fabrication, layout, estimating, and repair. The first semester of the program is devoted to learning about and practicing basic welding techniques. The second semester provides students an opportunity to develop additional welding skills and learn advanced techniques. Upon successful completion of the Welding Technology program, students will be awarded a diploma in Welding Technology.

### Program Study:

First Semester		Sem. Hrs.
MAT-743	Technical Math*	3
IND-126	Precision Measurements Lab	1
IND-127	Shop Operations	1
WEL-110	Blurprint Reading for Welders	2
WEL-213	Fabrication, Layout Estimating & Repair	2
WEL-122	Beginning Welding	2
WEL-170	Shielded Metal Arc Welding	2
WEL-181	Gas Metal Arc Welding	2
MFG-266	Introduction to Mill Operations	<u>2</u>
	Total Hours	
c 1c .		c
Second Semester		Sem. Hrs.
WEL-1/1	Adv. Shielded Metal Arc Welding**	Z
WEL-214	Advanced Fabrication**	Z
WEL-190	Gas lungsten Arc Welding	Z
VVEL-301		Z
VVEL-340		Z
VVEL-1/8	Adv. Gas Metal Arc Weiding^^	Z
VVEL-196	Adv. Gas lungsten Arc vveiding^^	Z
IND-184	Mechanical Processes	Z
IVIFG-256	Introduction to Lathe Operations	<u>∠</u>
	Iotal Hours	
Optional		Sem. Hrs.
WEL-710	Robotic Welding	
MFG-238	Machine Processes	2
MFG-257	Advanced Lathe2	
IND-314	Computerized Maintenance Management Systems1	

A student is to have completed all core program courses for the semester prior to the one in which they are currently enrolling with a "C" or better grade. Any exception will have to be approved in writing by the Program Coordinator and Division Dean. Core program requirements are courses beginning with the following prefix: WEL.

Because of changes in technology, students taking programs over an extended period of time may be advised to retake courses to update skills and competencies.

\*Course must be chosen or substituted with a related course from the approved general education course list.

#### \*\*Pre-requisites:

WEL-171 Adv. Shielded Metal Arc Welding pre-requisite is WEL-170 Shielded Metal Arc Welding

WEL-214 Advanced Fabrication pre-requisite is WEL-213 Fabrication, Layout Estimating & Repair and co-requisite is WEL-122 Beginning Welding

WEL-301 Pipe Welding pre-requisite is WEL-170 Shielded Metal Arc Welding, WEL-190 Gas Tungsten Arc Welding

WEL-340 Maintenance Welding pre-requisite WEL-122 Beginning Welding

WEL-178 Advanced Gas Metal Arc Welding pre-requisite is WEL-181 Gas Metal Arc Welding

WEL-196 Advanced Gas Tungsten Welding pre-requisite is WEL-190 Gas Tungsten Arc Welding

Enrollment Date: Fall Semester Minimum Required Credits: 33 (Diploma), 65 (AAS) Campus: Fort Dodge Department: Business CIP#: 1108010200 Enrollment Date: Fall Semester Minimum Required Credits: 35 Campus: Fort Dodge Department: Industrial Technology CIP#: 4805080100

## PROGRAMS OF STUDY

# COURSE DESCRIPTIONS

Fire Science (FIR) ..... 117 Foreign Language - Chinese (FLC) ..... 118 Foreign Language - German (FLG) ..... 118 Foreign Language - Spanish (FLS) ..... 118 Geography (GEO) ..... 118 Graphic Communications (GRA) ..... 118 Health Care Administration (HCA) ..... 119 Health Sciences (HSC) ..... 121 History (HIS) ..... 121 Hospitality/Culinary Mgt (HCM) ..... 119 Human Services (HSV) ..... 122 Humanities (HUM) ..... 123 Industrial Technology (IND) ..... 123 Intercollegiate Physical Educ (PEV) ..... 136 Journalism (JOU) ..... 124 Literature (LIT) ..... 125 Management (MGT) ..... 128 Manufacturing (MFG) ..... 127 Marketing (MKT) ..... 128 Mass Media Studies (MMS) ..... 129 Mathematics (MAT) ..... 126 Medical Assistant (MAP) ..... 125 Medical Lab Tech (MLT) ..... 128 Medical Transcription (MTR) ..... 130 Music (MUS) ..... 131 Music - Applied (MUA) ..... 130 Philosophy (PHI) ..... 136 Phy Ed and Health (PEH) ..... 136 Physical Education Activities (PEA) ..... 135 Physical Education Training (PET) ..... 136 Physical Science (PHS) ..... 137 Physics (PHY) ..... 137 Political Science (POL) ..... 139 Practical Nursing (PNN) ..... 138 Professional Photography (PHT) ..... 137 Psychology (PSY) ..... 139 Radiologic Technology (RAD) ..... 139 Reading (RDG) ..... 140 Recreation & Facilities Management (REC) ..... 140 Religion (REL) ..... 140 Social Media and Marketing (SMM) ..... 141 Sociology (SOC) ..... 141 Speech (SPC) ..... 142 Student Development (SDV) ..... 140 Welding (WEL) ..... 142

Accounting (ACC) ..... 92 Administrative Assistant (ADM) ...... 92 Agriculture - Animal Science (AGS) ..... 95 Agriculture - Equine (AGE) ..... 95 Agriculture - Farm Mgt (AGB) ..... 94 Agriculture - Horticulture (AGH) ...... 95 Agriculture - Mechanics (AGM) ...... 95 Agriculture - Precision Ag (AGP) ...... 95 Agriculture Agronomy (AGA) ..... 94 Agriculture Comprehensive (AGC) ..... 94 American Sign Language (ASL) ...... 98 Animation (ANI) ..... 96 Anthropology (ANT) ..... 96 Art (ART) ..... 96 Associate Degree Nursing (ADN) ...... 93 Auto Body Collision Repair (CRR) .... 109 Automation Tech and Robotics (ATR) ...... 98 Automotive Technology (AUT) ...... 98 Biology (BIO) .... 100 Biotechnology (BPT) .... 101 Business (BUS) .... 103 Business Computer Application (BCA) ..... 99 Chemical Technology (CHT) .... 105 Chemistry (CHM) .... 105 Coaching Officiating (PEC) .... 135 Communication (COM) .... 107 Computer Aided Drafting (CAD) .... 104 Computer Networking (NET) .... 133 Computer Programming (CIS) .... 105 Computer Science (CSC) .... 110 Construction (CON) .... 107 Criminal Justice (CRJ) .... 108 Cultural Studies (CLS) .... 106 Dental Hygiene (DHY) .... 110 Diesel Technology (DSL) .... 112 Early Childhood Education (ECE) .... 113 Economics (ECN) .... 113 Education (EDU) .... 113 Electrical Technology (ELE) .... 114 **Emergency Medical Services (EMS)** .... 115 Engineering Technology (EGT) .... 114 English Composition (ENG) .... 116 Environmental Science (ENV) .... 117 ESL (ESL) .... 117 Film and Theatre (DRA) .... 112



This course examines the recordkeeping and

reporting requirements pertaining to payroll of

an organization. Emphasis is placed upon federal

payroll requirements. Prerequisites: take ACC

Course Title

Course Description

Cost Accounting

ACC-221

3.00

This course provides a study of the methods of cost accumulation for inventory valuation and income determination for manufacturing concerns including utilization and evaluation of cost data for planning and controlling operations. Knowledge of Microsoft Excel will benefit the student. Prerequisite: ACC-146 Managerial Accounting

ACC-266 3.00

### Tax Accounting

This course provides an introduction to the federal tax structure, the federal revenue system, business and non-business income and deductions, tax credits, capital gains and losses and tax return preparation utilizing tax software. Prerequisite: ACC-142 Financial Accounting

ACC-311 3.00

### **Computer Accounting**

The course is designed to provide the student experience in handling automated accounting in a number of areas. These include General Ledger, Accounts Receivable, Accounts Payable, Payroll, Depreciation, Inventory and Accounting Statement Analysis. Simulation of business and its activities are processed through the entire accounting cycle culminating in the various accounting reports. The applications will be done on a computer. Prerequisites: ACC-111 Introduction to Accounting or ACC-142 Financial Accounting

### ACC-330

#### 1.50

### Computer Accounting-Peachtree

This course is designed to provide the student experience in handling automated accounting in a number of areas. These include General Ledger, Accounts Receivable, Accounts Payable, Payroll, Depreciation, Inventory and Accounting Statement Analysis. Simulation of business and its activities are processed through the entire accounting cycle culminating in the various accounting reports. The applications will be done on a computer utilizing the software program Peachtree.

#### ACC-331 1.50

#### **Computer Accounting - Quickbooks**

This course is designed to provide the student experience in handling automated accounting in a number of areas. These include General Ledger, Accounts Receivable, Accounts Payable, Payroll, Depreciation, Inventory and Accounting Statement Analysis. Simulation of business and its activities are processed through the entire accounting cycle culminating in the various accounting reports. The applications will be done on a computer utilizing the software program QuickBooks. ACC-364 3.00 Excel for Accounting

This course is designed to provide the student experience in applying accounting knowledge and skills to Microsoft Excel. Topics covered include: Excel basics, using formulas (beginning, intermediate and advanced), formatting, template tutorial, working with tables, data analysis features, automating repetitive tasks, importing, exporting, and distributing data, customizing, financial accounting, management accounting, financial statements, inventory, payroll, depreciation, amortization, cost of goods manufactured, job order cost accounting, process costing, and cost-volumeprofit analysis. The applications will be done on a computer. Prerequisite: ACC 142, Financial Accounting or ACC 111, Introduction to Accounting.

ACC-701 3.00 Certified Bookkeeping Review

ACC-932 3.00

#### Internship

This course provides an opportunity to gain practical experience through on-site training in an approved business or government office. The actual training will be at job site and will be under the supervision of a designated person in the business and coordinated by the program coordinator. This course is for the Accounting Associate Program. This course is to be taken during the final semester of the program.

### ADMINISTRATIVE ASSISTANT ADM-105

1.00

#### Introduction to Keyboarding

Students will learn to key alpha characters using the touch system for use on a personal level or as a basic skill. At the completion of this course, students are expected to key at a rate of 25 words a minute for one minute and three minutes with one or less errors per minute allowed using the touch method and without the use of the backspace key.

### ADM-108

### 1.00

### Keyboarding Skill Development

Students will have the opportunity to improve both speed and accuracy in their keyboarding skills. This course is offered in the Flexlab for individualized scheduling. Pre-requisites: ADM-105, ADM-112, or instructor approval. Advanced standing credit may be received by completing a 5-minute timing with a minimum speed of 65 wpm with no more than 5 errors without the use of the backspace key.

### ADM-112

### 3.00

Keyboarding

This course is designed to introduce students to keyboarding and word processing fundamentals. Emphasis is on the mastery of the keyboard, development of speed and accuracy, and production of formatted business documents using Microsoft Word. Prereq: Ability to key 35 wpm with 3 or fewer errors or the Coreq: ADM 105 Introduction to Keyboarding.

## ACCOUNTING

Payroll Applications

111 or ACC 142.

ACC-108 3.00 Bourell Applic

ACC-108

2.00

### Payroll Applications

This course offers the student the opportunity to learn about the function of federal and state of Iowa payroll concepts, taxes, and laws.

### ACC-111 3.00

### Introduction to Accounting

Students will receive instruction in analyzing and recording various business transactions and in completing the accounting cycle by journalizing, posting, preparing worksheets, making adjusting and closing entries, and preparing financial statements for service and merchandising businesses. Instruction will be provided for accounting for cash by using a petty cash fund, reconciling a bank statement, and utilizing the cash short and over account; calculating and journalizing employees' payroll; and calculating and journalizing instruction is necessary.

### ACC-142 3.00

### **Financial Accounting**

This course emphasizes fundamental bookkeeping procedures, including the handling of typical business and corporate transactions, adjusting, closing, and reversing entries, the use of controlling accounts, and subsidiary ledgers, and the voucher system, preparation of financial statements, and financial statement analysis. Computers are used.

### ACC-146 3.00

### Managerial Accounting

This course gives attention to partnership and corporation accounting, the use of departmental branch and manufacturing accounts, and an overview of job order and process cost accounting. Computers are used. Prerequisite: C or better in ACC-142 Financial Accounting

### ACC-211 3.00

### Intermediate Accounting I

This course includes an in-depth study of the worksheet, balance sheet, income statement, other supplementary statements and corporation procedures. Prerequisite: ACC-146 Managerial Accounting

### ACC-212 3.00

### Intermediate Accounting 2

This course provides an in-depth study of inventories; the acquisition, disposition, utilization, and impairment of property, plant and equipment; investments; current liabilities and contingencies; bonds and long-term notes.

### ADM-116 3.00 Keyboarding II

Students will be given the opportunity to process a variety of business documents using current formatting styles and different software applications. Emphasis will be on building keyboarding skills and increasing proficiency in Microsoft Word. Pre-requisite: ADM-112 Keyboarding or Program Coordinator approval.

#### ADM-131 1.00 Office Calculators

This course prepares students for mastery of both the 10-key electronic calculator and the computer keypad. Students will develop speed and accuracy and apply these skills in a variety of job simulations and applications.

### ADM-142 3.00 Desktop Publishing

This course examines the basic concepts of creating page layouts and designs using desktop publishing software. A progressive sequence of computer publishing principles and skill-building activities will be presented. Students will have the opportunity to prepare various business publications that will include graphics and photos.

### ADM-146 3.00 Integrated Applications

Students will be challenged to apply basic to advanced Microsoft Office software skills in realistic business situations. Projects include Marketing and Sales emphasizing word processing, Finance and Accounting emphasizing spreadsheet applications and Operations emphasizing database applications, media development, and Web page development. Electronic presentation applications are included throughout all projects. Prerequisite courses are ADM-112 Keyboarding, ADM-116 Keyboarding II and BCA-212 Introduction to Business Computer Applications. Exceptions to prerequisites per Administrative Specialist program coordinator.

### ADM-148 2.00

### Transcription

This course covers skill development in electronic transcription-dictated material into usable business documents. Emphasis will be placed on improving written communication skills while increasing the rate of transcription. Prereq: ADM-112 Keyboarding or the permission of the instructor.

### ADM-162 3.00

### Office Procedures

This course is designed to provide students with the working knowledge of current office systems and equipment. Students will be introduced to the mechanics and operational methods of various office systems and equipment in varied business environments.

#### ADM-180 3.00

### Administrative Management

This course is designed to prepare students to identify basic concepts and trends within business and office environments. Students will practice management skills, employee motivational strategies, problem-solving and communication skills individually and as a team member. Human resource management, office environment issues and systems will also be explored.

### ADM-258 1.00 Professional Development

This course is designed to provide a broad range of professional development opportunities for students. These opportunities will include but not be limited to areas of parliamentary procedure, meeting agendas, and minutes, note taking and transcription of that note taking, resume building, interview skills, portfolio building, teamwork projects and finally career specific expectations and professionalism necessary to be successful in an Administrative Specialist career. This course will also provide opportunities for guest speakers and field trips to assist in demonstrating the importance of professional development.

### ADM-260 1.00

#### Personal Development This course is designed to p

This course is designed to provide a broad range of personal development opportunities for students. These opportunities will include but not be limited to areas of personal hygiene and the importance of nutrition and fitness, business professional dress, business etiquette, time management/organization skills, teamwork projects and professionalism necessary to be successful in an Administrative Specialist career. This course will also provide opportunities for guest speakers and field trips to assist in demonstrating the important of professional development. A \$15 fee will be added to the course for costs incurred during field trips.

### ADM-297

### 1.00

**Certification Preparation** Students will prepare for certification in Microsoft

Office applications using tutorials and practice exams designed to simulate the certification process. Iowa Central is a Microsoft Office User Specialist Certification testing center.

### ADM-941

#### 2.00 Practicum

This course provides an opportunity to gain practical experience through on-site training in an approved office setting. The actual training on the job site will be under the supervision of a designated person in the business. The student must have taken/or be taking all courses required for the completion of the Administrative Specialist program. A letter grade of "C" or higher must be earned in this course to satisfy the program graduation requirements.

### ASSOCIATE DEGREE NURSING ADN-405 6.00

### Maternal Child Health Care

This course uses the nursing process and a developmental approach to build upon previous principles of Man, Health and the Environment as they affect Maternal Child Nursing. Emphasis is placed on health teaching, and providing care for complex problems of the obstetrical, newborn, and pediatric clients. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology I with lab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology, BIO-168 Microbiology for Fort Dodge and Webster City students. Co-requisites: ADN-407 Clinical Practicum 3, BIO-186 Microbiology (for Storm Lake students).

### ADN-407 2.00 Clinical Practicum 3

Provides an opportunity for students to apply Maternal-Child Health Care theory in the clinical setting with obstetrical, neonatal, and pediatric clients. The nursing process is utilized to plan individualized care. Emphasis is placed on comprehensive nursing interventions and teaching. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology II with Iab, BIO-173 Human Anatomy & Physiology II with Iab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology, BIO-186 Microbiology for Fort Dodge and Webster City students. Co-requisites: ADN-405 Maternal Child Health Care, BIO-186 Microbiology (for Storm Lake students).

#### ADN-465 5.00

### Psychiatric Mental Health Care

This course focuses on the study and application of modern concepts of psychiatric and mental health care and effective interactions with others. The student will learn to respond therapeutically to a variety of clients including those with maladaptive behaviors through the utilization of the nursing process by applying the principles of psychiatric and mental health care. Self awareness and self knowledge are incorporated throughout the course. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, PSY-111 Introduction to Psychology, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology II with lab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology. Co-requisite: ADN-466 Clinical Practicum 4.

### ADN-466

### 2.00

### Clinical Practicum 4

This practicum provides an opportunity for students to utilize the nursing process in a variety of mental health care settings. A pass/fail grade is earned for this clinical course. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, PSY-111 Introduction to Psychology, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology I with Iab, BIO-173 Human Anatomy & Physiology II with Iab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology. Corequisite: ADN-465 Psychiatric Mental Health Care.

### ADN-511 8.50

### Adult Health Care

This course utilizes the nursing process to care for acute and chronically ill adults. It expands on knowledge previously obtained regarding principles of Man, Health, and the Environment as it affects nursing care during the adult life span. Emphasis is placed on comprehensive nursing interventions needed for complex health deviations. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, BIO-186 Microbiology, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology I with lab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology. Corequisites: ADN-512 Clinical Practicum 5, SOC-110 Introduction to Sociology, ENG-105 Composition I.

### ADN-512 4.00 Clinical Practicum 5

This course provides an opportunity for students to apply Adult Health Care theory in the clinical setting with adult medical/surgical clients. The nursing process is utilized to plan individualized care. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, BIO-186 Microbiology, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology I with lab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology. Corequisites: ADN-511 Adult Health Care, SOC-110 Introduction to Sociology, ENG-105 Composition I.

## ADN-805

#### Management in Health Care

This course focuses on leadership and managerial skills related to caring for a group of patients. Content areas include: organization, prioritization, health care delivery systems, group dynamics, change, health issues, and legal and ethical dilemmas as they affect nursing. The concepts of Man, Health and Environment as they affect the health care setting is explored. The transition from the student role to the RN practitioner is emphasized. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, BIO-186 Microbiology, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology II with lab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology, ADN-405 Maternal Child Health Care, ADN-407 Clinical Practicum 3, ADN-465 Psychiatric Mental Health Care, ADN-466 Clinical Practicum 4, ADN-511 Adult Health Care, ADN-512 Clinical Practicum 5. Co-requisite: ADN-806 Clinical Practicum 6.

### ADN-806

### 2.50

### **Clinical Practicum 6**

This course provides an opportunity for students to apply management principles in organizing, prioritizing and delivering care to a group of clients in the clinical setting. An emphasis is placed on decision-making and managing care in a realistic work setting. A pass/fail is earned for this clinical course. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, BIO-186 Microbiology, PSY-121 Developmental Psychology, BIO-168 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology II with lab, BIO-151 Nutrition, HSC-112 or HSC-113 Medical Terminology, ADN-405 Maternal Child Health Care, ADN-407 Clinical Practicum 3, ADN-465 Psychiatric Mental Health Care, ADN-466 Clinical Practicum 4, ADN-511 Adult Health Care, ADN-512 Clinical Practicum 5. Co-requisite: ADN-805 Management in Health Care.

### AGRICULTURE AGRONOMY

### AGA-154

3.00

### Fundamentals of Soil Science

Students will acquire basic identification skills related to plant development stages, plant diseases, insects, fertility deficiencies, weeds, and integrated pest management.

### AGA-155 1.00

#### Fundamentals of Soil Science Lab

This lab is designed to give students handson learning opportunities in discovering the complexities of soil. The emphasis is on "discovery" rather than recipe.

#### AGA-271 3.00 Advanced Cern & Sevhee

### Advanced Corn & Soybean Production

This course is a follow up to Principles of Crop Production and focuses on the in-depth production and management of corn and soybeans in the Midwest. Some of the topics include tillage methods, planting procedures, weed, insect and disease identification, precision farming, nutrient requirements, and harvesting and storage.

### AGA-380 4.00

### Integrated Pest Management

Students will acquire basic identification skills related to plant development stages, plant diseases, insects, fertility deficiencies, weeds, and integrated pest management. This course provides a core background with attention to specialty topics in agricultural, forestry, and horticultural pesticide applicator certification. Students select certification categories and are eligible for pesticide applicator certification upon completion of course. Commercial certification emphasized.

#### AGA-390 3.00

### Introduction to Renewable Resources

This course will present an overview of soil, water, plants, and animals as renewable natural resources in an ecosystem context. Concepts of integrated resource management, history and organization of resource management will also be introduced.

### AGA-852 3.00

### Principles of Crop Production

The course is a study of principles of plant, soil, and climate relationships and their impact on crop production and animal food supply worldwide. Other topics covered are plant identification, anatomy and growth, as well as tillage and planting, pest control, harvesting and storage.

### AGRICULTURE - FARM MGT AGB-133

3.00

### Intro to Agricultural Business

This course is an introduction to agribusiness management. It will emphasize the application of basic, practical business management skills in marketing, demand analysis, forecasting, production, finance, and leadership with a global perspective.

#### AGB-206 3.00

### Farms Operations & Management I

Students participate in the operation and management of an actual lowa farm. The class is responsible for the plans for the school-managed farm, record keeping, and decisions on buying the farm's crops and participating in the actual planting of the crops, and arrangements for equipment and fertilizers. Outside speakers on current topics affecting the farm and agriculture will be utilized.

#### AGB-207 3.00

### Farm Operations & Management II

Students participate in the operation and management of an actual lowa farm. The students are responsible for the plans, record keeping, and decisions of buying and selling the farm's crops, and participating in the actual harvesting of the crops, arrangements for equipment, and make decisions and perform the post-harvest field work. Outside speakers on current topics affecting the farm and agriculture will be utilized.

### AGB-235 3.00

### Introduction to Agriculture Markets

This course in professional agricultural selling will concentrate most heavily on both theoretical and practical aspects of selling in an agricultural environment, but may be applicable to almost any area of non-agricultural selling. Many sales scenarios and audio-visual aids will utilize agricultural business examples.

#### AGB-330 3.00 Farm Business Manageme

### Farm Business Management

This course focuses on business and economic principles applied to decision making and problem solving in the management of a farm business. Some of the topics include cash flow, partial, enterprise, and whole farm budgeting. Information systems will be used for farm accounting, analysis, and control. Obtaining and managing land, capital, and labor resources will also be covered in the course.

### AGB-336

#### 3.00 Agriculture Sales

This course in professional agricultural selling will concentrate most heavily on both theoretical and practical aspects of selling in an agricultural environment, but may be applicable to almost any area of non-agricultural selling. Many sales scenarios and audio-visual aids will utilize agricultural business examples.

### AGB-934

### 3.00

Practicum

This course provides an opportunity for students to gain practical experience through on-site training in an approved agricultural-based business setting. The actual job site training will be under the supervision of a designated person in the Ag business. The student must have taken/or be taking all the courses required for the completion of the Agriculture Technology Program.

### AGRICULTURE COMPREHENSIVE

AGC-129 3.00

### Sustainable Agriculture

This course examines the social, economic, and scientific concepts relating to adding value to raw and processed agricultural products. The specific topics will include the impact of agriculture on economics, cultures, social structures, technologies, processing, products, nutrition and environmental issues resulting from adding value to agricultural products. Laboratory activities will provide opportunities for examining various technologies, evaluating products, examining nutritional advantages, assessing economic benefits to communities, and determining the environmental impact of various developments.

#### AGC-201 3.00 American Agricultural History

### Students will learn about the History of American

Agriculture. In this course students will be exposed to some of the changes and challenges American Agriculture has gone through starting in the 1850's through the present time. At the end of this course students will be able to relate to the similarities and differences of past and present day agriculture.

#### AGC-318 3.00 Field Studios/Caroor Oppo

### Field Studies/Career Opportunities

This course will provide students with field trips to agricultural businesses, college Ag facilities, operating farms, and livestock facilities. Students will also get a look at the various careers available to them in agriculture.

### AGC-940 3.00

### **On-The-Job Training**

This course provides a second opportunity for the students to gain on-site work experience in an agricultural related occupation in the spring or fall. The agricultural community values and looks for these experiences when hiring new employees. Students will be under the supervision of a designated person in the agricultural business.

### **AGRICULTURE - EQUINE**

#### AGE-219 3.00

### Equine Science

Equine Science introduces students to contemporary concepts, basic practices, and decisions necessary when managing horses through stages of their lives.

### **AGRICULTURE - HORTICULTURE**

AGH-112 3.00

### Intro to Turf Grass Management

An introductory course discussing the establishment and maintenance practices used on turfgrasses. Topics covered include classification of turfgrasses, plant characteristics, warm and cool season grasses, the role of soil in successful turf installation and maintenance, selection of a turfgrass for a site, and practices required for a healthy turf area including fertilization, mowing and irrigation.

### AGH-120 3.00

### **Herbaceous Plant Materials**

This Course will acquaint students with plant characteristics, culture and maintenance of hardy and tender perennials, groundcovers, annuals, ornamental grasses, bulbs, herbs and roses grown in lowa and the upper Midwest.

### AGH-124 3.00

### Woody Plants/Trees

This course will develop the student's skills in the identification, characteristics, culture, and landscape use of trees, shrubs, and woody vines native to the upper Midwest.

### AGH-141 3.00

### **Equipment Operations**

This course is designed to give the student knowledge of the different types of equipment that are used on turf grass facilities. Topics range from preventative maintenance, information on reel and rotary blades, selecting tools for the shop, training equipment operators and safety regulations.

### AGH-148 3.00

### Home Landscaping

This fundamental course will present the student with basic landscape principles that can be utilized in a residential setting. Topics covered will include an introduction to landscape design, basic landscape construction, an understanding of different plants to incorporate into different landscape settings, and maintenance techniques to ensure a long-lasting landscape environment.

### AGH-152 3.00 Landscape Design Technology

This course focuses on providing the student with the foundation for good landscape design. The student will gain knowledge of landscape design tools and how they are used to graphically represent a landscape design. Also presented will be the landscape design process from interacting with the client, selling a landscape concept, to creating a design from start to the finished product. The student will have the opportunity to draw landscape designs.

### AGH-156 3.00

### Landscape Design II

This course is organized around the steps involved in landscape construction. From preconstruction activities, including safety, reading construction documents, basic construction math, to work associated with landscape construction. This work includes site preparation, drainage, irrigation, retaining walls, landscape paving, wood decks and landscape structures.

### AGH-161 3.00

### Irrigation Systems This course will give the student knowledge in landscape and golf course irrigation systems. Topics

include irrigation equipment, piping, pump stations, water supply, design, installation and maintenance.

#### AGH-172 3.00

### Landscape Maintenance

This course is intended to give the student valuable information in the maintenance area of landscaping. Topics include different types of plants for different areas in a landscape, plant maintenance, lawn care, winterization, pest control and safety issues.

#### AGH-180 2.00

### Turf Grass Facilities Mgt

This course will teach the student management skills specific to the turfgrass industry. The student will gain valuable experience on the day to day operations of a turfgrass facility.

#### AGH-211 3.00

### Advanced Turf Grass Management

This course concentrates on practices that will promote a healthy turf area once the growth of the grass has been initiated. Topics covered include pesticides, weeds and insects. Also turfgrass diseases and other problems, such as thatch or compaction, improving unsatisfactory turf, golfcourse and other turf area management, a look at sports turf and business management practices.

#### AGH-221 3.00

### Principles of Horticulture

The student will learn the applications of scientific principles to commercial horticultural practices, and how those practices can be improved. Topics covered include plant classification and structure, photosynthesis, soil management, plant growth substances, and plant pests.

### AGH-255 1.00 Applicator License Prep

This course prepares the student for a commercial pesticide application license. The student will review the lowa Core Manual along with ornamental and turfgrass management(Category 3OT), which identifies different plant development stages, plant diseases, insects, fertility deficiencies, weeds, and integrated pest management.

### AGH-340 1.00

### **Turfgrass Professionalism**

This course will give the students hands on experience working on a real life golf course. Students will work on equipment, provide general maintenance, as well as function as the grounds crew to enhance skills learned throughout their academic program.

### AGH-805

### 3.00

### Horticulture Internship 1

The student will participate in an internship at turfgrass facility. The internship will give the student valuable hands-on experience under the supervision of a professional turfgrass manager. This course is taken by students in the turfgrass management program during the summer. The student is required to work 180 hours to complete the internship.

## AGRICULTURE - MECHANICS

#### AGM-101 1.00

### Ag Dsl Tractor/Equip Main

Ag and commercial maintenance will teach students how to maintain agricultural and commercial heavy duty equipment in skills such as oil changes, hydraulic repair, heavy duty electrical starting systems, and general maintenance.

### **AGRICULTURE - PRECISION AG**

AGP-330 3.00

### Advanced GPS

This course is designed for students who have successfully completed Introduction to GPS. Students will be able to evaluate yields, prescribe fertilization rates, and predict yield risks by real data taken through a number of input, analysis, and visualization steps. Prerequisite : AGP 329 Introduction to GPS.

### AGP-336

#### 3.00 Precision Agriculture

Students will be introduced to site specific agriculture by the use of Global Positioning Satellites. Students will be able to evaluate yields, prescribe fertilization rates, and predict yield risks by real data taken through a number of input, analysis, and visualization steps.

### AGRICULTURE - ANIMAL SCIENCE AGS-113

### 3.00

### Survey of the Animal Industry

The course explores issues impacting the United States and the international animal industry. The main emphasis of the course is on different breeds, basic management, and marketing of farm animals. The animals include beef and dairy cattle, companion animals, horses, poultry, sheep, swine, and their products.

#### AGS-308 3.00

### Livestock Managment Techniques

In this course students will learn and be able to demonstrate various livestock management practices with various types of livestock such as Beef Cattle, Swine, and Chickens. These management principles will be practical to real life situations such as livestock restraint, health management, proper castrating, weaning procedures, shorting, feeding, and many more.

### AGS-401 3.00

#### **Swine Production**

This course allows students to learn modern swine production and management techniques they can take back to the farm or into the swine industry. Some of the topics include biology of the pig, nutrition and feeding, housing, management of pig health, and marketing.

### AGS-553 3.00 Beef Production

### Beet Production

This course allows students to learn modern beef production and management techniques in which they can take back to the farm or into the beef industry. Some of the topics include commercial cow-calf management, feedlot management, the global beef industry, reproduction, and nutrition.

### ANIMATION

#### ANI-105 3.00

### Introduction to Animation

Introduction to Animation teaches the foundational principles, methods, and techniques of 2D, or hand-drawn animation through the completion of numerous projects culminating in a final project that demonstrates all previous knowledge. The successful completion of this course will prepare students for more advanced animation techniques and courses.

### ANI-130 3.00

### **Technical & Character Animation**

This course is a continuation of the study of the processes, techniques, methods and concepts associated with 2D, or hand-drawn, animation. Coursework will build upon previous knowledge of animation techniques including weight, balance, exaggeration, and timing as well as introduce new concepts of secondary motion, lip sync, and character. Pre-requisite ANI 105.

### ANTHROPOLOGY

#### ANT-105 3.00

### Cultural Anthropology

The development of culture, the origins of man, and concepts and techniques for understanding world cultural similarities, differences, and diffusion are studied.

### ART

### ART-101 3.00

### Art Appreciation

This class is designed for the non-Art major. It includes a survey of the themes, materials and processes associated with the visual arts. Students do not need to have either an art background or "talent" to succeed in the course. The course includes hands-on experiences, as well as lectures, films, small-group discussions, and trips to museums and/or galleries. This class fulfills a general education requirement. Pre-requisite: none

### ART-111 1.00 Exploring Design

Exploring Design will focus on particular design applications in our world. Students will apply basic design knowledge to a variety of classroom projects and will study how movements of the past (such as the Arts and Crafts movement, Art Deco, or the Bauhaus) continue to influence contemporary thought. Potential topics might include graphic design, interior design, product design, architecture, landscape design, painting, sculpture and photography. No text. Repeatable for credit. Pre-requisite: none

### ART-115 3.00

### Graphic Design

This course will be a general survey of graphic design concepts and techniques. You will study and apply the elements and principles of design as they pertain to page layout and communication. Students will learn to create effective logos, brochures, catalogs, flyers, etc. The tool of choice will be the computer, but will not be the only tool used in the course. Pre-requisite: none

### ART-116 3.00

### Graphic Design II

This course is a continuation of Graphic Design. Students will continue to learn the principles of page layout and communication and will apply this knowledge to professional publishing systems. Prerequisite: ART-115 Graphic Design

### ART-131

### 3.00

### **Digital Publication Design**

Publication Design is an introduction to the theories and principals related to publication design. In this course, you will analyze and apply learned principles and theories to class assignments as well as peerdesigned work. Working on Mac computers in a networked lab environment, students will build core skills that can be used to arrange and design type and images in layouts. Class sessions will focus on interacting with the tools associated with InDesign in a progressive sequence of exercises. In-class exercises will be supplemented by independent assignments that require students to apply basic skills and theories, underrepresented groups, and experiencing these theories by way of assignments designed for hands-on learning.

### ART-133 3.00

### Drawing

This course is an introduction to the fundamentals of the drawing process. Students will develop visual skills and an understanding of pictorial problems. Emphasis is placed on the examination of space and form using a variety of media and tools. Students will explore the physical characteristics of line through the use of pencil, pen and ink, charcoal, conte crayon and colored pencil. The class will increase the understanding of the expressive as well as the representational properties of line as it relates to shape, value, texture, color and space. Students do not need prior drawing experience. No text. Small materials fee. Pre-requisite: none

### ART-134 3.00 Drawing II

Students will study the process of drawing with an emphasis on the development of a personal style of visual communication. Students will continue to explore all types of drawing subjects, building on their skill and expanding their visual vocabulary. This course will include the gestural, structural, and dynamic expression of the human figure, as well as continued opportunity to experiment with the media of drawing. No text. Small materials fee. Pre-requisite: Drawing ART 133

## ART-139

### Introduction to Painting

This course is designed as a brief introduction to painting practices and techniques. Students will choose acrylics, oils, watercolors, or egg tempera as a focus for the course. The works and techniques of the masters, past and present, will be explored. No prerequisite. No text. Materials fee. Repeatable for credit.

### ART-143

#### 3.00 Painting I

Students enrolled in this course will gain skills in the use of oil, watercolor and acrylic paints. Students will develop an understanding of various painting techniques as well as an appreciation of paintings, both past and present. No text. Materials fee.

### ART-144 3.00

### Painting II

This course is designed to develop additional skills in the use of various painting media and techniques. Students will explore a personal means of visual communication. No text. Materials fee. Pre-requisite: Painting I ART 143

### ART-151

### 3.00

Design I

This basic design course provides a problemsolving structure in which students can explore ideas, enhance perception and develop creative thinking skills. Through the investigation of five or six problems, students acquire a basic visual vocabulary, experience several different media and processes, and become familiar with criteria for making aesthetic judgments. No text. Small materials fee. Pre-requisites: none

### ART-157 3.00

### Printmaking

This course is an introduction to the fundamentals of the printmaking process. Through the exploration of a variety of printmaking media, students will develop an understanding of traditional and contemporary techniques. Students will learn both to run editions and create one-of-a-kind, experimental prints. Emphasis will be placed on relief and intaglio processes, including (but not limited to) woodcuts, collagraphy, drypoint, and etching. Students will develop visual problem solving skills as they explore the possibilities offered by the graphic arts. In addition, the course will examine printmaking's role in historical and contemporary society. Students do not need prior printmaking experience, but ART 133 Drawing is a pre-requisite for this course.

#### ART-160 3.00 Typography

This course covers the art of the letterform, from its evolution to its use today in design communications. Students will learn how to use type in the most appropriate way possible to communicate effectively in print and on-screen.

### ART-162 1.00

### Introduction to Sculpture

This course is designed as an introduction to techniques and practices in sculpture. Students will experiment with various processes and sculptural methods. Possibilities include assemblage, welded metal, plaster, clay, plastics, cardboard, and paper. Materials fee. No text. Repeatable for credit. Prerequisite: none

### ART-163 3.00 Sculpture

Sculpture Studio will develop an understanding and appreciation of the interaction of form in space through the manipulation of materials and the experience of process. The student will investigate sources, develop the ability to conceptualize and apply three-dimensional (sculptural) design principles to create solutions to assigned problems. No text. Small materials fee. Pre-requisite: None

#### ART-168 1.00

### Introduction to Ceramics

This course is designed as an introduction to techniques and practices in Ceramics. Students will experiment with wheel throwing and various hand building processes. Possibilities include coil, slab, pinch and extruded forms. Materials fee. No textbook. No prerequisites. Repeatable for credit.

#### ART-173 3.00

### Ceramics

This course will introduce the basic methods of designing, forming, glazing and firing clay. You will develop a knowledge of good design as it relates to both function and expression. Using the techniques of coil, slab, pinch and wheel, students will achieve an understanding of the historic and cultural significance of this art form. No text. Small materials fee. Pre-requisite: none

### ART-174 3.00

#### Ceramics II

Ceramics II is a continuation of Ceramics with an increased emphasis on skill development in handbuilding techniques and proficiency on the potter's wheel. Students will begin to concentrate on developing a personal style and a more complete understanding of the contemporary ceramics studio. No text. Small materials fee. Pre-requisite: ART-173

### ART-177 3.00 Metalsmithing & Jewelry Making

This course will introduce students to basic metalsmithing and jewelry making techniques. Students will be introduced to a variety of tools and techniques involved with metal forms and jewelry making. Basic metalworking techniques, including: sheet metal fabrication, hammer forming, soldering, riveting, etching, texturing, stone setting, patina. Students will apply design fundamentals creating jewelry and sculptural objects that are functional, and nonfunctional using metals and other materials. Students are expected to comply with safety measures. Emphasis will be on the originality of the piece, craftsmanship, and the creative and appropriate use of materials.

### ART-179 1.00

#### Introduction to Photography

This course is intended as a brief survey of basic camera operations and the development of film and prints. Students will use black and white film and 35mm SLR cameras (students may provide their own camera or check one out from the Art Department). No text. Materials fee. Repeatable for credit. Prerequisite: none

#### ART-184 3.00

### Photography

This course is an introduction to camera selection and handling, the proper choice of lenses, ISO speed selection, shutter speed and aperture selection, photographic filter usage, and important elements of photographic composition. It will include theories of photography and photographic history. Students will be able to check out digital SLR cameras provided by the college, or may bring their own approved photographic equipment. Students will complete specific technique-based assignments and participate in class demonstrations, discussion and critiques. Materials fee. Pre-requisite: None

#### ART-187 3.00

### Creative Photography

This course will use a variety of techniques to explore some of the creative directions that photography can take and emphasizes creative techniques, contemporary ideas, issues, and individual experimentation. Students will experiment with photograms, lith prints, sabattier effects, cliche verre photos, and more. No text. Materials fee. Pre-requisite: ART-184.

### ART-191 1.00 Darkroom Photography

This course will cover basic darkroom (silver-based, including color) concepts and procedures, from developing roll film and making enlargements, to creating full-sized negatives for contact processes. No Text. Materials fee. Pre-requisite: ART-184 Photography

### ART-203 3.00

#### Art History I

This is an introductory course to the painting, sculpture, and architecture of the Western World from the Stone Age to the Gothic period. You will study the development of regional and personal styles, and the social contexts for which art objects have been created. Pre-requisite: none

### ART-204 3.00 Art History II

This is an introductory course to the painting, sculpture, and architecture of the Western World from the "Dawn of Individualism" in the 14th century to the Contemporary period. Students will study the development of regional and personal styles, and the social contexts for which art objects have been created Pre-requisite: none

### ART-210

#### 3.00 Museum Studiesý

This course provides a behind-the-scenes view of museums from the people who are actively involved in their operation. Students learn about the history and objectives of various types of museums (art, natural history, science, historical) through panel discussions that involve museum directors, curators, conservators, collection managers, and exhibit designers. Coursework will provide students with an opportunity to continue inquiry and creative work in art history, education, and community arts. Students will learn about special exhibitions and the museum's collection through gallery talks, lectures, and studio programming. Students will explore ways in which to work with intergenerational learners. Students will complete various tasks related to museum initiatives. Students will collaborate with industry experts in assisting is daily museum operations, taking part in special projects, and research opportunities. Students are expected to not only gain valuable skill sets and learn first-hand of workplace interactions, but also gain further insight into the professions of museums as an educational institution.

## ART-295

### Portfolio Preparation & Development

This course is designed to prepare students to professional present art work and is targeted to students who are preparing to transfer into a fouryear art program or those ready to enter the work force. Students who enroll in this course will learn to prepare and to present these portfolios. No text. Repeatable for credit. Pre-requisite: none

### ART-929

#### 2.00 Individual Projects

1, 2, 3, or 4 credit hours Highly motivated students may wish to work intensively on a creative or research project. The student should possess the necessary background for such works and should initiate an application for such study. A student must obtain written permission from the supervising staff member to enroll in this course.

#### ART-932

#### 1.00

### Internship

This course is designed to give students an opportunity to work directly in their community exploring their field of study in a meaningful and structured way. Students will, with faculty input, develop a proposal to work in an art setting that will benefit the student in a specific way. No text. Repeatable for credit. Pre-requisite: none

### ART-949

### 1.00

## **Special Topics**

1,2,3,or 4 credit hours. This course, offered usually on a limited basis, provides an in-depth study on a topic of general interest pertaining to this department.

### **AMERICAN SIGN LANGUAGE**

ASL-131

### 3.00

### American Sign Language I

This course is designed to provide an introduction to the various systems of manual communications used with deaf and hard of hearing individuals and others with communication disabilities. The primary focus of the course is to develop a core vocabulary, syntax, fingerspelling, and grammatical non-manual signals, providing a foudation for the subsequent acquisition of skills in American Sign Language. Introduces cultural knowledge and increases understanding of the deaf community.

### ASL-161 3.00

### American Sign Language II

This course continues to explore the various systems of manual communications used with deaf and hard of hearing individuals and others with communication disabilities. This course builds on the foundations in Sign Language I for the acquisition of skills in American Sign Language. Building on the fundamentals of American Sign Language (ASL) used by the deaf community, this course continues development of basic vocabulary, syntax, fingerspelling, and grammatical non-manual signs. Focuses on communicative competence. Develops gestural skills as a foundation for ASL enhancement. This course continues to explore the culture and knowledge of the deaf community. Prerequisite ASL-131 with a "C" grade or better.

### ASL-949 3.00 **Special Topics**

This course, offered usually on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### **AUTOMATION TECH AND ROBOTICS** ATR-253

3.00

### **Robotic Programming**

This course introduces students to the terminology, movements, & the physical construction of the robot and the applications for which they are used. Basic robot programming is studied as well as hands-on programming laboratory activities.

### ATR-265 3.00

### **Robotics and Automation**

This course establishes a firm foundation in Industrial Robotics. The major electronics and mechanics of common robots will be covered. Robot types, typical applications, cell structure, and end-of-arm tooling will be presented as well as programming multi-axis robots in a labroatory setting.

### ATR-270 2.00 Vision Systems

This course introduces students to sensors and cameras used to control industrial robots in an automated manufacturing setting. Students will be introduced to vision system technology using up-todate methods to select, identify, and install cameras, proximity sensors, and other solid state components.

### AUTOMOTIVE TECHNOLOGY

AUT-108 3.00

### Introduction Transportation Technology

This introductory course provides an introduction to the many facets of the automotive industry, to include: careers affecting the automotive industry, environmental concerns affecting the automotive industry, basic automotive hand tools, specialty tools, precision measuring tools, power tools and shop equipment, using service and shop manuals, and shop safety.

### AUT-117 1.50

### Automotive Lab 1A

This course provides a review and analysis of the many facets of the Automotive Industry. To include established diagnostic procedures and routines, environmental concerns affecting the automotive industry; proper utilization of specialty tools, precision measuring tools, and shop equipment; utilization of service and shop manuals, and shop safety. This course will concentrate on reviewing the service areas in the automotive technology field to include operating in a simulated shop environment.

### AUT-118 1.50

### Automotive Lab 1B

This course provides a review and analysis of the many facets of the Automotive Industry. To include established diagnostic procedures and routines, environmental concerns affecting the automotive industry; proper utilization of specialty tools, precision measuring tools, and shop equipment; utilization of service and shop manuals, and shop safety. This course will concentrate on reviewing the service areas in the automotive technology field to include operating in a simulated shop environment.

#### AUT-121 1.00

### Small Engines

This course will consist of classroom and lab instruction covering the theory of operation, disassembly, and reassembly of a one cylinder internal combustion gasoline engine. The engines will be operationally tested prior to disassembly and after reassembly.

### AUT-130 1.00

### Auto Maintenance/Inspection

This introductory course provides an introduction to the many facets of the automotive industry, to include: careers affecting the automotive industry, environmental concerns affecting the automotive industry, basic automotive hand tools, shop equipment, using service and shop manuals, and shop safety. Lab exercises will include but not limited to the following: Vehicle inspections, brake service, tire repair, engine tune-up, and fluid and filter replacement.

### AUT-164

### 4.00

### Automotive Engine Repair

This course will consist of classroom and lab instruction covering the theory of operation, disassembly, measurement, and reassembly of internal combustion gasoline and diesel power plants. When possible, power plants will be operationally tested prior to disassembly and after assembly.

#### AUT-172 2.00

### Adv. Engine Repair

This course provides an in-depth analysis of gasoline engine to include diagnosis of head gaskets, timing chains/belts, valve adjustments, engine noises, and on car internal engine diagnosis.

### AUT-205

### 5.00

### Automatic Transmissions

This course covers automatic transmission/ transaxle theory and repair. Students will receive classroom and lab instruction on the inspection, disassembly, reassemble, and operational testing of the automotive transmission. This course also covers an in-depth analysis of computer controlled transmissions and transaxles.

#### AUT-304 4.00

### Manual Transmission & Dr. Axles

This course covers manual transmissions, transaxles, transfer case, four wheel drive systems, and rear axle theory and repair. Students will receive classroom and lab instruction on the inspection, disassembly, reassembly and operational testing of the automotive transmission.

#### AUT-404 4.00

### Auto Steering & Suspension

This course will provide an in-depth analysis of operation and service of automotive chassis and suspension systems. Emphasis will be placed on the principles of steering components, steering geometry, inspection and replacement of components, and the principles of two and four wheel alignment. Students will learn the inspection of steering and suspension components, steering geometry and adjustment procedures.

### AUT-503

### 3.00

### Automotive Brake Systems

The course covers the latest procedures of inspecting, measuring, diagnosing, and the repairing of drum and disc brakes. Classroom and lab instruction will be utilized to teach students the latest procedure for inspecting, measuring, diagnosing and repairing the modern brake systems in use today.

### AUT-538

### 1.00

### Advanced Brakes Systems

Students will learn in-depth analysis of automotive brake systems used in today's vehicles to include anti-lock brakes, traction control, and stability control. Students will also be instructed on the theory and operation of wheel bearings.

#### AUT-610 4.00

### Automotive Electrical I

This introductory course covers basic electronic theory and utilization of electrical measuring instruments. Emphasis will be placed on the application of Ohm's Law and the proper utilization of electronic test equipment including instrument selection, interpretation of results, and maintenance of equipment. Students will receive classroom and lab instruction on the diagnosis and repair of batteries, starting and charging systems.

### AUT-654 4.00

### Automotive Advanced Electrical

This course will provide an in-depth analysis of the automotive electrical systems utilized in the modern automobile. Students will receive classroom and lab instruction on the electrical theories and its application in instrumentation, accessories, air bag systems, and hybrid electrical systems.

### AUT-656

#### 4.00 Automotive Electrical II

This course covers electrical and electronics systems and its application in the modern automobile. Students will receive classroom and lab instruction on electrical theories, principles, and its use in the automobile. Electrical components necessary for the operation of the automobile will be disassembled, tested, reassembled, and operationally tested. Emphasis will be made on reading wire diagrams, understanding relays and modules, voltage drops, and the lighting of the vehicle.

#### AUT-658 3.00 Auto Electrical II

#### This course covers electrical and electronics systems and their application in the modern automobile. Students will receive classroom and lab instruction on electrical theories, principles, and its use in the automobile. Electrical components necessary for the operation of the automobile will be disassembled, tested, reassembled, and operationally tested. Emphasis will be made on reading wire diagrams, understanding relays and modules, voltage drops, and the lighting of the vehicle.

### AUT-659 3.00

### **Advanced Electricity**

This course will provide an in-depth analysis of the automotive electrical systems utilized in the modern automobile. Students will receive classroom and lab instruction on the electrical theories and its application in instrumentation, accessories, air bag systems, and hybrid electrical systems.

#### AUT-703 3.00

### Automotive Heating and Air Conditioning

This course will place emphasis on the principles of air conditioning including theory of operation, maintenance, diagnosis, repair, and Freon recovery. Students will receive instruction on servicing air conditioning systems including system charging, operational testing, troubleshooting, repair and environmental concerns.

#### AUT-704 4.00

### Automotive Air Conditioning

This course will place emphasis on the principles of heating and air conditioning including theory of operation, maintenance, diagnosis, repair, and Freon recovery. Students will receive instruction on servicing heating and air conditioning systems including system charging, operational testing, troubleshooting, repair, and environmental concerns.

### AUT-801 4.00 Engine Performance

This course is an overview of the Engines, Electrical II, Ignition, and Fuel classes. Students will review theories, operation, and test procedures in engines, ignitions, fuel systems, computer controlled engine controls, and emission control systems. Students will be instructed in new diagnostic procedures and have to diagnose vehicles with engine, ignition, emission, and fuel related problems.

### AUT-811 4.00

### Auto Engine Performance II

This course will provide an in-depth analysis of the various electrical systems utilized in the modern automobile. Students will receive classroom and lab instruction on electrical theories and its application to the computer controlled systems. Emphasis will be placed on computer controlled engine controls, emission control systems, computer networking/communications, and the use of automotive scan tools.

#### AUT-828 4.00

### Automotive Ignition Systems

This course covers automotive ignition system theory, diagnosis, and repair. Students will receive classroom and lab instruction on theory, diagnosis, and repair of ignition systems. Students will do hands on testing on the theory and operation of ignition system components.

### AUT-831 3.00

### Automotive Diesel and Hybrid Systems

This course will provide an in-depth analysis of the various electrical, mechanical, and fuel systems utilized in the modern automotive diesel and hybrid vehicles.

#### AUT-835 4.00

### Auto Fuel Systems

This course covers automotive fuel systems theory, diagnosis, and repair of electronic fuel injection systems. Students will receive classroom and lab instruction on the theory, diagnosis, and repair of electronic fuel injection systems. Students will be tested on the theory and operation of fuel injection systems.

#### AUT-856 1.00

### Automotive Scan Tools

This is an introductory class designed to educate automotive students on the importance and use of automotive scan tools. Students will demonstrate the use of the most common scan tools used in the industry at this time.

### AUT-879 1.00

### Automotive Lab I

This course provides a review and analysis of the many facets of the Automotive Industry. To include established diagnostic procedures and routines, environmental concerns affecting the automotive industry; proper utilization of specialty tools, precision measuring tools, and shop equipment; utilization of service and shop manuals, and shop safety. This course will concentrate on reviewing the service areas in the automotive technology field to include operating in a simulated shop environment.

### AUT-882 3.00 Automotive Lab II

This course provides an in-depth review and analysis of the many facets of the Automotive Industry. To include established diagnostic procedures and routines, environmental concerns affecting the automotive industry; proper utilization of specialty tools, precision measuring tools, and shop equipment; utilization of service and shop manuals, and shop safety. This course will concentrate on reviewing the eight specific service areas in the automotive technology field to include operating in a simulated shop environment.

### AUT-949

#### 3.00 Spec Top: Automotive

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### **BUSINESS COMPUTER APPLICATION**

BCA-122 1.00

### Basic Word Processing

This course is an introductory word processing course. Students will learn the basic features of Word that include creating, editing, and formatting documents.

### BCA-124

#### 1.50 Word

This course will assist students in learning word processing from concept to comprehension. The primary goal is to instill confidence, build the skills and insight necessary to master the software application, develop a basic understanding of the concepts behind each task, and comprehend how different applications are often used interactively to complete a variety of tasks. Familiarity with the keyboard is strongly recommended.

### BCA-134 3.00

### Word Processing

This course will assist students in learning word processing from concept to comprehension. The primary goal is to instill confidence, build the skills and insight necessary to master the software application, develop a basic understanding of the concepts behind each task, and comprehend how different applications are often used interactively to complete a variety of tasks. Familiarity with the keyboard is strongly recommended.

### BCA-143

### 1.50

### Spreadsheets

This course is an intensive study of speadsheets. Prerequisite CSC 110 Introduction to Computers, equivalent, or permission of instructor.

#### BCA-146 1.00

### Basic Spreadsheets

This course is an introductory spreadsheets course. Students will learn the basic features of Excel that include creating, editing, formatting documents, and working with charts.

#### BCA-162 1.50 Access

This course is an intensive study of database management systems Prerequisite CSC 110 Introduction to Computers, equivalent, or permission of instructor.

### BCA-164 1.00

### Basic Databases

This course is an introductory database course. Students will learn the basic features of Access that include opening a database, using tables and gueries, using forms, and using report documents.

#### BCA-174 1.00

### **Basic Presentation Software**

This course is an introductory presentation course. Students will learn the basic features of PowerPoint that include creating, modifying, and enhancing presentations.

### BCA-185

### 3.00

### **Beginning Webpage Development**

This course is for students who are interested in learning the fundamentals of web page creation using Microsoft FrontPage as a web editor to construct and maintain websites.

### BCA-193 0.50

#### **Computer Concepts**

Computer Concepts is intended for those students who are beginning or intermediate computer users. This course provides students the opportunity to navigate in the Windows environment; to utilize the Internet to research topics and communicate via electronic-mail; to explore application software; to explore graphics, sound, and video; and to purchase and/or upgrade a personal computer.

#### BCA-212 3.00

### Intro to Computer Business App

This course is an intensive study of spreadsheets and database management systems. Prerequisite CSC-110 Introduction to Computers, equivalent, or permission of instructor.

#### BCA-251 3.00 Publisher

This course introduces students to desktop publishing by having them create newsletters, brochures, e-mail letters, business forms and tables using Microsoft Publisher 2003. Students will also learn creative ways to use color schemes, textwrapping, clip-art and photographs throughout their projects.

#### BCA-252 3.00

### Access for Business Applications

This course will assist students in learning databases from concept to comprehension. Students will learn the features of Access that include managing the access environment, building tables, building forms, creating and managing queries, and designing reports. Students will prepare for certification in Microsoft Access using a textbook, practice exercises, projects, tutorials, and practice exams designed to simulate the certification process. Iowa Central is a Microsoft Office User Specialist Certification testing center.

### BCA-254 3.00 Excel for Business Applications

This course will assist students in learning spreadsheets from concept to comprehension. Students will learn the features of Excel that include managing the worksheet environment, creating cell data, formatting cells and worksheets, managing worksheets and workbooks, applying formulas and functions, presenting data visually, sharing worksheet data with other users, analyzing and organizing data, and working with macros and forms. Students will prepare for certification in Microsoft Excel using a textbook, practice exercises, projects, tutorials, and practice exams designed to simulate the certification process. Iowa Central is a Microsoft Office User Specialist Certification testing center.

### BCA-281 1.00

### Intermediate Word

This course is an intermediate word processing course. Students will learn the features of Word that include graphics, web pages, mail merge, styles and templates, multi-page documents, and collaborating on documents. This course is offered in the Flexlab.

### BCA-282 1.00

### Intermediate Excel

This is an intermediate spreadsheets course. Students will learn the features of Excel that include preparing worksheets for the Web, automating worksheet tasks, creating and analyzing lists, enhancing charts and worksheets, and setting up shared workbooks. This course is offered in the Flexlab.

### BCA-283 1.00

### Intermediate Access

This course is an intermediate database course. Students will learn the features of Access that include creating multiple tab queries, enhancing forms, analyzing data with reports, importing and exporting data, analyzing data design, and creating advanced queries. Prerequisite: CSC 110 or BCA 164 or instructor approval.

#### BCA-284 1.00 Advanced Powerpoint

This course is an advanced presentation course. Students will learn the features of PowerPoint that include enhancing charts; embedding and linking objects and hyperlinks; customizing a slide show; publishing, packaging, and broadcasting a presentation. This course is offered in the Flexlab.

### BIOLOGY

BIO-102

#### 3.00 Introductory Biology

An introduction to the science of biology. This course is designed for students who are not majoring in biology or health related fields. Topics include scientific method, diversity of life, genetics, ecology and evolution. This course satisfies a general education requirement in the Math/Science area. Three hours lecture.

### BIO-103 1.00

### Introductory Biology Lab

This is an introductory laboratory in biology. Basic biological principles and theories will be used to investigate the natural world. Students will learn to plan, conduct, analyze, and interpret simple experiments in biology. Critical thinking will be a major emphasis throughout the lab. This course satisfies a general education requirement in the Math/Science area. Two hours lab. Prerequisite/ Co-requisite: BIO-102 Introductory Biology or concurrent enrollment

### BIO-112 4.00

### General Biology I

The first of a two-semester sequence that introduces students to all major concepts within the scope of modern biology. This course is intended for students majoring in the biological sciences or related pre-professional programs (pre-medicine, pre-dentistry, etc.). Topics covered include cell structure and function, metabolism, and the biology of plants and animals. Laboratory exercises provide hands-on experiences that reinforce the lecture material. Three hours lecture, two hours lab.

#### BIO-113 4.00 Gen Biology II

The second of a two-semester sequence that introduces students to all major concepts within the scope of modern biology. This course is intended for students majoring in the biological sciences or related pre-professional programs (pre-medicine, pre-dentistry, etc.). Topics covered include genetics, ecology, diversity and evolution. Laboratory exercises provide hands-on experiences that reinforce the lecture material. Three hours lecture, two hours lab. Prerequisite: BIO-112 with a "C" grade or better

### BIO-125

### 4.00 Plant Biology

This course is an introduction to the theories and conceptual schemes of modern plant biology. It includes the structure and function of plant organs and tissues, phylogeny, cell biology, reproduction, and a survey of the plant kingdom. In addition, the function of plant hormones and photosynthetic processes are emphasized. This course is designed for students who plan to specialize in some field of biology and for students who need botany in their pre-professional training. Three hours lecture, two hours lab.

### BIO-130 4.00

### Animal Biology

This course is an introduction to the facts and principles of modern animal biology. It includes a review of the molecular basis of life and the organization of cells and tissues and interrelationships of structure and function in living systems as evidenced by the major animal phyla. The course is designed for students who plan to specialize in some field of biology and for students who need zoology in their pre-professional training. Three hours lecture, two hours lab.

BIO-151 3.00 Nutrition

The principles of human nutrition are studied in this course. This involves the metabolism of carbohydrates, lipids, and proteins. A study of vitamins, minerals, and water is also included. Emphasis is placed on proper nutrition during adulthood and proper diet in reference to disease. It is strongly recommended that BIO-112 General Biology I, BIO-168 Human Anatomy and Physiology I w/Lab, or equivalent precede this course. Three hours lecture.

#### BIO-163 4.00

### **Essentials of Anatomy and Physiology**

This course is a study of the anatomy and physiology of human cells, tissues, and membranes, followed by a comprehensive study of the skeletal, muscular, circulatory, respiratory, nervous, digestive, urinary, endocrine and reproductive systems. This course is not equivalent to BIO-168 Human Anatomy and Physiology I w/Lab. Three hours lecture, two hours lab.

#### BIO-168 4.00

#### Human Anatomy & Physiology I w/Lab

A study of the structure and function of the human body. This course is the first course of a two-semester sequence. The study begins at the molecular and cellular level and proceeds through the integumentary system, skeletal system, muscular system, the central, and peripheral and autonomic nervous systems. At least one year of high school biology or chemistry or the equivalent is recommended. Three hours lecture, two hours lab.

#### BIO-173 4.00

### Human Anatomy & Physiology II w/Lab

The second course in a two-semester sequence. The study continues with the senses, endocrine system, blood and cardiovascular system, lymphatic system and immunity, respiratory, digestive, urinary, and the reproductive systems. Three hours lecture, two hours lab. Prerequisite: BIO-168 with a "C" grade or better

### BIO-186 4.00 Microbiology

This is a study of microorganisms with emphasis on bacteria and viruses. An overview of fungi, protozoan and metazoan parasites is also included. The course also covers morphology, physiology, genetics, immunity, distribution of microbes, culturing techniques, identification, control, disease and disease resistance. It is designed for biology majors and others that require a general microbiology course. It is strongly recommended that BIO-112 General Biology I, BIO-163 Essentials of Anatomy and Physiology or BIO-168 Human Anatomy and Physiology I w/Lab or equivalent precede this course. Three hours lecture, two hours lab.

#### BIO-948 1.00 Special Projects

This course is open to students showing satisfactory preparation in a particular area of interest. Involves individual topic, conferences and preparation of reports. Designed to meet the needs of students wishing to study a selected topic in depth. Permission of the instructor with whom the student wishes to work is required.

#### BIO-949 1.00 Special Te

### **Special Topics**

This course, offered usually on a one-time basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### BIOTECHNOLOGY

#### BPT-113 3.00

### Process Instrumentation

Instrumentation, control loops, and process control systems are presented in class and labs, to include process control loop training, process variables, analog and discrete signals, calibration errors, flow process and measurement, and temperature and pressure measurement.

#### BPT-120 3.00

#### Molecular and Cellular Biology

This is a study of the molecular structures and processes that underlie cellular functions. Topics include DNA, RNA, and protein synthesis, methods of isolation and purification of biological molecules, and relevant principles of microbiology, immunology, virology, and recombinant DNA technology. Offered alternating years during the fall semester. Prerequisite/Co-requisite: BIO-112 General Biology I or BIO-102 Introductory Biology and BIO-103 Introductory Biology Lab, CHM-165 General Chemistry I, or CHM-110 Introduction to Chemistry & CHM-111 Introduction to Chemistry Lab

#### BPT-123 3.00

#### Ethanol and Biodiesel Processing

The ethanol and biodiesel process fundamentals course will provide students with an overview of the biodiesel and ethanol production process from feedstock to finished product. The student will understand the biochemical and molecular mechanisms that produce biofuels and will be introduced to the equipment and process controls associated with industrial biodiesel and ethanol production. An emphasis will be placed on the physical processes and variables that affect the efficiency of the production process and the resultant fuel quality. Prerequisites/Co-requisites: BPT-162 Introduction to Biotechnology and BPT-163 Introduction to Biotechnology Lab.

#### BPT-129 3.00

### **Distillation and Evaporation Theory**

This is an introduction to the fundamentals of distillation. Topics will include the basic principles behind the distillation of mixed composition solutions, the relationships between pressure, temperature, boiling point and vapor composition, and the construction and function of a basic distillation column. The laboratory portion of the course will provide hands-on experiences with the distillation of solutions under various conditions.

### BPT-134

#### 3.00

### **Energy and the Environment**

This is an introduction to environmental science with an emphasis on renewable and nonrenewable energy resources. Topics will include the distribution, availability, patterns of use, and environmental impacts of energy resources. Relative efficiencies, political, and economic impacts on energy will be evaluated. Other topics will include human impacts on the environment, management of environmental systems, and an exploration of ways in which biotechnology impacts the environment.

#### BPT-136 4.00 Applied Biock

### Applied Biochemistry I

A survey of general biochemistry with an emphasis on the biochemical processes employed by various organisms in the biofuels and sustainable energy disciplines. Acid-base chemistry, enzyme kinetics, and the general properties of carbohydrates, amino acids, lipids and nucleic acids will be discussed. Laboratory exercises will demonstrate the biochemical properties of biomolecules and introduce the student to the batch preparation of biofuels.

### BPT-137 4.00

### Applied Biochemistry II

A survey of general biochemistry with an emphasis on the biochemical processes employed by various organisms in the biofuels and sustainable energy disciplines. Metabolism of carbohydrates, amino acids, lipids and nucleic acids, with an emphasis on ethanolic fermentation and lipid biosynthesis as it relates to biodiesel feedstock will be discussed. Additionally, the student will be introduced to the principles of genetics, gene regulation, and recominant DNA techniques. Laboratory exercises will include an in-depth exploration of the American Society for Testing and Manufacturing (ASTM)approved analytical testing methods for the composition, purity, and physical properties of biofuels. Prerequisite: BPT-136 Applied Biochemistry I

### BPT-148

### 3.00

### Biotechnology Methods I

This is an introduction to commonly utilized laboratory equipment and methods. Topics include media and solution preparation, instrument care and calibration, laboratory mathematics, record keeping, GMP/GLP regulations, and methods for isolating and purifying important biological molecules. This class will provide students with the background necessary for subsequent Biotechnology courses. Prerequisite: High school algebra or ACT math score 20 or COMPASS math score of P-64. One semester high school biology and chemistry or concurrent enrollment is recommended. Concurrent enrollment in BPT-149 Biotechnology Methods I Lab is highly recommended.

### BPT-149

### 1.00

#### **Biotechnology Methods I Lab**

This laboratory introduces commonly utilized laboratory equipment and methods. Knowledge from BPT-148 will be applied as students prepare media and solutions, utilize laboratory mathematics, maintain laboratory notebooks, and isolate and purify important biological molecules. This class will provide students with the background necessary for subsequent Biotechnology courses. Prerequisite/ Co-requisite: BPT-148 Biotechnology Methods I or concurrent enrollment.

### BPT-152

#### 4.00 Biotechnology Methods II

This course is a continuation of BPT-148 & 149 Biotechnology Methods I. Topics covered in BPT-148 & 149 are continued in more depth and students will work independently on several biotechnology-related projects. These projects will cover a wide range of topics including DNA and applied enzymology for biofuels, ELIZA techniques, Polymerase Chain Reaction (PCR), and sub-cloning of DNA fragments. Prerequisite: BPT-148 & 149 Biotechnology Methods I & Lab.

### BPT-154 4.00 Biotechnology Methods III

This course is a continuation of BPT-152, Biotechnology Methods 2. Students will continue to work indpendently on projects covering a variety of topics including protein extraction followed by (PAGE), and immunological detection,(isoelectric focusing followed by PAGE; 2D-PAGE),mammalian tissue culture, and chromatography techniques including gas chromatography and high performance liquid chromatography. Independent study component where students will create a poster and discuss a topic of their choosing. Prerequisite: BPT-152 Biotechnology Methods 2

#### BPT-162 2.00

#### Introduction to Biotechnology

An introductory course focusing on the fields of biotechnology, biofuels technology, and renewable sources of energy. Topics will include an introduction to employment opportunities in the field of biotechnology, basic biology, and biochemistry, lab math skills and an introduction to equipment used in biotechnology. There will also be a brief introduction to the production and refining of biofuels. Prerequisite: High school algebra or ACT math score 20 or COMPASS math score P-64; one semester high school biology and chemistry. Highly recommended to concurrently take with BPT 163 Introduction to Biotechnology Lab.

#### BPT-163 1.00

### Introduction to Biotechnology Lab

An introductory laboratory course focusing on the fields of biotechnology, biofuels technology, and renewable sources of energy. Lab activities include basic laboratory skills, performing titrations, extracting DNA from plant tissue, biodiesel synthesis, ethanol biosynthesis, and more. Prerequisite/Co-requisite: BPT-162 Introduction to Biotechnology or concurrent enrollment.

#### BPT-210 4.00

### Applied Microbiology & Immunology

This is a study of microorganisms with an emphasis on the ones used in industry. The course covers the methods used to cultivate bacteria, nutritional and environmental conditions required to grow bacterial cultures, the physical and chemical ways to control microbial growth, and the industrial cultivation of microbes and microbial products. The second half of this course addresses the immune system and focuses on specific and innate immunity. The chemical attributes and functions of antibodies and antigens are emphasized, as well as the role these chemicals play in immunity and in laboratory assays. The preparation of vaccines and the body's response to vaccination are the final topics. This course is designed for biotechnology majors. It is strongly recommended that BIO-112 General Biology I and BPT-163 Introduction to Biotechnology or BPT-148 Biotech Methods I precede this course. Three hours lecture, one hour lab.

#### BPT-211 3.00 Biomanufacturing

This course provides basic biomanufacturing skills and knowledge required by students planning to work in a biotechnology facility. The materials covered include applied math, technical writing, record keeping and workplace organization. Students will also develop an understanding of technical concepts that include cell culture maintenance, sterilization, aseptic technique, basic laboratory skills and downstream processing of fermentation broth. There is no formal lab but the lecture will be supplemented with handson activities designed to introduce students to laboratory equipment and practices. This course provides 30 contact hours.

#### BPT-220 3.00

### **Biotechnology Workforce Readiness**

This course will include three units. One unit covers job skills and is designed to provide a broad range of professional development opportunities for students. These opportunities will include resume building, interview skills, career specific expectations and professionalism necessary to be successful in a Biotechnology career. A second unit provides an informal survey of the local, state and federal regulatory agencies that are involved with the biotechnology and biofuels manufacturing industries. This unit of the course will include quest lecturers from agency representatives, review of current literature, and open discussion. The third unit covers hazard identification, avoidance, control and prevention, OSHA compliance and regulations, safety and health training, first aid, and CPR. Three hours of lecture.

#### BPT-300 4.00

### Intro to Process Technology

The students in the process control course will be introduced to the industrial process control systems. The students will learn process control that is extensively used in industry and enables mass production of continuous processes such as oil refining, paper manufacturing, chemicals, power plants, and many other industries. The students will also be introduced to all the aspects of systems operations & how process control enables automation, with which a small staff of operating personnel can operate a complex process from a central control room.

#### BPT-305 2.00

### Technical Diagrams

This course will cover the symbols and diagrams commonly used on Piping and Instrumentation Designs (P&ID) and Process Flow Diagrams (PFD). Focus will be on identifying the types of diagrams, identifying instrument symbols and line symbols used on P&ID's, understanding the types of information typically found on a legend, using P&ID to locate components of a system, and reading a PFD to trace the flow paths of a system.

### BPT-310 2.00

#### **Material Balance**

The students in the material balance (also called a mass balance) course will be instructed in how all process systems follow the same principle rule that all the material entering the process system has to be accounted for when exiting the process system. The students will learn the formulas associated with material balance to account for all materials used in the process system. Finally, the students will be instructed in the science of waste water management.

#### BPT-315 3.00 Brocoss Storm

### Process Steam & Heating Sys

The students in the process steam systems class will be taught the principles of boiler operations and boiler control systems. The students will learn about the different components associated with a boiler system such as: steam traps, heat exchangers, low pressure, high pressure, condensate return, heating coils, pumps, and several more components used in the industrial heating process.

### BPT-320 2.00

### Process Cooling Systems

The students in the process cooling systems will learn about the industrial cooling process. The students will gain an understanding of chillers, cooling towers, cooling coils, and several more components used in the industrial cooling process.

#### BPT-325 2.00

### .00

### Emission Control Systems

Introduction to types of pollutants, methods of monitoring and reporting requirements for electrical generating plants, as well as biofuels plants. Methods of controlling pollution and regulatory agencies are covered. Identification of the major sources of pollution, explanation of control devices used to minimize polluting emissions; the importance of reducing emissions, in compliance with State and Federal regulations will be discussed. Regulatory agencies overseeing permitting and enforcement procedures bth state and federal will also be covered.

### BPT-331 3.00 Dcs & Scada Control System

Students in this course will be taught about the wiring methods, data storage, I/o, HMI?s, controllers, hardware and software components associated with DCS (Distributed Control System) & SCADA (Supervisory Control And Data Acquisition) systems.

### BPT-335

2.00

### Basic Fermentation

In this course the student is introduced to fermentation process control, sterilization and fermenter design. Topics include vessel sterilization, media sterilization, automatic control of pH, DO, temperature and defoam addition. The modes of batch, fed-batch and continuous fermentation will be compared. The impact of fermenter design features like height to diameter ratio, sparger design and agitator speed will also be studied. The course will also allow the students to understand the relationship between other unit operations and the fermentation process.

### BPT-340

#### 4.00 Advanced Process Technology

The program focuses on communication skills, team work and quality control, the way all of these tie together to make a quality process technician. With these trades we will work through troubleshooting and safety in multiple areas of the process industry.

#### BPT-932 4.00 Internship

The Biotechnology/Biofuels Technology Internship will allow the student to apply their knowledge gained from classroom instruction in a real-time manufacturing environment. The Internship will be performed with the cooperation of area biotechnology or biofuels manufacturing facilities. Prerequisites: BPT 148 Biotechnology Methods 1; BPT 149 Biotechnology Methods 1 lab; BPT 162 Introduction to Biotechnology; BPT 163 Introduction to Biotechnology lab; BPT 120 Molecular and Cellular Biology; BPT 152 Biotechnology Methods 2.

### **BUSINESS**

BUS-102 3.00

#### Introduction to Business

This survey course explores the various fields within the world of business, how they differ, and how they are interrelated. Topics include business in a global environment, starting and growing your business, management, marketing management, managing technology, and managing financial resources. Students who are interested in a career in business or want to further their knowledge of the business world would benefit from this course.

#### BUS-112 3.00 Business Math

The student applies basic mathematical skills used in personal and business operations. This course includes fractions, decimals, percents, trade and cash discounts, markups, markdowns, interest, depreciation, investments, insurance, payroll and annuities. Students may receive advanced standing credit by examination.

#### BUS-113 1.50

### Workplace Readiness

This course will present skills needed for entry into the workplace including inquiries, job application letters, resumes, and interviewing skills. Students will utilize Career Ready 101 to supplement their learning, as well as computer applications such as Excel spreadsheets and Word documents, email, and phone etiquette to express themselves in correct, clear, and effective manner.

### BUS-114 3.00

### Workplace Communications

This course presents an introduction to communication for the workplace including inquiries, job application letters, resumes, and interviewing skills. Students will learn types of workplace communications, such as Excel spreadsheets, email, phone etiquette and Word documents. They will also learn and demonstrate their ability to express themselves in correct, clear, and effective oral and written communications. Students will discuss teamwork, conflict resolution, listening skills, and interpersonal relationships.

#### BUS-121 3.00 Business Communication (Business)

Introductory course designed to help you develop and refine the skills necessary to communicate effectively in a professional business environment. The focus will be on communicating clearly, concisely, considerately, and correctly, both orally and in writing. You will learn to plan, compose, and evaluate business documents, including letters, memos, and business reports; to use technology to communicate, including e-mail and discussion boards; and to prepare and deliver oral presentations. The course will also contain an introduction to employment communication, including resume, application letters, and interview skills. Emphasis throughout the course will be placed on intercultural communication and the ethics of communication. Teaching/learning methods will include reading, close analysis of business and professional documents, in-class writing and oral exercises, brief lectures, formal writing assignments, group projects, and examinations.

### BUS-130 3.00

### Intro to Entrepreneurship

Students will have the opportunity to observe business from an entrepreneurial viewpoint. Entrepreneurial drivers, entrepreneurial forces, business plans, customer service, quality, taking ideas to market, and intrapreneurism are also explored.

### BUS-135 3.00

### Mgmt the Entrepreneurial Vent

This course is designed to give entrepreneurs the management skills necessary to maximize the likelihood of success and minimize the chance of failure. Students will be encouraged to interact with successful entrepreneurs and to conduct research outside the classroom.

### BUS-145 3.00

#### Financial Entrepreneurship

This class provides a straightforward practical overview of the business and financial knowledge required to become a successful entrepreneur. It examines the elements of entrepreneurial finance which addresses key questions that challenge entrepreneurs such as how much money can/ should be raised, from whom, what the reasonable valuation of the company is, and how funding should be structured.

### BUS-161 3.00

#### Human Relations

This course introduces students to the importance of people skills and personal strategies needed for anyone working in business today. By focusing on working with others in a business setting coworkers, consumers, and vendors, the students will learn the dynamics occurring at every level of organizations by examining the people, practices, and events that make the world of business what it is today and will be tomorrow.

### BUS-180 3.00 Business Ethics

Many people, faced with their own interests and standards, need reliable guidelines to address the moral implications of ethical & business decisions. This course offers a unique practical approach to learning business ethics and focuses on the relationships among various stakeholders, including individuals, groups, corporations, and nations. Students will study the latest research, current cases, and practical examples to examine the role of ethics in the contemporary business world. Outcomes include real-world ethical dilemmas encountered by managers, implementing a stakeholder analysis, and comprehensive coverage of employee workplace issues such as risk management, preferential hiring, corporate legitimacy, and moral accountability. This course will give students the realistic tools needed to handle complex moral dilemmas in the workplace and the world.

### BUS-185 3.00

### Business Law I

An introduction to the principles of law as they relate to business. The course content includes an introduction to contract law, criminal law, tort law, constitutional law, court systems, anti-trust law, agency law, employment law and labor law. Students may receive credit through CLEP examination.

### BUS-186

### 3.00

### Business Law II

This course emphasizes laws governing sales, commercial paper, secured transactions, bankruptcy, real property interests, leases, the landlord-tenant relationship, partnerships, corporations, personal property and bailments.

#### BUS-241 1.00

### **Developing Prof. & Ethical Practices**

Are real estate agents really unethical? What are the ethical problems facing real estate practitioners today? Can ethics be taught? These are some of the questions addressed in the 15hour program, "Developing Professionalism and Ethical Practices." In addition to meeting Iowa's licensing requirements, this course also satisfies NAR membership renewal requirements.

### BUS-242

### 1.00

### Buying Practices

This course will familiarize the students with buying practices such as qualifying buyers, financing, working with buyers, writing offers and responsibilities and services during closings.

### BUS-243

1.00

### Listing Practices

This course acquaints the student with the proper listing practices for residential real estate. In the course the students will cover: Steps to preparing a Competitive Market Analysis, estimating net proceeds, listing presentations and contracts, marketing and servicing listings, presenting offers and responsibilities and services during closings.

#### BUS-256 4.00 Real Estate Prelicensure

This course is accrediated by the Iowa Real Estate Commission and has been approved for real estate salesperson pre-licensing. Upon successful completition of this course students will be prepared to sit for the Iowa real estet salesperson exam. Students will complete their homework utilizing a required workbook.

### BUS-932 3.00

Internship

Gain valuable work-and-learning experience in an organization under the direction of a faculty member and an employee of a participating firm. This course is for Web, Media, and Graphics Technology majors. This course is to be taken during the summer with the permission of the program coordinator. 120 hours of student work time are required during the internship. Enrollment is contingent upon the availability of appropriate internships.

### BUS-949 3.00

### Special Topics

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### COMPUTER AIDED DRAFTING

CAD-101 3.00

### Introduction to CAD

The student will be introduced to the use of Computer-Aided Drafting software to make drawings of various objects. Students will create and modify drawings, print hard copies, and change the drawing environment to meet task requirements.

## CAD-138

### Virtual Modeling

Students will use computer software to develop three-dimensional digital models for use in graphics applications. Students will learn about working in computer aided design environments, including concepts and techniques of geometry construction and placement, lighting and appearance, and rendering.

### CAD-155 3.00

### **Engineering Graphics I**

This course will introduce the student to the standard industry practices for technical and industrial illustration. Emphasis will be placed on understanding how edges and surfaces are represented using orthographic projection. Students will use computers to create technical drawings of mechanical components.

#### CAD-156 3.00 Engineering Graphics II

Coursework will build on basic skills and focus on using computer-aided design software to develop technical drawings. Topics will include advanced orthographics, auxiliary views, section views, representation of threading, and the application of fits & tolerancing in dimensioning.

### CAD-157 3.00 Engineering Graphics III

Course work will focus on using computer-aided design software to develop technical drawings using advanced view development techniques. Students will study and create advanced sections, secondary auxiliaries, revolutions, and developments. Students will also learn to apply advanced dimensioning and tolerancing.

CAD-158 2.00 Engineering Graphics IV

Students will complete the engineering graphics sequence by examining and applying advanced design modeling and drawing principles to technical drawings.

### CAD-164 2.00

### Solid Modeling I

The student will be introduced to the principles of parametric design using computer aided design software. Students will construct digital models by use of elements of geometry, modeling theory, and parametric workflow. Topics will include sketching, constraining, feature construction, combination modeling methods and mating.

### CAD-166 2.00

### Solid Modeling II

Students will build on basic parametric skills. Students will explore the use of equation modeling, configurations, assembly techniques, sheet metal features, and advanced drawing features.

#### CAD-194 2.00

### Architectural Modeling

Students will use computer software to develop digital representations of architecture and construction. Students will learn about working in computer aided design environments, including concepts and techniques of geometry construction and placement, dimensioning, and media preparation and presentation.

### CAD-198

2.00

### Applied Geometry & Technology

This course will examine the application of geometry in computer graphics. Students will study geometric principles, learn terms and concepts of plane and solid geometry, and apply them in problem solving. Students will also learn how to use calculators, computer algebra systems, and computer graphics software in solving geometry challenges.

#### CAD-217 3.00

### Engineering Mechanics I

This course will introduce students to the basic principles of statics and the mechanics of materials. Students will learn about systems in equilibrium and use diagramming, calculations, and computer-aided design to construct simple systems and analyze them for reactions under various conditions. The physical properties of materials and their reactions to loading will also be covered.

### CAD-218 3.00

### Engineering Mechanics II

Students will build on experience in Mechanics I by exploring dynamics & kinematic analysis. Students will study principles of systems in motion and use diagramming, calculations, and computer-aided design to construct simple mechanisms and analyze them for reactions under various conditions.

#### CAD-230 2.00

### Geometric Dimensioning and Tolerancing

The student will learn the fundamentals of Geometric Dimensioning and Tolerancing, according to ANSI standards. Skill will be developed in both the interpretation and application of Geometric Dimensioning and Tolerancing to engineering drawings.

### CAD-232

#### 2.00 Virtual Modeling II

This is a course that will build on skills from Virtual Modeling I. Students will learn about advanced surfacing methods, contrast and compare modeling paradigms, and learn about file exchange and management. Students will also use lab technology to create output.

#### CAD-275 2.00

### Applied Logical Processes

Students will practice and build on the methods of problem solving. Students will utilize multiple skill sets in the problem solving process to collaboratively and independently identify goals and objectives, plan strategies, and design and execute solutions. Emphasis will be placed on research and development on projects. Students will present results for peer critique and public display.

### CAD-315

#### 2.00 Computational Design

This course is a programming course geared towards students in the various fields of design. Students will learn the methods and concepts involved in programming, and examine how programming is applied in real-world scenarios. Students will then use hands-on lab time to create programming, producing still and animated output.

### CAD-401

#### 3.00 Electrical Cad

The student will be introduced to the use of Computer-Aided Drafting software to make drawings of various electrical objects. Students will create and modify drawings, print hard copies, and change the drawing environment to meet task requirements.

### CAD-949

#### 1.00 Special Topics: Survey of Cad

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### **CHEMISTRY**

CHM-110 3.00

### Introduction to Chemistry

This course is a study of the basic principles of chemistry. Topics include measurements, atoms and molecules, stoichiometry, aqueous systems, gas laws, chemical reactions, equilibria, acids, bases, salts, and nuclear chemistry. A course such as this may be part of the requirements in certain health professions (nursing, dental and physical therapy), home economics, mortuary science, agriculture, forestry, and other related programs. This course is not equivalent to CHM-165 General Chemistry I. This course satisfies a general education requirement in the Math/Science area. Three hours lecture.

#### CHM-111 1.00

### Introduction to Chemistry Lab

This is a two-hour laboratory which accompanies CHM-110 Introduction to Chemistry. This course satisfies a general education requirement in the Math/Science area. Two hours lab. Prerequisite: CHM-110 Introduction to Chemistry or concurrent enrollment or the equivalent

### CHM-130 3.00

### Introduction to Organic and Biochemistry

This course is a study of organic chemistry and biochemistry. Topics in the course include structure, nomenclature, nature and reactions of the functional groups, stereochemistry, carbohydrates, proteins, lipids, nucleic acids, and metabolism. Three hours lecture. Prerequisite: CHM-110 Introduction to Chemistry or equivalent

### CHM-131

1.00

### Intro to Organic and Biochemistry Lab

This is a two-hour laboratory which accompanies CHM-130 Introduction to Organic and Biochemistry. Prerequisite: CHM-130 Introduction to Organic and Biochemistry or concurrent enrollment or the equivalent.

### CHM-165 4.00

### General Chemistry I

This course is a study of the following topics: stoichiometry, atomic structure, solutions, acidsbases, and oxidation-reduction. This course is intended for science, engineering, pre-vet, predental, and pre-optometry majors. This course satisfies a general education requirement in the Math/Science area. Three hours lecture, three hours lab. Prerequisite: MAT-063 Elementary Algebra or equivalent and high school chemistry

### CHM-175 4.00 General Chemistry II

### This course is a continuation of CHM-165 General Chemistry I with consideration of states of matter,

solutions, acids bases, reaction rates, equilibrium, thermodynamics, and electrochemistry. Three hours lecture, three hours lab. Prerequisite: CHM-165 with a "C" grade or better

### CHM-261 4.00 Organic Chemistry I

This course is a study of the principles of organic chemistry including structure, bonding, nomenclature, reaction mechanisms, synthesis, and spectroscopy of common organic compounds. This course along with CHM-271 Organic Chemistry Il are designed to satisfy the one year of organic chemistry required by most medical schools. Three hours lecture, three hours lab. Prerequisite: CHM-175 with a "C grade or better

### CHM-271 4.00

### Organic Chemistry II

This course is a continuation of CHM-261 Organic Chemistry I. The structure, nomenclature, and chemistry of aromatic compounds and various functional groups, carbohydrates, lipids and proteins are considered. Bonding, synthesis, reaction mechanisms and spectroscopy are also emphasized. Three hours lecture, three hours lab. Prerequisite: CHM-261 with a "C" grade or better

### CHM-948

#### 1.00 Special Projects

This course is open to students showing satisfactory preparation in a particular area of interest. Involves individual topic, conferences and preparation of reports. Designed to meet the needs of students wishing to study a selected topic in depth. Permission of the department chair and the staff member with whom the student wishes to work is required.

### CHM-949

#### 1.00

### **Special Topics**

This course, offered usually on a one-time basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### CHEMICAL TECHNOLOGY CHT-105 4.00

### Applied Chemistry

This course will provide students with an understanding of chemistry as it applies to industrial processes, as well as an understanding of some basic concepts that are relevant in the industrial world.

### **COMPUTER PROGRAMMING**

#### CIS-153 4 00

### Data Structures

This course is a continuation of CIS-162 C++. It deals with the implementation of user-defined data structures including stacks, queues, linked lists, trees, heaps, and graphs. Object oriented features of C++ and recursion are used to help implement these data structures. Three hours lecture, two hours lab. Prerequisite: CIS-162 C++

### CIS-162

### 4.00

### C++

This is an introductory course in C++ which emphasizes the design and development of structured programs. All standard C++ topics are considered including input/output functions, logical constructs of sequence, selection and repetition, user-defined functions, parameter passing by value and by reference, and the use of simple variables, arrays and structures. Three hours lecture, two hours lab. Pre-requisite: MAT-127 or equivalant with "C" grade or better or concurrent enrollment in MAT-127.

**CIS-172** 4.00 Java

This is an introductory course in Java programming. Java programs have uses in business, industry, and Web page design. This course is designed to guide the student in developing applications and applets. The course introduces the student to object-oriented programming concepts along with the Java syntax needed to implement them. Three hours lecture, two hours lab.

### CIS-194 3.00

### Layout Design III

Students take design and composition to the next level building on earlier Layout Design classes. Students work on design projects from concept to finished product to gain insights and experience while exploring the challenges of designing posters, logos, magazine covers and more. Prerequisite: Layout Design 1 and 2 or instructor permission

#### CIS-195 3.00

### Layout Design Projects

This course is designed to immerse students in project based work - doing creative design while improving productivity and building portfolio-ready compositions. Prerequisites: Layout 1, 2, & 3 or instructor permission.

### **CIS-253**

#### 3.00 **HTML Basics**

HTML is the language of the Web. While not readily visible, this system of tags enables the display of graphics, text, and sound on the World Wide Web. Become skilled at the core concepts of HTML and create a project site from scratch. Upload files to a host server so people can view the files as pages on the Internet.

### CIS-254

#### 2.00 **Basic Multimedia Design**

Discover the principles of design that are essential to guide the viewers eye in every visual communication piece whether in print or on the Web. Gain

knowledge of typography that enables the creation of interesting, provocative and effective type combinations. Course projects build on how to effectively place elements and unify a design work.

### CIS-255

3.00

### Web Graphics

Get a thorough grounding in Adobe Photoshop and Adobe ImageReady, the must-have digital imaging programs for today's web and print designers. Hands-on projects include working with layers, making selections, incorporating color technique, creating special effects with filters and more. Create complex web graphics such as rollovers and animations.

### **CIS-256**

#### 3.00 Dreamweaver I

Learn to create sophisticated web-sites with Macromedia's Dreamweaver - the preferred HTML editor of professional Web designers. Become skilled in designing sites with advanced layouts by using tables, style sheets, images and more. Go from beginner to intermediate as you create a portfolio-building project Web site.

#### CIS-257 3.00 Web Graphics 2

Students will learn to create original web graphics and interactivity using Macromedial Fireworks. Create valuable web components from simple graphical buttons to complex rollover effects and pop-up menus. Gain skill in optimizing images and exporting to Macromedia Flash and Dreamweaver. Prerequisite: CIS-255 Web Graphics or instructor approval.

### CIS-258 3.00

#### Dreamweaver II

Build on previous knowledge of Dreamweaver and create a dynamic, database-driven Web site. Use Dreamweaver to bind data to a Web page in a totally visual environment. Learn to plan a dynamic web site, create web forms, incorporate a database and define a database connection. Prerequisite: CSI-256 Dreamweaver I or instructor permission.

#### CIS-259 3.00

### Dreamweaver III

This course concentrates on building advanced skill in designing database driven sites with Dreamweaver. Create a portfolio-building project site that displays data and images dynamically. Process a search form and write code to enhance a Web site. Prerequisite: Dreamweaver II CIS-258 or instructor permission.

### CIS-260 3.00

### Web Databases

Learn to create relational databases for use in web applications using Microsoft Access. Make finding, organizing, and presenting data more efficient. Gain skill in creating tables, finding and editing table records. Learn to improve the management of information using queries, forms and reports.

### CIS-261 3.00

### Media Projects

When it comes to internship and job hunting, students want to be armed with original work that illustrates their talent and skills. In this project-based class, instructors work with students to prepare portfolio-level pieces. Pre-requisite: Students must be enrolled in one of the following programs or have instructor permission: Web Technology, Graphics Technology, Media Technology, CAD

### CIS-262 3.00

#### Dreamweaver Projects

Students enrolled in this course will be creating websites using Dreamweaver. Emphasis is on the pre-production, production and post-production process.

### CIS-265 3.00 Photshop 1

Get a thorough grounding in Adobe Photoshop, the must-have digital imaging program for today's web and print designers. Hands-on projects include working with layers, making selections, incorporating color technique, creating special effects with filters and more.

### CIS-266 3.00 Photoshop 2

This class is designed for Photoshop users who want to broaden their understanding of the program's features. Students will develop skill in intermediate and advanced image creation and manipulation including special layers functions, filters and creating images for the web.

### CIS-277 3.00

### Portfolio 1

When it comes to internship and job hunting, students want to be armed with original work that illustrates their talent and skills. In this project-based class, instructors work with students to prepare portfolio-level pieces.

### CIS-278 3.00

### Portfolio 2

This course offers students practical support in portfolio completion for application to the work force or a higher education institution. Students will have the opportunity to present their portfolio to design professionals in the industry to articulate their design thinking and defend their design decisions.

### CIS-604

#### 3.00 Visual Basic

This is an introductory course in Visual Basic in which applications are developed that use the graphical

## user interface of Windows.

#### CIS-612 3.00

### Advanced Visual Basic

This is a second course in Visual Basic Computer programming that will extend the coverage of the Visual Basic programming system that was covered in the first course of Visual Basic computer programming. Additional topics of coverage will include database access, management and data handling techniques, array development and utilization, developing Object-Oriented programs, SQL's, Drag-and-Drop concepts, and the Visual Basic graphics environment. Prerequisite: CIS-604 Visual Basic

### **CULTURAL STUDIES**

### CLS-130

#### 3.00 African Cultures

This course is designed to introduce students to the modern history and culture of Africa and examines major themes relating to European conquest and imperialism, the development of the colonial economy, African responses to colonialism and the rise of nationalist movements that eventually achieved independence. Discussions about the post-colonial present, exploring recent socioeconomic transformations, continuities, as well as struggles over political authority, ethnic identity, gender, religion, media, popular culture, and access to resources, will be featured. The course will examine these themes by applying them to case studies of specific African nation-states.

### CLS-141 3.00

### Middle Eastern History & Culture

This course is an introduction to the history and culture of the modern Middle East from the late 18th century to the present. The course briefly surveys the early history of the region, beginning with the origins of Islam, but mainly focuses on the great pre-modern empires, their collapse under European pressures, the renaissance of Middle Eastern culture in the eighteenth and nineteenth centuries, the move toward independent states in the 19th and 20th centuries, and pan-Arabist and Islamist ideologies of the late 20th and early 21st centuries. Considerable attention will be devoted to the region since 1945 and to the problems and promises of the present day. Discussions about the post-colonial present, exploring recent socioeconomic transformations, continuities, as well as struggles over political and religious authority, ethnic identity, gender, religion, the arts and humanities, media, popular culture, and access to resources, will be featured.

#### CLS-150 3.00

### Latin American History & Culture

This course is designed to introduce students to the modern history and culture of Latin America. The course examines major themes relating to European conquest and European/American imperialism, the development of the colonial economy, Latin American responses to colonialism and the rise of nationalist movements that achieved independence and resisted imperialism. Discussions about socioeconomic transformations, continuities, as well as struggles over political authority, ethnic identity, gender, religion, media, popular culture, and access to resources, will be featured. The course will examine these themes by applying them to case studies of specific Latin American nation-states.

CLS-165

#### 3.00 Understanding Cultures: Japan

This course is designed to introduce students to the history and culture of Japan, from the earliest times to the present, with an emphasis on the modern era. The course will examine the cultural unities and diversities, and continuities and discontinuities, which comprise the historical development of Japanese civilization. Topics include anthropology and social change; geography and the environment; philosophy and religion; economic development and commerce; politics and foreign relations; literature and the arts; science and medicine; power and authority; media and popular culture; and gender, ethnicity, and cultural identity. Japan's history cannot be understood in isolation; so the course will examine how Japan's place in the world has changed through the transmission of culture, ideas, and technology from (and to) East Asia and the West, along with occurrences of confrontation, colonialism, imperialism, and war.

#### CLS-167 3.00 **Understanding Cultures: China**

This course is designed to introduce students to the history and culture of China, from the earliest times to the present, with an emphasis on the modern era. The course will examine the cultural unities and diversities, and continuities and discontinuities, which comprise the historical development of Chinese civilization. Topics include anthropology and social change; geography and the environment; philosophy and religion; economic development and commerce; politics and foreign relations; literature and the arts; science and medicine; power and authority; media and popular culture; and gender, ethnicity, and cultural identity. China's history cannot be understood in isolation; so the course will examine how China's place in the world has changed through the transmission of culture, ideas, and technology from (and to) East Asia and the West, along with occurrences of confrontation, colonialism, imperialism, and war.

### CLS-170 3.00

#### **Russian History & Culture**

This course is an introduction to the modern history and culture of Russia and the former Soviet Union. The course is designed to acquaint students with Russian geography, ethnic groups, and religious institutions, as well as with social, political, and economic developments that have combined to produce a constantly evolving Russian nation. The course examines major themes relating to Russian imperialism, communism, the Cold War, and the fall of communism in the Soviet Union and other former Warsaw Pact states in Central Europe. Discussions about the post-communist present, exploring recent socioeconomic transformations, continuities, as well as struggles over political authority, ideology, ethnic identity, gender, religion, media, popular culture, the fine arts, and access to resources, will be featured.

### CLS-181

#### 3.00 American Diversity

What does it mean to be American? The Declaration of Independence states our inalienable rights as "life, liberty, and the pursuit of happiness," but do we really know what this means? Does this concept of rights apply to all Americans? This course will emphasize the American quest for common ground by investigating our cultural roots through history and literature. Students will examine the varied American immigration experiences to find our common bonds. Students will complete a service learning component.

#### CLS-210 3.00

#### **Cultures in Transition**

This course is an interdisciplinary introduction to a world region in cultural transition. Students will explore topics relating to the region's history, social and political institutions, art, music, literature, economy, religion, agriculture, geography, and ecology.

### CLS-949 1.00

### **Special Topics in Cultural Studies**

This course will examine first hand the diversity of another nation. In particular, the students will learn about the history, land, peoples, government, economy, and culture of another country. This class will include a trip during the spring semester. This will be taught as a stand alone course and will not be affiliated with any other course.

### COMMUNICATION

COM-142

#### 3.00 Mass Media Writing

This course introduces students to writing in a professional environment and to the forms of writing for the mass media. These forms include news stories for print and broadcast, advertising copy for print and broadcast, and other types of writing for public relations.

### COM-148 3.00

### Diversity and the Media

Communication professionals are often required to cross borders of cultural identity, race, religion, age, sexual orientation and socio-economic status. Studying race, ethnic, multicultural groups, issues, and cultures from a mass communication perspective is important because your careers will probably require you to work with, portray, and/or represent people of diverse backgrounds. Radio, television, and film producers and writers, broadcast and print journalists, advertising and public relations specialists, teachers, professors, counselors, and general media consumers will all need to understand, communicate with and relate to individuals of diverse backgrounds in our changing nation and world. In an effort to prepare students to embark on the journey of understanding and working in a diverse society, this course will investigate underrepresented audiences through reading academic research on the topic of media and diversity, consuming stories produced by underrepresented groups, and experiencing these theories by way of assignments designed for hands-on learning.

#### COM-150 3.00

### Mass Communications and Society

This course is designed to introduce you to the history, models, theories, concepts and terminology of mass communication, specifically focusing on journalism, advertising and public relations. It will enable you to understand the complex interactions between media and society, and think critically about the ways in which mass media inform our everyday lives. It will introduce you to mass communication theories and concepts to help explain and/or predict causes and effects of mass communication. It will also introduce you to the various careers in mass media to help prepare you for the professions.

### COM-157 1.00

### Newspaper Production

Students on the newspaper staff are to enroll in Newspaper Production if they are not in a journalism class, to earn credit for their work on the newspaper. Students accept and complete assignments for each of the four issues each semester. Assignments vary according to the student's interests and abilities, as well as the newspaper staff's needs.

#### COM-170 3.00 **Crisis Media Management**

This course is designed to provide students with a working knowledge of media crisis management. The course focuses on actions to take and actions to avoid when handling a crisis situation from a communications perspective. Topics will include issues management, risk management, relationship management, crisis planning and preparation, and review of case studies. Finally, students will develop a workable and generic crisis management plan.

### COM-720 1.00

### **Communication in Workplace 1**

This course presents an introduction to written communications for the workplace including inquiries, job application letters, resumes, and memos. Students will learn occupational terminology and communication strategies used in workplace correspondence, as well as conventions for structure and style for both formal and informal types of workplace communications. Students will learn and demonstrate their ability to express themselves in correct, clear, and effective written communications for the workplace. This course meets during the first five weeks of a semester.

### COM-721

### 1.00

### Communication in Workplace 2

This course will enhance the student's communication skills. Daily classroom writing assignments will be tailored to daily industry correspondence. Students' will prepare memos, e-mail messages, and distribution lists. Students will utilize wordprocessors and presentation graphics for classroom demonstrations.

#### COM-947 2.00

### Special Projects

Highly motivated students may wish to work intensively on a creative or research project not covered in the course offerings of the department. The student should possess the necessary background for such work, and initiate an application for such study. A maximum of four hours of credit may be earned in any one department. Permission of the staff member with whom the student wishes to work is required.

### COM-949

### 1.00

### **Special Topics**

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department

### CONSTRUCTION

CON-100

### 1.00 **Basic Carpentry**

Students will learn the complexities of working with hand and power tools. They will learn basic carpentry skills, which include wall framing, window and door framing, floor framing, and basic exterior finish.

### CON-102

### 2.00

### Introduction to Residential Construction

Students will be introduced to basic residential construction history, terminology, materials and basic construction techniques. This course will cover basic information and develop manual skills needed to begin construction of a new home.

#### CON-129 3.00 Concrete Theory & Lab

Emphasis of this course will be concrete estimation, poured foundation formwork and placement, insulated concrete forms erection and placement, and placement of exterior and interior flatwork by various methods including pumper trucks. A variety of applications and finishes will be covered. Safety will be strongly enforced.

### CON-130 1.00

### Concrete Theory

Understanding concrete and its relationship to residential construction will be discussed along with concrete safety and testing techniques.

### CON-131 1.00

### Site Layout & Blueprint Reading

This course will train students to interpret and use working drawings and blueprints. It includes an understanding of construction symbols and building specifications. Students will develop a site layout for various projects utilizing lasers, builder's levels, blueprints, and site plans.

#### CON-133 4.00

#### **Construction Technology Lab**

This course consists of construction of floors, stairs, walls, ceilings, and roof systems in a residential setting or shop location. This course will expand on Introduction to Residential Construction. Construction safety will be strongly enforced. Safety glasses are required when working on site as required by Iowa Law.

#### CON-175 6.00

### **Residential Construction Applications**

Students will apply advanced construction procedures on decks, walls, roofs, stairwells, and related structures. Durable design and application of proven methods will be emphasized. The course relates to sustainable building practices.

### CON-219 4.00

### **Exterior Finish**

This course will present the various materials used for residential exterior coverings. Topics will include insulated sheathing, house wraps, drainage planes, and shingles, soffits, venting, windows and exterior doors. Emphasis will be on sustainable construction techniques.

#### CON-301 7.00

### Framing for Sustainable Design

The students will utilize resource efficient framing methods that stress energy efficiency and sustainable design. The "House as a System" method of residential construction will be teamed with Universal Design and Optimum Value Engineering techniques, the "Building America" program and the LEED (Leadership in Energy and Environmental Design) program. This course will provide networking for the students with leaders in the energy efficiency and sustainable design arenas through guest speakers and the opportunity to present at conferences.

#### CON-302 1.00

### **Building Science I**

Students will apply building science methods to determine how insulations, moisture, building pressures, heat flow and durable design apply to today's residential building methods.

### CON-303 1.00

### **Building Science II**

Students will be expanding on Building Science I, utilizing hands on activities to explore the effects of mold, volatile organic compounds, radon, healthy home design, renewable energy, and building failures.

### CON-307 3.00 **Basic Woodworking**

## The students will spend time constructing cabinets using various joint techniques. Safe tool operation

and proper tool use will be emphasized. This course will give the students a basic knowledge of calculating, selecting, and using different types of cabinet materials.

### CON-308 2.00

### Interior Finish I

Students will discuss the theory and history of the residential interior system. Universal Design and a focus on indoor air quality will be stressed. Custom interior finish packages may be included.

### CON-309 3.00

### Interior Finish II

The lab portion of this course will be to apply gypsum board, tape, texture, and paint. The trim work will follow by installing pre-hung door units, casing, base mold, custom trim, closet finishes, hardware, and cabinetry. Universal Design and a focus on indoor air quality will be stressed. Custom interior finish packages may be included.

### CON-321 2.00

### **Residential Estimating**

Students will learn to estimate the residential construction costs of concrete, rough framing and finishes. Estimating skills will first be developed using a pencil paper analysis and then transferred to computer applications.

### CON-386

#### 1.00 Sustainable Design

Students will look at an overview of sustainable design and how to incorporate it into residential construction. There will be a continued emphasis on how to properly and efficiently install new and existing building products.

### CON-500 2.00

### **Construction Tech Lab 1A**

This course consists of construction of floors, stairs, walls, ceilings, and roof systems in a residential setting or shop location. This course will expand on Introduction to Residential Construction. Construction safety will be strongly enforced. Safety glasses are required when working on site as required by Iowa Law. This is the first of two classes to full fill CON 133 Construction Technology Lab requirement.

### CON-501 2.00

### Construction Tech Lab 1B

This course consists of construction of floors, stairs, walls, ceilings, and roof systems in a residential setting or shop location. This course will expand on Introduction to Residential Construction. Construction safety will be strongly enforced. Safety glasses are required when working on site as required by Iowa Law. This is the second of two classes to full fill CON 133 Construction Technology Lab requirement.

### CON-949 2.00

### Spec Topics: Woodworking Fundamentals

This course will give the students a basic knowledge of calculating, selecting, and using different types of cabinet materials. Safe tool operation and proper tool use will be emphasized. Students will spend time constructing cabinets using various joint techniques.

### **CRIMINAL JUSTICE**

#### CRJ-100 3.00

### Introduction to Criminal Justice

This course examines the criminal justice system and those areas closely related to it. Emphasis is on the relationships among law enforcement, adult and juvenile corrections, courts and private security and correctional agencies.

### CRJ-110

### 3.00

### Patrol Procedures

This course examines the organizational structuring and management within law enforcement agencies, community policing, procedures including traffic investigations, developing and handling informants and interview/interrogation techniques.

### CRJ-120 3.00

### Intro to Corrections

This course analyzes corrections and punishment in modern society, exploring the prison system, community based corrections, and alternatives to incarcerations. Probation and parole in the criminal iustice system.

### CRJ-132

### 3.00

### Constitutional Law

This course covers arrest, search and seizure, review of court systems, procedures from incident to final deposition, principles of constitutional, federal, state and civil laws as they apply to and affect members of the criminal justice system.

#### CRJ-133 3.00

### **Constitutional Criminal Procedure**

This course is the study of the philosophy and the basis for law, the historical development of criminal law and procedure, the structure, definition and the criminal law of Iowa. Explores the causation, preparation and perpetration of crimes, criminal conduct and parties to crimes.

### CR.J-141

#### 3.00 Criminal Investigation

This course examines the fundamentals of criminal investigation: rules of identification, including collection, preservation and processing of physical evidence, record reports and statements; case preparation; testimony in court; basic report writing and investigative techniques relating to specific crimes such as robbery, burglary, homicide and narcotics violations are explored. Methods/services of the criminalistics laboratory are covered.
### CRJ-152 3.00 Defensive Tactics

This course covers methods of protection against persons armed with dangerous and deadly weapons, demonstrations and drill in a limited number of holds, pressure points and come alongs and restraint of prisoners. Firearms and OC spray safety, handling and use will be covered with a Firearms Use-Of-Force Training Simulator. The other areas of emphasis will concern itself with the civil and criminal liabilities of the use of force.

# CRJ-160 3.00

### Intro to Forensic Investigation

This course aims at making the subject of forensic science comprehensible to a wide variety of students who are planning on being aligned with the forensic science profession. This course introduces the non-scientific student to the field of forensic science. Through applications to criminal investigations, clear explanations of the techniques, and the abilities and limitations of modern crime labs, this course covers the comprehensive realm of forensics. The text strives to make the technology of the modern crime laboratory clear to the non-scientist. Combining case stories with applicable technology, Criminalistics captures the excitement of forensic science investigations

### CRJ-170 3.00 Overview of

# Overview of Cybercrime

The course provides an introduction and overview of computer crime. In particular, a categorization of types of computer crimes is presented including: the computer as a target; the computer as an instrument of a crime; the computer as incidental to crime, and crimes associated with the prevalence of computers.

# CRJ-200

# 3.00

Criminology

This course explores the response of the criminal justice system in its attempt to prevent, predict and control criminal activity. Emphasis is also on the nature and causes of criminal activity.

### CRJ-201 3.00

### Juvenile Delinquency

This course explores the area of juvenile delinquency, its history, theories, laws, and the criminal justice system's response in caring for, treating, and controlling delinquent behavior.

# CRJ-206 3.00

### Terrorism Response

This course provides an in-depth look at consequence response-the safety procedures for emergency responders, scene search operations, precautions for secondary devices, and initial scene evaluation of a terrorism/tactical violence event.

### CRJ-260 3.00 Medicolegal Death Investigation

This course aims at making the subject of death investigation comprehensible to a wide variety of students who are planning on being aligned with the criminal justice profession. This course introduces the non-scientific student to the field of death investigations. This course provides information to conduct a scientific, systematic, and thorough death scene investigation. Content includes information regarding the investigation of natural and unnatural cases of death such as asphyxial death, toxicological deaths, childhood deaths, firearm deaths, and deaths due to blunt and sharp force injury, as well as deaths from the natural disease processes. t

### CRJ-300 3.00

### Perspectives of Homeland Security

Terrorism has captured global attention to a degree without historical parallel. This course explores the events of 9/11 and beyond. In an uncertain world that has emerged since 9/11, intergovernmental organizations, national governments, policy analysts, law enforcement groups, scholars, and society at large are all faced with the arrival of difficult times that challenge older notions about international terrorism. At the same time, recent developments on the American scene remind us, despite the unprecedented scope of the 9/11 catastrophes, that "homegrown" terrorism and the extremist beliefs that accompany it remain a threat to public order in the United States. This course will explore these domestic terrorist groups in depth.

### AUTO BODY COLLISION REPAIR CRR-104 3.00

### Introduction to Automotive Restoration

Introduction to the way vehicles were built in the past. Intro to Auto Restoration will consist of accessing vehicle repair parts, ordering parts, and putting ideas together for the design of custom vehicle.

# CRR-105

3.00

### Introduction to Specialty Tools

Students will learn to use an array of specialty tools related to custom fabrication of sheet metal.

### CRR-110 3.00

### Auto Body Welding

The Auto Body Welding course will introduce students to the basics of auto body shop safety, use of oxy-acetylene cutting and welding torches, spot welders MIG and TIG welding with auto body applications. Students will learn to weld and repair metal auto body parts.

# CRR-111

### 3.00 St Rod Welding

Students will learn the basics of welding thicker gauge steel such as vehicle frames and different techniques for welding in body panels.

### CRR-204 3.00

# Repair of Plastics & Adhesives

The Repair of Plastics and Adhesives course will give students the knowledge and experience to identify and repair rigid, semi-rigid, and flexible plastic panels.

# CRR-303 3.00

# Introduction to Auto Body Repair

The Introduction to Auto Body Repair course will provide students with the basics of body-shop safety, use of common hand tools, power tools, body hand tool operations, and body fasteners. The study of mild and high strength steel, sheet metal design, and collision damage analysis. Students will begin to repair minor dents and rusted automobiles.

### CRR-309 3.00

# Auto Body Prep and Masking

Students will learn to evaluate surface conditions of vehicles and determine what must be done before painting an auto body surface. Checking paint thickness, paint removal procedures, sand blasting, media blasting, sanding of paint will be covered. Students will also prep bare metal-metal conditioners, metal replacement parts, using self etch primer, selecting and applying primer coats, sanding methods, surface scuffing, masking skills, cleaning substrate, liquid mask options, back masking, jam preparation, and masking plastic sheeting using proper taping methods. Students will learn to evaluate masking verses part removal, decal and stripe removal methods, masking aids wheel maskers, antenna masking, mirror masking, reverse masking, surface wax and grease cleaning, and roll masking for spot repairs. Bolt molding, trim removal, and removal of stationary glass will also be covered.

# CRR-337

### 3.00

### **Beginning Metal and Filler Work**

The Beginning Metal and Filler Work course will provide students with the necessary skills to work out various dents and properly apply various fillers.

### CRR-341

### 3.00 Metal Fabrication

Students will explore the process involved in custom fabrication of sheet metal such as chopping tops and fabricating their own rust repair panels.

### CRR-345

### 3.00 Advanced Metal Sectioning and Repair

Advanced metal sectioning and repair; the replacement class involved OEM and I-CAR approved sectioning repairs preformed on today's advanced unibody designs.

# CRR-346

# 3.00

# Metal Stripping

Students will use various methods to stripe paint finishes, such as sand blasting, media blasting, chemical stripping and soda blasting. Student will also learn how to treat bare metal surfaces with the correct coatings.

# CRR-401

### 3.00

# Panel & Door Skin Replacement

The Panel and Door Skin Replacement course will allow students to gain experience replacing door skins, fenders and rear quarter panels.

# CRR-415 3.00

# **Restraint Systems**

The student will learn to diagnose and repair various restraint systems used by OEM manufacturers today.

# CRR-501 3.00

### Frame Machine Use

The Frame Machine Use course will allow students to diagnose and measure structural damage using tram and self-centering gauges to identify misaligned or damaged steering, suspension, and power train components that can cause vibration, steering, and chassis alignment problems.

### CRR-612 3.00

### Intro to Suspension & Steering

This course will provide an in-depth analysis of operation and service of automotive chassis and suspension systems. Emphasis will be placed on the principles of restoring a collision damaged suspension back to its pre-accident condition, using manufactures specifications and tolerances. The principles of steering & suspension components, steering geometry, inspection and replacement of damaged components with manual and electronic measuring will also be covered.

### CRR-613 3.00

### **Altered Steering and Suspension**

Students will learn to install aftermarket suspensions such as air ride and lift kits. Students will learn to replace worn out suspension and steering parts and install new steering columns in antique vehicles.

# CRR-620

### 3.00

### **Electrical Mechanical Systems**

The Electrical Mechanical Systems course will allow students to learn the proper procedures for electrical repair work. The use of wire and solder. The repair of special electrical connectors. Students will learn the use of specialty electrical trouble shooting equipment.

### CRR-750 3.00

# **Damage Estimating & Shop Operation**

Introduction to procedure and sequence of writing collision damage estimates, familiarization with body shop management. Students will be introduced to material (physical) damage, insurance policies, and adjusting.

# CRR-807 3.00

### Auto Body Refinishing

The Auto Body Refinishing course will provide students with the necessary surface preparation prior to primer and paint applications. Students will learn the art of touch and feel to compliment visual inspection prior to final finish.

### CRR-813 3.00

### Advanced Auto Body Repair & Refinishing

This course includes job planning, sheet metal repair, and metal finishing operations, along with glass replacement, the alignment of doors, hoods, fenders, and applying body plastic filler and fiberglass repair.

# CRR-817 3.00

# **Buffing & Detailing**

Students will learn to color sand, buff, and detail freshly applied finishes, as well as aged finishes, as well as detailing interiors.

### CRR-850 3.00

### **Computerized Paint Mixing**

The Computerized Paint Mixing course will provide students the opportunity to utilize and compare traditional hand mix paint methods to that of computerized mixing. Students will experiment with spot-in verses entire panel restoration methods.

### CRR-852 3.00

# **Custom Painting & Airbrush**

This auto body painting course will cover basic custom painting and air brush work.

### CRR-853

# 3.00

# Custom St Rod Painting

Students will learn painting techniques used on antique and custom vehicles.

### CRR-887 3.00 **Complete Refinish and Detail**

Students will learn the correct techniques involved in refinishing a complete vehicle, from surface preparation to final painting. Students will learn techniques in color sanding and buffing.

# CRR-910

### 3.00

### Auto Body Rebuild Project I

The Auto Body Rebuild Project I course will allow students to take on a major rebuild or restoration project from start to finish.

### CRR-911 3.00

### Auto Body Rebuild Project II

The Auto Body Rebuild Project II course will allow students to take on a major rebuild or restoration project from start to finish. Students are expected to work with less supervision than they received in the Rebuild Project I class. Pre-requisite: CRR910 Auto Body Rebuild Project I.

# CRR-913

### 3.00 **Restoration Project I**

Students will disassemble and restore an antique vehicle from start to finish.

# CRR-914

### 3.00

# Restoration Project II

Students will design and assemble a fiberglass street rod from start to finish.

# CRR-949

1.00

# Spec Top: Spray Finishes

Students will get extensive experience spraying with different types of paint, including waterborne paint.

# COMPUTER SCIENCE

CSC-040 3.00

# **Computer Fundamentals**

This fundamentals course will present the basic uses, understanding and knowledge of computer hardware and software. It will teach the fundamentals of the Windows Operating System environment and the use of popular business software using word processing and spreadsheet applications. E-mail communication skills and the use of the Internet as a communication and research tool will be developed.

### CSC-110 3.00

# Introduction to Computers

This is an introductory course in computer literacy and software applications. The literacy components of the course include history of computing, computer systems, communications, networks, and computers in society. The applications training will include word processing, spreadsheets, database management and presentation software. No prior computer experience necessary.

# CSC-125

### 2.00 **Microsoft Fundamentals**

This is an introductory course in the Microsoft Office software applications. The applications training will include word processing, spreadsheets, database management and presentation software. No prior computer experience necessary.

# **DENTAL HYGIENE**

# DHY-114

# 4.00

### **Dental Hygiene Anatomical Sciences**

This course encompasses the fundamental study of head and neck anatomy, postnatal development, structure of the teeth, facial, oral and tooth anatomy, the morphology of the teeth, identification of the teeth, their functions and occlusion. Instruction emphasizes peer interaction with dental nomenclature and the inspection of teeth and surrounding structures. Prerequisites: BIO-168 Human Anatomy and Physiology I w/ lab & BIO-173 Human Anatomy and Physiology II w/ lab. Co-requisite: DHY-163 Radiology.

DHY-121 2.00

# Oral Histology and Embryology

This course covers the normal growth and development of the face and oral structures. This course includes the descriptions of the processes which occur at the cellular level in the growth and development along with the normal microscopic anatomy of oral structures. Prerequisites: BIO-168 Human Anatomy and Physiology I w/ lab & BIO-173 Human Anatomy and Physiology II w/ lab.

DHY-132 3.00

# Dental Pharmacology

This course covers general pharmacology and reviews drugs that may influence the management of dental hygiene patients. This course will enable the student to develop sufficient knowledge of pharmacology to permit safe and effective medical evaluation of patients for dental hygiene treatment. Pain control techniques are also covered including local anesthesia administration and nitrous oxide sedation. Prerequisites: BIO-168 Human Anatomy and Physiology I w/ lab & BIO-173 Human Anatomy and Physiology II w/ lab and CHM-130 Introduction to Organic/Biological Chemistry & CHM-131 Introduction to Organic/Biological Chemistry lab.

# DHY-140 2.00 General and Oral Pathology

This course encompasses the fundamental study of abnormal findings in and around the oral cavity, including identification of lesions, developmental disorders, neoplasia, genetics, inflammation, degenerative changes, oral manifestations of diseases and/or conditions. Instruction emphasizes case studies, vocabulary and terminology; along with the comprehensive integration throughout all clinical aspects of the inspection of the oral cavity and surrounding structures. Prerequisites: DHY-114 Dental Hygiene Anatomical Sciences.

# DHY-163 3.00

# Radiology

This course emcompasses the physics of radiation and radiation biology are related to the principles, techniques and interpretation of intra and extraoral radiographs. Quality in exposing, mounting and processing dental x-rays is stressed along with an emphasis on the safety of the patient and operator included in this course. Laboratory exercises will develop the student's competency in exposing, processing and mounting radiographs. Co-requisites: DHY-114 Dental Hygiene Anatomical Sciences.

# DHY-174 5.00

### **Principles of Dental Hygiene**

This course introduces the students to the basic principles and theory of clinical dental hygiene. The course will cover the etiology of deposits and their effect on oral tissue. The student's skill and performance in removal of deposits through instrumentation is emphasized utilizing hands on instruction and demonstration. Prerequisites: Acceptance into the Dental Hygiene Program.

# DHY-183

# 2.00

**Dental Hygiene I Theory** 

This course builds upon the fundamental level dental hygiene knowledge and skills aquired in DHY 174 Principles of Dental Hygiene. Emphasis centers on the dental hygiene process of care and utilizes the care model as the basis for the provision of care to individuals in specific populations, patients with special needs, and medically compromised patients. Emergency procedures and protocol will be presented and practiced with emphasis placed on the recognition and prevention of emergency conditions, medico-legal considerations, and management of emergencies in a dental environment. Co-requisites: DHY-184 Clinical Dental Hygiene I.

### DHY-184 3.00

# Clinical Dental Hygiene I

This course is an application of the instrumental skills utilized in preventative and therapeutic dental hygiene clincal experiences in oral prophylaxis, application of preventative therapeutics and radiography techniques to beginner level. This course is a pass/not pass course Prerequisites: DHY-174 Principles of Dental Hygiene. Correquisites: DHY-183 Dental Hygiene I Theory and DHY-209 Periodontology.

### DHY-209 3.00 Periodontology

This course covers the initiation, development, pathogenesis, mechanism, etiology and process of periodontal disease that is fundamental to the clinical hygienist. Periodontology provides an in-depth study of the pathogenesis of periodontal disease. It presents the microscopic oral anatomy of the periodontium, plaque-induced and non-plaque induced diseases and the American Academy of Periodontology (AAP) classification of periodontal diseases, clinical characteristics, histopathology, and etiology of periodontal diseases. Special emphasis centers on the role of the immune system and host response to bacteria in the initiation and progression of periodontal disease, including risk factors associated with periodontal disease. Prerequisites: BIO-186 Microbiology with lab. Co-requisites: DHY-184 Clinical Dental Hygiene I.

# DHY-224 1.00

# Dental Materials

This course will cover the various materials used in restorative dentistry and other specialty areas in dentistry. Some of which are used to fabricate dental appliances and others for tooth restoration. Lecture and laboratory components will help students develop an understanding of the composition, properties, structure, and manipulative variables of dental materials historically used in dentistry as well as new materials and techniques that are rapidly evolving. Emphasis centers on practical application as well as clinical applications of materials and the need for educating patients regarding these materials in the oral cavity. Co-requisites: DHY-292 Clinical Dental Hygiene III.

# DHY-233 2.00

# Preventative Dentistry/Nutrition

This course focuses on preventing disease and nutrition's effect on oral health throughout the life cycle. It establishes the principles of counseling and emphasizes patient education and instruction in preventive dentistry necessary to maintain optimum oral health. Prerequisites: BIO-168 Human Anatomy and Physiology I w/ lab & BIO-173 Human Anatomy and Physiology II w/ lab and CHM-130 Introduction to Organic/Biological Chemistry & CHM-131 Introduction to Organic/Biological Chemistry lab.

# DHY-253 1.00

# **Community Oral Health Rotations**

This course allows the student to apply public health/ health education principles through implementation and evaluation of the student's community dental health project and through participation in extramural rotations outside of the school setting. Emphasis is placed on students interacting with a variety of clients including children, the physically and mentally handicapped, indigent populations and geriatric groups. Prerequisites: DHY-256 Community Dentistry.

### DHY-256 2.00 Community Dentistry

This course relates the concepts of dental public health and preventative dentistry, including principles of biostatistics, epidemiology, educational instruction, dental manpower and delivery systems. Students plan, implement and evaluate a community dental health project. Community Dentistry may include community service to be performed by the students. Prerequisite: DHY-280 Clinical Dental Hygiene II.

# DHY-265 2.00

# **Current Dental Hygiene Practice**

This course explores the integration of therapy and clinical experiences to the application of practice management of dental hygiene. It is designed to orient the student to the various office settings and each team member's role. This course will also help introduce the dental hygiene student the moral, legal and administrative challenges that can occur in the dental practice. Dental Hygiene is a licensed profession and are held accountable for their actions. This course will provide an introduction to various ethical theories, moral philosophy and reasoning. The American Dental Hygienists' Association Code of Ethics will provide a guide for the student in their daily practice. The governmental policy and employment regulations that impact the delivery of dental hygiene care will also be covered. Prerequisites: DHY-209 Periodontology.

### DHY-278 2.00

# Dental Hygiene II Theory

This course provides the continuing instruction and application of client education and clinical techniques. Dental Hygiene II is a continuation of clinical practices providing further instruction and application of patient education and oral prophylaxis techniques. Emphasis is placed on continued client assessment proficiency, instrumentation and radiographic skills with total over-all care of clients with simple to moderate patient classifications. Topics include mechanical scalers, air-polishing techniques, chemotherapeutics, endodontic pulp testing, sutures, intra-oral photography utilization. Pain control techniques are also covered including local anesthesia administration and nitrous oxideoxygen inhalation analgesia. Prerequisites: DHY-183 Dental Hygiene I Theory.

### DHY-280 3.00

# Clinical Dental Hygiene II

This course continues the clinical practices providing further instruction and application of client education and clinical techniques. Emphasis is placed on continued client assessment proficiency, instrumentation and radiographic skills with total over-all care of clients with simple to moderate patient classifications. This is a pass/not pass course. Prerequisites: DHY-184 Clinical Dental Hygiene I.

# DHY-292

# 5.00

# Clincal Dental Hygiene III

This course expands clinical practices of client education and non-surgical periodontal therapy and maintenance and preventative therapies on more complex periodontal cases. Emphasis is placed on advanced instrumentation and radiographic skills, increase efficiency and effectiveness in assessment and communication providing comprehensive dental hygiene care to advanced cases. This is a pass/not pass course. Prerequisites: DHY-280 Clinical Dental Hygiene II. Co-requisites: DHY-221 Dental Materials.

### DHY-293 2.00 Dental Hygiene III Theory

This course expands the processes of providing further instruction and application of client education and non-surgical periodontal therapy and maintenance and preventative therapies on more complex periodontal cases. Emphasis is placed on advanced instrumentation and radiographic skills, increase efficiency and effectiveness in assessment and communication providing comprehensive dental hygiene care to advanced cases. Topics will include polishing restorations, sexual harassment, substance abuse, completion of community projects and dental specialties. Prerequisites: DHY-279 Dental Hygiene II Theory.

### DHY-302 5.00

### **Clinical Dental Hygiene IV**

This course provides continued development of comprehensive care with emphasis placed on the ability to synthesize the instruction and techniques gained from the previous courses while providing comprehensive program exit-level competency for clients. Research principles are applied to facilitate growth as a professional and enhance clinical skills. This is a pass/not pass course. Prerequisites: DHY-292 Clinical Dental Hygiene III.

### DHY-303 2.00

### Dental Hygiene IV Theory

This course provides continued development of comprehensive care with emphasis placed on the ability to synthesize the instruction and techniques gained from the previous courses while providing comprehensive program exit-level competency for clients. Research principles are applied to facilitate the students' comprehension and ability to critique professional and scientific literature to continue to learn and grow as a professional and enhance clinical practice. Included in this course is baseline knowledge of Ethics as it relates to dental care issues, adult and child abuse and the legal aspects including the statutes, rules and regulations pertaining to the practice of dental hygiene in the state of Iowa. Prerequisites: DHY-293 Dental Hygiene III Theory.

### **FILM AND THEATRE**

# DRA-101

### 3.00 Introduction to Theatre

This survey course overviews all the aspects of the theatrical process - from acting and directing to the historical development of the theatre. It is designed to develop in the student an understanding and appreciation of theatrical productions.

### DRA-130 3.00 Acting I

This course offers training in the fundamentals of acting. It is a performance-based course which offers much individual and group practice on the basic techniques, including movement exercises, improvisation, concentration, imagination and some basic scene work.

### DRA-132 3.00 Acting II

This course works beyond the fundamentals of acting covered in Acting I. There will be advanced improvisational technique, interpretation and characterization applied in scenes and plays, and attention to blocking choices and movement patterns in performance techniques. Prerequisite: Dra 130; or special instructor approval

### DRA-154 3.00 Theatre Production

This hands-on course provides technical experience in the design and production process of a play or musical (as well as a series of smaller events) and includes a final project to be selected by the student with approval of the professor. All technical aspects of theatre will be covered in the class period and then implemented in the lab and required production hours.

# DRA-254 3.00

### Theatre Production II

This hands-on course provides more intensive technical knowledge and experience in the design and production process of plays, musicals, concerts, etc. and includes a group final project to be selected by the students with approval of the professor. Further study of the technical aspects of theatre, etc. will be covered in lecture during the class period and then individualized in the lab and required production hours. Pre-requisite: DRA-154 Theatre Production I

# DRA-929 1.00

# Individual Project

1,2,3,or4 credit hours. Highly motivated students may wish to work intensively on a creative or research project that is more advanced than the course offerings of the department in that area. The student should possess the necessary background, such as any pre-requisite classes, and should initiate an application for such study. A maximum of four hours may be earned. Permission from the faculty or staff member with whom the student wishes to work is required.

# DIESEL TECHNOLOGY

### DSL-323 3.00

### Intro to Diesel Technology

Intro to Diesel Technology will introduce students to the world of the diesel engine. It will get them familiar with the different engine manufactures and the different engine and power train systems used today. Shop safety and tools and fasteners of the diesel industry will be covered. Students will learn how to safely use shop equipment like jacks and presses. Shop skills like drilling, tapping, torching, and welding will be covered in the lab. Fine skills like precision measuring will be extensively covered.

### DSL-357 3.00

### **Diesel Engines I**

The Diesel Engines I course will provide students with the opportunity to learn the basic principles of diesel engine overhaul and service. Students will learn the basics of diesel engines.

# DSL-358

### 3.00 Diesel Engines II

The Diesel Engines II course will provide students with some advanced diesel engine repair and trouble shooting skills

# DSL-403 3.00

### Electronic Engine Control I

The Electronic Engine Control I course will introduce electronic engine control systems and the components used on today's computer controlled engines.

### DSL-413 3.00 Electropic Engl

# Electronic Engine Control II

Electronic Engine Control II will utilize all major electronic diagnostic software. It will be used to trouble shoot and repair problems, and change software on engine ECMs for hourse power upgrades and service bulletin up dates. Students will use wiring schematics and rewire and trouble shoot electronically controlled engines. ABS brake systems and electronically controlled transmissions will also be covered.

### DSL-426 3.00

# Intro to Med. and Heavy Duty Electronics

Introduction to medium duty and heavy duty electronics will introduce students to the basics of electronic theory and concepts. Laws of electronics such as OHM's law will be covered in depth. Students will learn how to perform proper wiring repairs with solder and learn how to use voltage and amperage tools. The digital multi meter will be introduced and covered in depth on the proper uses and functions.

### DSL-427 3.00

### Adv. Med. & Hvy Duty Electronics

Advanced medium and heavy duty electronics will get students familiarized with the electronic components on trucks and equipment. Things like batteries, starters, and alternators will be covered in theory in the classroom. In the lab they will be disassembled and reassembled. Then using today's high tech testing methods and test equipment they will be performance tested. Students will learn how to use and read wiring schematics found today for equipment engines and chassis.

DSL-445 3.00

### Diesel Fuel Systems

The Diesel Fuel Systems course will provide students with the basics of direct and indirect diesel injection systems. Students will learn the operation, troubleshooting and repair techniques associated with mechanical or electronic diesel injected fuel systems.

DSL-545 3.00

### Power Train Maintenance & Syst Procedure

The Power Train Maintenance and Service Procedures course will provide students with the opportunity to learn the correct service procedures when working with clutches, transmissions and final drives components.

### DSL-547 3.00

# Ag Power Train

Ag and commercial power train will teach students the power train side of heavy duty equipment. Starting with gear fundamentals and various clutch designs. Manual transmissions, Power shift transmissions and hydrostatic transmissions will be covered. Track propelling systems and heavy duty differentials and final drives will also be covered.

### DSL-615 3.00

# Mobile Hydraulics Systems

The Mobile Hydraulics Systems course will cover the basics of hydraulic pump, piping control values, filtration and oil maintenance.

### DSL-620

3.00

# Semi Tractor Trailer Suspension & Align.

The Tractor Trailer Suspension Alignment course will provide students with the opportunity to learn how to service semi-tractor trailer suspension and laser alignment systems.

### DSL-634 3.00

### Service Tractor Trailer Pneumatic Brake

The Servicing Tractor Trailer Pneumatic Brake Systems course will provide students with the basics of pneumatic brake systems progressing up through anti-lock pneumatic tractor trailer brake systems.

### DSL-743 3.00

### AC & Refrigeration

The Air Conditioning and Refrigeration course will introduce students to the basics of heat pumps, the safe handling of refrigerant gases, gauge testing, gas reclamation, and preventative maintenance procedures.

# DSL-804

### 3.00

### Ag & Commercial Equipment Maintenance

Ag and commercial maintenance will teach students how to maintain agricultural and commercial heavy duty equipment. Things from oil changes, hydraulic repair, heavy duty electrical starting systems and general maintenance will be covered at first. Then a more in-depth coverage of heavy duty track systems, final drives and PTOs will be covered.

### DSL-835 2.00

### **Commercial Drivers License**

The Commercial Drivers License course will provide students with the opportunity to obtain their CDL License.

### DSL-838 3.00 Diesel Auto Systems

The Diesel Automotive Systems course will provide students with the opportunity to learn to work on and service diesel powered automobiles.

# DSL-840

# 3.00

### **Diesel Operations and Maintenance 1**

The Diesel Operations and Maintenance I course will provide students with the opportunity to do real life trouble shooting and repair on projects in the shop. They will also learn the correct way to service and maintain trucks, trailers, and equipment.

### DSL-841 3.00

# Diesel Operations and Maintenance II

The Diesel Operations and Maintenance II course will provide students with the opportunity to use all of the information learned in Diesel Operations and Maintenance I and apply it to a real shop setting.

### DSL-850 3.00

### **On-Board Communication Systems**

The On-Board Communication Systems course will provide students with knowledge of the internal and external communication systems utilized in today's over the road tractor trailer units.

### DSL-932 4.00

### 4.00

# Internship in Diesel Mechanics

The Internship in Diesel Mechanics course will allow students to experience working in a repair shop under the supervision of an experienced diesel mechanic.

### DSL-949 1.00

# Spec Top: Diesel

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

# EARLY CHILDHOOD EDUCATION

ECE-102

### 2.00 Introduction to Child Care Services

Introduction to Child Care Services is an introductory training curriculum designed to help the child care provider with little or no previous training to learn how to offer high-quality child care services.

### ECE-103 3.00

### Introduction Early Childhood Education

Gives students a historical and philosophical foundation of the field of early childhood education. Includes an overview of assessment and evidencebased practices. Addresses the influences of familycentered practice, inclusion, culture and language. Explores early childhood careers.

### ECE-133 3.00

# Child Health,Safety&Nutrition

Focuses on evidence-based 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 problem-solving, practical applications and assessments. Includes collaboration with families and assesses the role of culture, language and ability on health, safety, and nutrition decisions in early childhood settings.

### ECE-158 3.00

### Early Childhood Curriculum I

Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through eight. Students prepare to utilize evidence -based, developmentally appropriate practices in the context of children's family, culture, language and abilities. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments to support each child in the following areas: dramatic play, art, music, fine and gross motor play.

### ECE-159 3.00

# Early Childhood Curriculum II

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 evidence-based practices in a context of children's culture, language and abilities. Emphasis is on understanding children's developmental stages and developing appropriate learning opportunities, interactions and environments in the following areas: emergent literacy, math, science, technology and social studies.

### ECE-221 3.00

### Infant/Toddler Care and Education

Focuses on care, education, and assessment of children from birth to thirty-six months. Prepares students to utilize, developmentally appropriate evidenced-based practices including responsive caregiving,routines as curriculum, collaborative relationships with culturally, linguistically, and ability diverse children and families, and a focus on the whole child in inclusive settings.

### ECE-243 3.00

### Early Childhood Guidance

Focuses on developmental appropriate, evidence -based approaches and positive guidance strategies for supporting the development of each child. Emphasizes supportive interactions and developmentally appropriate environments. Uses assessment to analyze and guide behaviors. Studies impact of family, and each child's culture, language and ability on child guidance.

ECE-262 3.00

### Early Childhood Field Experience

Supervised experience\* in selected early childhood settings serving children ages birth through eight. Includes integration of theory, and developmentally appropriate evidence-based practice. Provides an understanding of the working with culturally, linguistically and ability diverse young children and families. Emphasizes professional relationships and behavior, appropriate adult / child interactions, basic curriculum planning, and program routines. \*Requires a minimum of 80 contact hours (4800 minutes) for 2 credits of direct work with children, with the remaining contact hours equal to one credit being distributed across direct contact and classroom hours as deemed appropriate by the institution.

ECE-810 2.00

### **Child Development Associate Portfolio**

Students will either work in their own child care setting or for one that is either Head Start or Early Head Start or one that is approved by the instructor. The student will arrange a qualified advisor to observe and record the observation instrument. The student will arrange to be the teacher that day. In the correct setting the student will be applying for the CDA credential. The student will write an autobiography, activities they would provide to accomplish the Child Development Associate Competency goals.

### **ECONOMICS**

ECN-120 3.00

### Principles of Macroeconomics

This course is an introduction to the general field of economics, description and analysis of the American economic system, national income accounting, modern employment theory, fiscal policy, monetary policy and economic growth.

ECN-130 3.00

### Principles of Microeconomics

This course examines the economics of the firm and resource allocation, current domestic economic problems, international economics, and comparative economic systems including the underdeveloped countries.

# **EDUCATION**

EDU-115 4.00

### Education and the Teaching Process

The course is a study of general classroom methods and problems, the learning process and the role of the teacher. It provides for practical applications of educational concepts through both observation and participation in classroom situations. The course includes two hours of lecture and discussion and four hours of field experience per week.

# EDU-120 2.00

### Communication, Ethics & Confidentiality

Participants will develop skills and strategies to enhance communication and examine situations where professionalism, ethical standards, and confidentiality will guide the correct course of action when working with colleagues, students, parents and others.

# EDU-121 2.00

# **Behavior Improvement**

Participants will develop skills and strategies to support a safe, positive teaching and learning environment; assist in the development of physical and intellectual growth; and support social, emotional, and behavioral development.

# EDU-122 2.00

### **Roles and Responsibilities**

Participants will develop skills and strategies to support a safe, positive teaching and learning environment; assist in the development of physical and intellectual growth; become part of a team approach to interventions; and integrate technology effectively to support student learning.

### EDU-213 3.00

### Introduction to Education

This course is an appraisal of the teaching profession, the work and certification of teachers including administrative organization, instructional procedures and contemporary problems at both elementary and secondary levels. A survey of the historical and sociological foundations of education is made.

### EDU-235 3.00

### Children's Literature

This course includes a study of the history of children's literature, the place of literature in the lives of children, authors and illustrators, storytelling and trends. It also surveys children's books and evaluates both books and illustrations in terms of criteria for good literature.

### EDU-255 3.00

# Technology in the Classroom

In this course students will become members of a TLC (Technical Learning Community) comprised of 1-5 education majors and 1 K-12 and 1 Iowa Central teacher/mentor. Students will: 1. Study and discuss Best Learning Practices using online streaming video data bases and the textbook. 2. Learn the roles of educational media and computers in the teaching/learning process, using the text and the National Educational Technology Standards for Teachers (NETS) as a guide, 3. Operate, select, prepare, utilize, and evaluate media and computer software for educational use, and 4. Using what they have learned, create or revise a real life learning lesson or unit and help implement it in their mentor's classroom for the purpose of improving student achievement.

### EDU-920 2.00

### **Field Experience**

This field experience will emphasize the State of lowa mandated competencies for paraeducator certification training. This course will focus on "in the classroom" skills that paraeducators will be expected to perform while assisting certified teachers.

# EDU-949 1.00

# **Special Topics**

This course, offered usually on a one-time basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### ENGINEERING TECHNOLOGY EGT-400 3.00

### PLTW-Introduction to Engineering Design

This course is an introduction to the elements of Engineering Design. Students will learn the history of design, design process, sketching and visualization, geometric relationships, and modeling. Elements of manufacturing production, marketing, analysis, and quality control will also be studied. Students will learn presentation techniques and develop a portfolio.

### EGT-410 3.00

### PLTW-Principles of Engineering

This course is an introduction to the opportunities and responsibilities of Engineering. Students will learn the fields of Engineering, and explore Engineering Careers. They will complete projects from areas such as Design, Engineering Systems, Thermodynamics, Fluid Systems, Electrical and Control Systems, Strength and Properties of Materials, and Production Process and Quality Control.

# EGT-420 3.00

# **PLTW-Digital Electronics**

This course is an introduction to Digital Electronics. Students will learn basic lab safety, electron theory, Ohm's and Kirchhoff's Laws, logic, number systems, binary addition and Boolean Expression applications. Students will design construct, troubleshoot and evaluate design problems, and will present oral reports of their results. Students will also study PLD's, Flip-Flops, microprocessors, and shift registers and counters.

# EGT-450

# 3.00

# PLTW-Computer Integrated Manufacturing

This course enhances computer modeling skills by applying principles of robotics and manufacturing automation to the creation of models of threedimensional designs. Prerequisites: EGT 400 and EGT 410 are recommended, but not required.

### ELECTRICAL TECHNOLOGY ELE-104 1.00

### Print Reading & Estimating

This course is designed to increase the proficiency of the student in the making of a material take off sheet from a print. The student will also be introduced into common building and electrical symbols.

### ELE-111 3.00 AC Fundamentals

This course will build upon the concepts covered in DC Fundamentals with the addition of inductance, capacitance, and impedance. Emphasis will be on true and apparent power, power factor analysis and correction, mutual inductance, transformers, power supplies and three phase power.

### ELE-114 3.00 DC Fundamentals

This introductory course will begin with the topics of Direct Current and Alternating Current (AC) fundamentals, electrical safety, VOM meter use, oscilloscope use, scientific notation, metric prefixes, Ohm's Law to solve series circuits, parallel circuits and series-parallel circuits. Electrical Symbols and schematic diagrams along with standard electrical prints will be introduced.

ELE-124 2.00

### Tools/Adapters/Instrumentation

This class will introduce the student to basic hand and power tools for the electrician. The course will also introduce the student to types of metering tools, how to electrically troubleshoot different types of industrial equipment, and job site safety.

# ELE-149

### 2.00 Ul and Electrical Safety

This class will introduce the student to the use of the UL White Book. The student will be instructed in the proper methods for electrical safety. The student will be instructed in the use of NFPA 70E electrical safety book and the requirements for arc flash protection.

ELE-155

# 2.00

# National Electrical Code I

This course will introduce students to the National Electrical Code (NEC), Occupational Safety Health Administration (OSHA), and local building codes. Students will learn the correct terminology and correct wiring requirements to conform and establish safe electrical wiring procedures.

### ELE-156 2.00

### National Electric Code II

This course will expand on the principals introduced in National Electric Code I. The student will learn the principles of the approved wiring methods, boxes, service installations, feeder installations, introduction to grounding, & bonding, conductor properties, raceways, motor installations.

### ELE-158 2.00

### National Electric Code III

This course will expand on the principals introduced in National Electric Code 2. The student will learn a more in-depth way to perform service and feeder calculations. The student will explore requirements for special locations and special equipment. The student will also be introduced into preparing for licensing exams.

### ELE-162

# 1.00

# Basic Wiring

This course will provide wiring regulations and practices for residential wiring as presented by the National Electrical Code, state and local building codes.

### ELE-164 2.00 Residential Wiring

This course will provide wiring regulations and practices for residential wiring as presented by the National Electrical Code, state and local building codes.

### ELE-167 3.00 Industrial Electrical Systems

The Industrial Electrical Systems course will provide students with the essentials of industrial electrical system installation and troubleshooting. Students will study electrical safety, installation and design of electrical systems, conduit bending practices, industrial electrical diagrams, transformers and power distribution systems.

# ELE-170 2.00

### **Power Distribution**

This course will provide students with hands on experiences in electrical power distribution. Students will connect, construct and troubleshoot electrical systems consisting of transformers and power distribution panels. All wiring activities will be done in accordance with National Electrical Code and safety procedures will be stressed to comply with OSHA requirements.

### ELE-187 4.00

### **Advanced Industrial Electrical Systems**

The advanced Industrial Electrical Systems course will provide students with the essentials to install and maintain electrical systems related to industry in today's environment. Students will receive handson training. Electrical safety practices, installations, repair, maintenance, and preventative maintenance will be the emphasis of study.

### ELE-195 3.00 Motor Control

This course will provide students with experiences related to electric motors, motor controls and relay logic in an industrial environment. Students will learn to apply ladder logic diagrams to install, maintain and troubleshoot motors and motor control circuits. Students will learn how to troubleshoot direct and alternating current motors and their control circuits. Motor replacement requirements are covered along with the NEC as it applies to motor circuits.

# ELE-198 2.00

### Solid State Motor Controls

This course will provide students experiences installing and maintaining systems with solid-state motor control devices. Students will install, program and troubleshoot systems with variable frequency drives, soft start motor starters, and solid-state motor control devices.

### ELE-204 3.00

### Programmable Logic Theory

This course will provide students with experiences related to Programmable Logic Controllers. Emphasis will be given on the Allen Bradley SLC 500, RSLinx, and RS500 software. Students will identify and install hardware and software associated with Programmable Logic Controllers. Students will create, edit, and apply instruction sets to programs and also learn how to troubleshoot problems using a PLC.

### ELE-205 3.00

### **Advanced Programmable Controllers**

Students will apply advanced instruction sets including analog input and output sequencers, subroutines, and message instructions. Data manipulation and file structure will also be covered.

# ELE-221 3.00

# Instrumentation & Control

Students will learn the basics of closed and open loop industrial process control systems. Emphasis will be placed on the analog input of transducer-based sensors, analog signal conditioning, opto-isolation and thyristor and relay power control circuitry.

# ELE-245 4.00

# Integrated Motion Control & Robotics

This course will introduce students to touch screen graphic displays, PLC motion instructions, and 6-axis robotic equipment used in many aspects of industry. In addition to learning proper wiring and installation practices, the students will create graphics programs, PLC programs, and robotic programs, which will be used to operate integrated multi-axis motion systems, for hands-on experience in robotic automation.

### ELE-932 4.00

### Internship

The student will be able to apply classroom instruction in a real world industrial environment.

# ELE-949 1.00

# Spec Top: Electrical

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### EMERGENCY MEDICAL SERVICES EMS-113

### 3.50

### Emergency Medical Responder

This course is a combined lecture/lab course which has been developed by the United States National Highway Traffic Safety Administration. The course follows the January 2009 National Emergency Medical Services Education Standards for the Emergency Medical Responder (EMR). This course emphasizes patient assessment and patient care procedures at the Emergency Medical Responder level. Patient assessment is introduced early and is reinforced with each new skill learned. Instruction is related to entry-level patient assessment in areas of basic life support, cardiac arrest, trauma, and medical emergencies. Skills practice sessions are scheduled throughout the program to provide an opportunity for students to apply the new skills they learn and to reinforce previous skills. Upon successful completion of the course students are eligible for National Registry of EMTs testing at the Emergency Medical Responder level. Prerequisite: Must be 17 years of age at time of enrollment, be able to speak, write, and read English and possess a valid driver's license. Current BCLS recognition at the Healthcare Provider (American Heart Association) or Professional Rescuer (American Red Cross) level is required prior to certification testing.

### EMS-200 8.00

### **Emergency Medical Technician**

This course is a combined lecture/lab/clinical course which has been developed by the United States National Highway Traffic Safety Administration. The course follows the January 2009 National Emergency Medical Services Education Standards for the Emergency Medical Technician (EMT). This course provides the student an opportunity to supply cognitive knowledge and psychomotor skills in the classroom, hospital, and pre-hospital setting. Students receive a letter grade for the classroom and lab portions of the course. The clinical portion is graded on a pass/fail basis. Instruction is related to patient assessment in areas of basic life support, cardiac arrest, trauma, and medical emergencies. Students must complete a minimum of 32 hours of clinical/field time to successfully complete the course. Upon successful completion of this course students will be eligible to take National Registry of EMTs certification testing at the Emergency Medical Technician level. Students will be required to undergo a national criminal background check and State of Iowa child/adult abuse registry check prior to clinical rotations. Mandatory reporter training and a health physical are required prior to starting clinical/field rotations. The cost of obtaining these requirements is in addition to course tuition and fees. Information on how to satisfy these requirements will be distributed the first night of class. Prerequisite: Must be 17 years of age at time of enrollment, be able to speak, write, and read English and possess a valid driver's license. Current BCLS recognition at the Healthcare Provider (American Heart Association) or Professional Rescuer (American Red Cross) level is required prior to starting class.

### EMS-760 9.00

### NSC Paramedic 1

This course is designed to prepare the student for the paramedic level as outlined by the 2009 National EMS Education Standards for the Paramedic. The student is introduced to the Paramedic career field. Concepts taught include medical/legal considerations, the roles and responsibilities of the paramedic, anatomy and physiology, patient assessment techniques, medication administration, pharmacology, and life span development. Students will complete a 90 hour clinical experience in outpatient surgery and emergency departments. Students must be currently certified at the EMT-Basic/EMT or higher level, be at least 17 years of age, have a high school diploma or equivalent, be able to speak, write, and read English. Current BCLS recognition at the Healthcare Provider (American Heart Association) or Professional Rescuer (American Red Cross) level is required prior to starting NSC Paramedic 1. Students will be required to undergo a national criminal background check and State of Iowa child/adult abuse registry check prior to starting clinical rotations. Mandatory reporter training and a health physical are required prior to starting clinical/field rotations. The cost of obtaining these requirements is in addition to course tuition and fees. Information on how to satisfy these requirements will be distributed the first night of class. Prerequisites - EMS 200 EMT, HSC 113 Medical Terminology, BIO 168 Human Anatomy and Physiology 1 with lab \*NSC = National Standard Curriculum.

### EMS-761 9.50 NSC Paramedic 2

This course is a continuation of NSC Paramedic 1. Pulmonology, advanced airway management, cardiology, and neurology will be discussed. Students will complete a 150 hour clinical experience in the hospital setting. Clinical shifts will be performed in the operating room, emergency department, coronary care department, and respiratory therapy departments. Prerequisite -EMS 760 NSC Paramedic 1 Co-requisite - EMS 810 Advanced Cardiac Life Support \*NSC = National Standard Curriculum.

# EMS-762 6.50

### NSC Paramedic 3 This course is a continuation of NSC Paramedic 1

and 2. Head, ear, eye, nose, and throat disorders, endocrinology, immunology, gastroenterology, renal/urology, medical musculoskeletal disorders, cutaneous, toxicology, hematology, and infectious/ communicable diseases, behavioral emergencies, gynecological emergencies, obstetrics, neonatology, pediatrics, geriatrics, and abuse/assault will be discussed. In addition students will discuss environmental emergencies, thoracic drainage systems, collagen vascular diseases, basic blood chemistries, central line monitoring and patients with agitated delirium. Students will complete 90 hour clinical experience in the hospital setting. Clinical emphasis will be devoted to the emergency department, intensive care unit, coronary care unit, pediatrics, labor and delivery, and psychiatric departments. \*NSC = National Standard Curriculum Prerequisites - EMS 761 NSC Paramedic 2 and EMS 810 Advanced Cardiac Life Support Course \*NSC = National Standard Curriculum.

### EMS-763 9.50 NSC Paramedic 4

This course is a continuation of NSC Paramedic 1 -3. Care of the patient with special challenges and chronic illnesses will be discussed. Students will learn how to effectively manage a multiple casualty incident, gain Haz-Mat awareness, how to safely and effectively transport their patient, how to operate at a crime scene, and gain rescue awareness. Trauma and assessment based management will be discussed. Students will perform 150 hours of clinical time in the hospital and prehospital setting. Clinical experiences will be gained in the emergency department, intensive care unit, coronary care unit, pediatric department, labor and delivery department, and psychiatric department. Students will be expected to gain prehospital field experience on an ambulance or fire based EMS service. Prerequisite - EMS 762 NSC Paramedic 3 Co-requisite - EMS 815 Pediatric Advanced Life Support \*NSC = National Standard Curriculum.

### EMS-764 8.50

### NSC Paramedic 5

This course is a continuation of NSC Paramedic 1 - 4. Students will perform a 120 hour clinical/ field experience. A portion of this experience will a dedicated capstone field internship experience with one area transporting ambulance service. Students will review previous course content and practice NREMT practical skills stations in preparation for the NREMT-Paramedic practical and written exams. Prerequisites - EMS 763 NSC Paramedic 4 and EMS 815 Pediatric Advanced Life Support course. Corequisite - EMS 820 Prehospital Trauma Life Support \*NSC = National Standard Curriculum.

### EMS-810 1.00 Advanced Cardiac Life Support

This course is designed to provide the student with advanced emergency cardiovascular knowledge and skills. Treatment protocols will be based on the current American Heart Association guidelines. Completion of a cardiac dysrhythmia course is highly recommended. If a cardiac dysrhythmia course has not been taken students must seek approval from the EMS Coordinator prior to taking this course. This course is offered pass/ fail. Prerequisites - PS, EMT-P, or Paramedic certification, RN licensure, Respiratory Therapist or completion of NSC Paramedic 1 (EMS 760)

# EMS-815

### Pediatric Advanced Life Support

This course is designed to provide the student with the knowledge and skills necessary to care for newborn and pediatric patients in emergency medical situations. Treatment protocols will be based on the current American Heart Association guidelines. Completion of a cardiac dysrhythmias course is highly recommended. If a cardiac dysrhythmias course has not been taken students must seek approval from the EMS Coordinator prior to taking this course. This course is offered pass/fail. Prerequisites - PS, EMT-P, or Paramedic certification, RN licensure, Respiratory Therapist or completion of NSC Paramedic 3 (EMS 762)

### EMS-820 1.00

### Prehospital Trauma Life Support

This course is designed to provide the student with the knowledge and skills necessary to care for patients in emergency trauma situations. The course is based on the current National Association of Emergency Medical Technician's Pre-hospital Trauma Life Support (PHTLS) curriculum. This course is offered pass/fail. Prerequisites - EMT or higher EMS certification or RN licensure

### ENGLISH COMPOSITION ENG-025 4.00

# Basic Writing

This course teaches basic grammar and writing skills, punctuation, spelling, sentence structure, and paragraph structure. The student will be able to write one or two pages on one main idea. The course also covers basic study skills, time management, job-seeking skills, and an introduction to library skills. The course includes individual work and prepares the student for ENG 101 and ENG 105. This course does not meet graduation credit requirements for certificate, diploma, general studies, or associate degree programs. In order to move to ENG 101, students must earn a CP or above OR a 38-64 on the COMPASS Exam.

### ENG-096 5.00 Fundamentals of Writing

This course will help students develop their grammar skills based on their individual needs in order to prepare them for ENG-105. More comprehensive than Elements of Writing (ENG 101), Fundamentals of Writing will also help students learn and improve their basic writing, research, and documentation skills with an emphasis of sentence, paragraph, and essay development. Also, covered in class are basic study and reading skills, time management techniques, jobseeking skills, and an introduction to library skills. The course wraps up with a POST-COMPASS or equivalence exam. This course does not meet graduation credit requirements for certificate, diploma, general studies, or associates degree programs. -Mandatory Placement Levels: ASSET: 23-34; COMPASS: 0-37; ACT: 0-13

### ENG-101 3.00

### Elements of Writing

This course will help students develop their writing and critical thinking skills in order to prepare them for ENG-105. Elements of Writing will also provide opportunities for the improvement of oral expression and will help students learn and improve research and documentation skills with an emphasis of sentence, paragraph, and essay development. Also, covered in class are basic study and reading skills, time management techniques, job-seeking skills, and an introduction to library skills. The course wraps up with a POST-COMPASS or equivalence exam. In order for students to move to ENG 105, students must earn a CP or above OR a 65+ on the COMPASS Exam.

### ENG-105

# 3.00

# Composition I

This course focuses on the process of writing expressive and informative prose, incorporating oral, visual and electronic modes. It introduces research skills and critical thinking skills. Mandatory Placement Levels: Compass Writing: 65+; ACT 18+; or a grade of C or better in ENG 101-Elements of Writing.

# ENG-106

### 3.00 Composition II

This course is a continuation of ENG-105 with advanced work in library research techniques. The major focus is on persuasive and argumentative writing with an emphasis on critical thinking skills. Each student must have completed ENG-105 Composition I or equivalent with a grade of C or better before enrolling in this course.

# ENG-111

### 3.00 Technical Writing

This course is designed to aid students in expanding

skills in extracting, evaluating, and synthesizing information. Students will develop a working knowledge of the research process, including materials in the library. The course is an exercise in the processes of writing specific types of papers and reports, many of which students may be called upon to complete for other courses as well as on the job. The emphasis will be upon clear, concise, accurate, conventional, appropriate materials on a worthwhile subject or interest of a technical field as explained in each specific assignment.

### ENG-221 3.00

# Creative Writing

This course will cover the essentials of three creative writing genres: the short story, poetry and its elements, and creative non-fiction. Students will review various examples of professional authors and will produce their own creative work.

# ENG-949 1.00

# **Special Topics**

1,2,3, or 4 credit hours. This course, offered usually on a limited basis, provides an in-depth study on a topic of general interest pertaining to this department.

# **ENVIRONMENTAL SCIENCE**

ENV-111 4.00

### **Environmental Science**

Environmental science promotes an understanding of the Earth as a complex network of interacting organic and inorganic systems. It includes learning about the processes of science and information literacy. The course covers topics such as ecology, the Earth's resource challenges, air and water pollution, population growth, biodiversity, and sustainability. Three hours lecture, two hours lab.

### ENV-131 1.00

### **Environmental Science/Future Alternative**

This is a five week interdisciplinary course that examines the future alternatives for survival on this planet. Solutions to environmental problems are discussed. Special emphasis is given to land use options, species diversity, energy usage, habitat loss and water as a resource. This course satisfies a general education requirement in the Math/Science area. Five weeks.

### ENV-133 1.00

### **Environmental Sci/Population Problems**

This is a five-week interdisciplinary course covering the dynamics of human population growth. Characteristics of population growth will be examined. Global, U.S. and Iowa population trends will be studied. Crises and conflicts centering around population growth and its threat to the environment will be analyzed. This course satisfies a general education requirement in the Math/Science area. Five weeks.

# ENV-135

### **Environmental Science/Pollution Problems**

This is a five-week interdisciplinary course that covers major topics in pollution. These include the fundamentals of air, water and soil contamination. An emphasis is given to ozone depletion, global warming, acid rain, toxic waste, pesticides, eutrophication and groundwater contamination. Current pollution problems are also discussed. This course satisfies a general education requirement in the Math/Science area. Five weeks.

### ENV-148 3.00

### Intl. Perspective on Sustain Energy

This course is intended to provide an international perspective on energy and its use. Students will travel to Denmark to study and compare that countries approach to energy use with that of the United States. The international oil Cartel embargo of the 1970's demonstrated how dependent western economies were on imported oil. This course is intended to compare how other governments have dealt with their energy needs since the 1970's. Areas of comparison will include: energy use, energy waste, energy production, energy an the environment and the economics of energy. Course participants will be expected to observe Danish culture while living with a Danish host-family for approximately two weeks. The course will include a pre and post component of study at the student home college to enhance and reinforce the Danish experience. College level reading, writing and mathematics skills are required.

# NON-INTENSIVE ESL

ESL-265 4.00

# English As a Second Language

This is a basic English course for those whose native language is not English. The emphasis is oral and written communication. The course is designed for those students who score in Elements of Writing. This class meets daily.

### ESL-266 4.00

### English As a Second Language 2

This is a continuation of ESL-265. Emphasis is on oral communication, basic grammar, vocabulary building and writing skills. This class meets daily.

# **FIRE SCIENCE**

### FIR-124

# 3.00

### **Building Construction**

This course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. Prerequisites: FIR-127 Fire Behavior and Combustion or coordinator approval.

### FIR-127

3.00

# Fire Behavior and Combustion

This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.

### FIR-144 4.50

# Fundamentals of Fire Fighting

This course provides information and skills needed to meet the fire-related performance objectives in NFPA 1001, Standard for Fire Fighter Professional Qualifications, Fire Fighter I.

# FIR-145

3.00

### **Fire Strategies and Tactics**

This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground.

### FIR-149 3.00

### Fire Protection Hydraulics and Water

This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. Prerequisites: FIR-152 Fire Protection Systems or coordinator approved.

### FIR-152 3.00 **Fire Protection Systems**

This course provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers.

### FIR-200 3.00

### Occupational Safety/Health in Emerg Serv

This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization.

FIR-213 3.00

### **Principles of Emergency Services**

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

### FIR-214 3.00

### Legal Aspects of Emergency Services

This course introduces the Federal, State, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases.

### FIR-221 3.00 Fire Prevention

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education.

### FIR-226

### 3.00 Fire Administration I

This course introduces the student to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer.

# FIR-235

# 3.00

# Fire Investigation I

This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes. Prerequisites: FIR-127 Fire Behavior and Combustion, FIR-213 Principles of Emergency Services, FIR-221 Fire Prevention, FIR-124 Building Construction, FIR-200 Occupational Safety/Health in Emergency Services or coordinator approved.

FIR-236 3.00 Fire Investigation II

This course is intended to provide the student with advance technical knowledge on rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and testifying. Prerequisites: FIR-235 Fire Investigation I or coordinator approval.

### FIR-400

### 3.00

### Fire & Emergency Svcs Safety & Survival

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

# FOREIGN LANGUAGE-CHINESE

### FLC-141

### 4.00

Elementary Chinese I

This is a basic course in Chinese. Attention is given to the essentials of structure and vocabulary.

# FLC-142

4.00

# **Elementary Chinese II**

This is a continuation of FLC 141. Further attention is given to the essentials of structure and vocabulary.

# FOREIGN LANGUAGE - GERMAN

### FLG-141 4.00

# Elementary German I

This is a basic course in German. Attention is given to the essentials of structure and vocabulary.

FLG-142

### 4.00

### **Elementary German II**

This is a continuation of FLG 141. Further attention is given to the essentials of structure and vocabulary.

### FLG-241 4.00

### Intermediate German I

This course is a review of the basic elements of the German language. There is intensive practice in oral communication and listening comprehension, using the audio-tutorial approach.

### FLG-242 4.00

### Intermediate German II

This is a continuation of FLG 241. Intensive practice is continued in oral communication and listening comprehension.

### FLG-928 1.00

### Independent Study-Germany

This course will enhance your knowledge of Germany, its people, and culture---by exploring the German countryside, visiting small villages and meeting the local people.

# **FOREIGN LANGUAGE - SPANISH**

# FLS-110

### 3.00

### Spanish Professionals: Law Enforcement

1, 2 or 3 credits. This course is a beginning Spanish course designed to provide the basic vocabulary used in a particular profession. Culture as it applies to the profession will be a part of the course.

### FLS-111

2.00

### Spanish Professionals: Health

1,2 or 3 credits This course is a beginning Spanish course designed to provide the basic vocabulary used in a particular profession. Culture as it applies to the profession will be a part of the course.

### FLS-141 4.00 Elementary Spanish I This is a basic course in Spanisl

This is a basic course in Spanish. Attention is given to the essentials of structure and vocabulary.

# FLS-142 4.00

### Elementary Spanish II

This is a continuation of FLS 141. Further attention is given to the essentials of structure and vocabulary.

### FLS-241 4.00

### Intermediate Spanish I

This course reviews the basic elements of the Spanish language. There is intensive practice in oral communication and listening comprehension.

# FLS-242 4.00

# Intermediate Spanish II

This is a continuation of FLS 241. Intensive practice is continued in oral communication and listening comprehension.

# FLS-271

### 4.00 Advanced Spanish I

Assignments in the Advanced Spanish I course apply grammar concepts in the development of writing and reading skills within the context of Hispanic culture. Students have weekly reading and writing assignments which enhance their knowledge of Hispanic culture. Grammar concepts and usage are observed in the readings and integrated into the requirements of the writing assignments. All readings are taken from authentic materials. These include short stories, publications such as AMERICAS, Hispanic newspapers (from the web), and authentic sites on the web. Prerequisite: FLS 242 Intermediate Spanish II or 4 years of high school Spanish

### FLS-272 4.00

# Advanced Spanish II

This course is a continuation of FLS-271. The emphasis is on advanced study of structure through conversation and composition. Study units are drawn from the culture and civilization of the Spanish speaking world using authentic materials

# FLS-948

### 2.00

# Special Projects

1, 2 or 3 credits This course is open to students showing satisfactory preparation for topics chosen. It involves in-depth study, conferences and preparation of reports. A student must initiate the request for a special project course.

# FLS-949

### 3.00 Special Topics

1, 2 or 3 credits This course, offered usually on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department

# GEOGRAPHY

### GEO-121

3.00

### World Regional Geography

This introductory course in world geography acquaints the student with spatial relationships that exist between people, their culture, their environment, and places on earth.

# **GRAPHIC COMMUNICATIONS**

GRA-102 2.00

### Graphic Design Seminar

Students will utilize critical thinking skills in the discovery and implementation of graphic design. Students will compare and contrast both inside and outside pieces of design work and analyze the concepts used.

# GRA-107

### 3.00

# Introduction to Graphics Technology

Students will develop an understanding of the issues involved in the many facets of digital graphic industries. Students will evaluate what resolution to use when scanning artwork, manipulating images and displaying artwork to different electronic and printed media. Students will also become familiar with the language and terms commonly used in graphics and associated fields.

### GRA-111 2.00

### Vector Graphic I

Build a working knowledge of Adobe Illustrator, the graphic world's premier vector program for creating meticulous and scalable art. Course projects explore text and gradient tools, drawing tools, transforming and distorting objects, working with patterns, brushes and more. Create portfolio projects.

### GRA-115

### 2.00 Vector Graphic II

Build on basic Illustrator skills to gain a working knowledge of Adobe Illustrator's advanced features. Learn how to create illustrations and designs using features from filters and blends to gradient meshes, transparency, effects and symbols. Develop portfolio-building projects. Prerequisite: Vector Graphics I or instructor permission.

# GRA-158

### 3.00 Web Multimedia

Adobe Premiere is a digital video application used to create high quality videos for CD or web application. In this course you will learn to import video into Premiere and edit it to create short digital videos. Learn to add transitions, sound and text to your video.

# GRA-166

# 3.00

# Web Animations

Macromedia Flash is the leading tool for designing vector graphics and interactive multimedia for the Web. In this hands-on course, students will become skilled at the basics of drawing, tweening, and animating vector graphics. Become competent in creating rich web-user experiences such as user interfaces, navigation systems and complete websites that include images, text, animations, sound, and video.

GRA-176 3.00 Layout Design I

Whether it's a poster, brochure or Web page, a great layout communicates effectively. Master the basics of layout using Adobe InDesign, the latest environment for designing professional layouts. Prepare, package and export documents for print. Create portfoliobuilding projects in a hands-on environment.

### GRA-177 2.00 Layout Design II

Work on advanced layout projects using the increasingly popular layout and production tool Adobe InDesign. Gain skill in working with transparency, tabs and tables. Explore advanced techniques in creating effective communication pieces. Prerequisite: GRA-112 Layout Design 1 or instructors permission

### GRA-949 1.00

### **Graphics Tech Special Topics**

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

# HEALTH CARE ADMINISTRATION

# 3.00

### **Oveview of Health Care**

This course will explore the career field as it relates to health care. Items covered in class will include identifying components of health care system in the U.S., quality, size, scope and business functions of health care. The student is introduced to different sectors of health care.

### HCA-153 3.00

### Career Opportunities in Health Care

This course allows the student the opportunity to explore the professional opportunities related to health care. Students who complete this course will be able to identify leadership styles and skills, human resource issues, recruitment strategies, compensation practices, and various health care professions.

### HCA-155

### 3.00

### Technology and Health Care

This course will examine the informational technology used in health care. Students will be able to define the implications, efficiency and effectiveness of technology, and identify the evolution of technology. Past, current and future issues relating to technology will be discussed.

### HCA-157 3.00 Health Care and Economics

This course provides students an overview of economics and how it affects health care. Items such as financing systems, products and the costs associated with health care will be examined.

### HCA-159 3.00

### Financial Matters in Health Care

This course provides students with the general principles of the financial aspects of the health care professionals. Students will be able to define financial terminology, understand budgeting and cost analysis, payment methods for services and understand the responsibilities of financial management. Current issues of building a budget will be examined.

### HCA-161 3.00

# Legal Issues in Health Care

This course will discuss the legal and ethical issues dealing in health care. The intent of the course is to clarify legal issues that might approach health care professionals. Students will be able to define negligence, malpractice and understand the importance of confidentiality.

### HOSPITALITY/CULINARY MGT HCM-108 3.00

### Safety and Sanitation

Principles and methods of sanitation safety and equipment. Equipment selection and facilities planning. Also includes preventive maintenance.

### HCM-128 2.00

# Basic Baking and Lab

This course offers instruction in the baking fundamentals and procedures as applied to bread, rolls, cakes, and cake decorating. Practical experience in sanitation, safety and the use of large equipment is also emphasized in this course.

### HCM-129 2.00

### Advanced Baking and Lab

This course offers instruction in the advanced baking fundamentals and procedures as applied to bread, rolls, cakes, and cake decorating. Practical experience in sanitation, safety and the use of large equipment is also emphasized in this course.

# HCM-131 2.00

### **Basic Pastry and Lab** This course offers instruction in the baking

fundamentals and procedures as applied to pastries. Practical experience in sanitation, safety and the use of large equipment is also emphasized in this course.

### HCM-132 2.00

# Advanced Pastry and Lab

This course offers instruction in the advanced baking fundamentals and procedures as applied to pastries. Practical experience in sanitation, safety and the use of large equipment is also emphasized in this course.

# HCM-143 3.00

# Food Preparation 1

Introduces the student to the scientific principles used in food preparation. Involves preparation procedures and techniques to be used with fruits, vegetables, starch products, cheese, eggs, meat, poultry, and fish. Establishes criteria needed to produce a standard product.

# HCM-144

### 3.00 Food Preparation Lab 1

Preparation of small servings of salads, starch, cheese, egg, meat, poultry and fish products using the techniques studied in lecture. Oral and written evaluation of each product.

### HCM-148

# 3.00

Food Fundamentals This course offers a broad introduction to the foodservice industry. It also explores recipe structure, terminology, equipment, and the basics of cooking and sourcing of ingredients and knowledge

of suppliers and their role in the industry.

# HCM-157 3.00

# Food Preparation 2

This course will be the next level of the preparation of food, such as meat, poultry, fish and shellfish as well as fruit, vegetables and salad. It will cover all cooking techniques and dish preparations. This course is accompanied by HCM 158 Food Preparation Lab 2.

### HCM-158 3.00

# Food Prep 2 Lab

This course is a laboratory to coincide with HCM 157 Food Preparation 2. The students will gain hands on experience in the preparations of meats, poultry, fish and shellfish as well as fruits, vegetables and salads

### HCM-178 4.00

### .00

# Int'l Restaurant/Hotel Cuisine/Lab

Provides experience in the preparation of quality food production and practice in following recipes to prepare a variety of dishes with varying levels of difficulty Introduces various international cuisines and the ingredients and preparation methods used

# HCM-179

# 4.00

# Adv Cuisine for Restaurant and Hotel

This course will provide experience in the preparation of quality food production and practice in following recipes to prepare a variety of dishes with varying levels of difficulty. The students will be introduced to various international cuisines including ingredients and preparation methods.

### HCM-194 2.00

### International Breads

Students will learn how to bake fresh international artisan breads using quality ingredients, and a variety of making and baking techniques. Students will learn to use creativity and a variety of equipment to the fullest. Proper handling and packaging of such breads will be additional skills taught.

### HCM-228 3.00

### **Culinary Nutrition and Food Science**

Practica<sup>1</sup>, 'how-to' course focusing on nutrition as it relates to personal health; foods, and food preparation; menu planning and recipe codification; and marketing of nutritious menu items in the food service industry.

# HCM-238

### 2.00

### Menu Planning/Kitchen Design

This course applies the principles of menu planning and layout to the development of menus for a variety of types of facilities and service. The course will also strongly examine the kitchen design, and facility layout.

### HCM-240

2.00

### Menu Planning and Design

This course applies the principles of menu planning and layout to the development of menus for a variety of types of facilities and service. The course will also strongly examine the kitchen design, and facility layout.

### HCM-242 2.00

### **Event Planning and Customer Service**

This course will cover all aspects of event planning and customer service relating to the restaurant and hospitaility fields. Student will engage in a hands on learning experience of dealing with real life customers and planning events such as company parties, graduations, and wedding receptions.

# HCM-254

### 2.00 Purchasing for Profit and Loss

This course teaches the principles and methods of food purchasing with emphasis on specifications and grading of various food products. The course includes financial procedures and controls used in the food service industry.

### HCM-259 2.00

### Jams, Jellies, and Preservatives

To achieve a basic knowledge in fruits, vegetables, and herbs being made into jams, jellies, and preserves from scratch. Also how to store and properly handle the natural essence of the quality ingredients. Students will also learn basics in pairing such ingredients to heighten the palate.

# HCM-266

# 3.00

# **Culinary Mathematics**

This course addresses the relationship between nutrition and health. Practical, 'how-to' course focusing on nutrition as it relates to personal health; foods, and food preparation; menu planning and recipe modification; and marketing of nutritious menu items in the food service industry.

# HCM-272

### 2.00

### Garnishing and Finishing Techniques

This course is designed to illustrate the many and varied ways chefs can improve dishes with professional garnish skills and presentation methods. This course will also provide students training in the qualities of food service professionalism.

### HCM-279 3.00

### Accounting for Hospitality

This course will provide a balanced mix of accounting theory and practice, tailored to the special needs of the hospitality service industries. It gives attention to the unique accounting and operating characteristics that are of major concern to managers in the hospitality industry in the new millennium. In simple, straightforward language, this book helps managers in the hospitality industry acquire a basic understanding of financial statements, payroll, office calculator's and cost accounting. Current coverage of emerging issues and techniques are covered.

# HCM-285

# 4.00

# Advanced Food Prep

This course offers the students a greater range of ingredient knowledge, taking the fundamentals learnt in the first year and stretching their ability and talent with a much more diverse and varied mixture of cooking techniques and styles while incorporating modern restaurant skills and methods.

### HCM-286 4.00

### Advanced Food Preparation 2

This course offers the students a greater range of ingredient knowledge, taking the fundamentals learnt in the first year and stretching their ability and talent with a much more diverse and varied mixture of cooking techniques and styles while incorporating modern restaurant skills and methods.

### HCM-291 2.00 Cake Decorating

This course introduces the basics of how to decorate cakes that look and taste great. The lessons will consist of how to prepare the cakes and decorate with borders, flowers, leafs, stars, and other designs that make the cake look professional. Students will do actual designs and techniques with frosting in each class and will decorate a complete cake in various sessions throughout the class.

### HCM-292 3.00 Food Preparation

This Course offers instruction in the Fundamentals of basic cooking skills, use of equipment, kitchen safety and basic recipes that are the foundations for all culinary learning.

### HCM-293 2.00 Advanced Cake Decorating

This course will be covering an advanced array of fundamentals for professional frostings and icings, layered cakes, wedding cakes, cupcakes and piping techniques. This class will offer larger equipment skills, time management, and food cost.

### HCM-294 3.00

# Food Preparation 2

This Course offers instruction in the Fundamentals of basic cooking skills, use of equipment, kitchen safety and basic recipes that are the foundations for all culinary learning.

### HCM-296 3.00

### International Cuisine

This course offers the students a greater range of ingredient knowledge, taking the fundamentals learnt in the first year and stretching their ability and talent with a much more diverse and varied mixture of cooking techniques and styles while incorporating modern restaurant skills and methods.

### HCM-297 2.00 Chocolate Confections

### This course introduces you to the principles involved in tempering chocolate, creating chocolate sculptures, forming simple centerpieces, and preparing chocolates and other confections with soft, hard, and liquid centers. You?II learn to use both traditional and contemporary production methods in creation confections by hand and with special equipment. Efficient methods to increase productivity in this highly specialized field will be highlighted.

# HCM-298

### 2.00 Knife Skills

This course offers instruction in the proper use of knives and other culinary equipment and allow gradual growth and confidence in ability with the tools of the trade and allow all students to become proficient in this most important of tasks.

### HCM-299 3.00

### Creative Desserts

This course offers instruction in the fundamentals and procedures of individual desserts. Hot and Cold, American and European. This course teaches desserts traditionally manufactured for professional kitchens such as hotel and restaurants. This class will teach both modern and classic desserts and plating.

### HCM-300 2.00

### Beverage Management

This course will familiarize the student with all aspects of beverage service including wine and alcohol laws. The basic mechanics of beverage preparation, sales and promotion will be covered. This course will follow the Serv Safe curriculum.

# HCM-305 2.00

# Meat and Fish Fabrication

Designed to help the students grasp the principles of industry techniques when manually prepping proteins for restaurant or hotel menus. A large selection of poultry, meat and both round a flat fish will be used.

### HCM-332

### 2.00

### **Hospitality Personnel Management**

This course is designed to provide the students with the human resource qualities that are required in the industry, plus diversity, regulations and legal requirements will be covered. Students will learn how to deal with situations that occur in the field and gain an understanding of the needs of employees and customers.

### HCM-336 3.00

# Event Planning & Customer Service 1

This course will cover all aspects of event planning and customer service relating to the restaurant and hospitality fields. Student will engage in a hands on learning experience of dealing with real life customers and planning events.

### HCM-337

### 3.00 Event Planning and Customer Service 2

Designed to help the students grasp the principles of event management and planning strategies for all types and sizes of events, as well as provide an education in the art of high end customer service.

### HCM-511

### 3.00 Food Technology Internship

This course provides an opportunity to gain practical experience through on-site training at Willow Ridge Golf Course. The student will work in all areas of the restaurant facility including front and back of house. A letter grade of "C"" or higher must be earned in this course to satisfy the program graduation requirements."

### HCM-513

### 1.00 Hospitality Professionalism

This course will give the students hands on experience working in a real life restaurant. Students will work in the kitchen as well as in the front of the restaurant serving guests.

### HCM-517 1.00

# Hospitality Professionalism II

This course will give the students hands on experience working in a real life restaurant. Students will work in the kitchen as well as in the front of the restaurant serving guests.

### HCM-518

### 1.00 Baking Internship

This course provides an opportunity to gain practical experience through on-site training at Willow Ridge Golf Course or an approved site. The student will work in the baking and/or pastry area of the restaurant facility and complete a minimum of 60 on-the-job hours. A letter grade of "C" or higher must be earned in this course to satisfy the program graduation requirements.

### HCM-592 3.00 Convention Mana

# Convention Management

Introduces the principles of convention management, event planning and food service. The students will learn the how, what and when of convention management, as well as being hands on with events and conventions organized in conjunction with the college through menu planning, purchasing, equipment needs and rentals, and food service operations.

# HCM-608

### Intro to Hospitality

A detailed look at restaurant and institutional food service operations, hotel and motel management, travel, tourism and international hospitality. Students will learn to better evaluate career opportunities, learn the level of quality and service necessary in an ever-changing industry.

### HCM-609 3.00

### Hospitality Management

This course will give students a concise background into what is required of restaurant, hotel or food service manager, and to prepare them for the many facets and challenges of management and to arm them with all the knowledge they will need when the "I need to see the Manager" situation arises.

### HCM-613 3.00

### Hospitality Marketing and Sales

This course is designed to provide the students with the importance of marketing in the food service industry. They will learn that all facets of marketing will have a direct affect on the business. The students will gain an understanding of the importance of providing for customer needs which will make the student a better manager.

### HCM-949

1.00

### Special Topics

This course, usually offered on a limited basis only, provides an in-depth study on a topic or general interest pertaining to this department.

### **HISTORY**

HIS-112 4.00

### WestCiv:Ancnt to Early Modern

This course is a comprehensive study of the major political, social, economic, cultural and philosophical movements in Western Civilization from the Stone Age to the Age of Enlightenment.

### HIS-113 4.00

### WestCiv: Early Mod to Present

This course is a comprehensive study of the major political, social, economic, cultural and philosophical movements in Western Civilization from the Age of Enlightenment to the Present.

### HIS-151 3.00 U.S. History to 1877

This course includes the political, socio-cultural, and economic factors in the development of American Civilization from the earliest European explorers until the end of the Civil War and Reconstruction. The course will focus on the changing aspirations and behavior of ordinary Americans as well as the transformative achievements of the powerful and famous. The objective is to understand not only what happened, but also why it happened. The course will allow students to analyze critically the significance of race, ethnicity, religion, class, and gender in the American Experience and prepare students to make their own judgments about the relative importance of different factors in shaping the American past.

# HIS-152 3.00

### U.S. History Since 1877

This course includes the political, socio-cultural, and economic factors in the development of American Civilization from the end of Reconstruction to the present. The course will focus on the changing aspirations and behavior of ordinary Americans as well as the transformative achievements of the powerful and famous. The objective is to understand not only what happened, but also why it happened. The course will allow students to analyze critically the significance of race, ethnicity, religion, class, and gender in the American Experience and prepare students to make their own judgments about the relative importance of different factors in shaping the American past.

### HIS-211 3.00 Modern Asian History

This course is an introductory study of the main Asian civilizations today. A historical analysis of Asian ways of life and thought is made with an emphasis on the political, social, geographic, economic, religious, and cultural environment within which most Asians live.

### HIS-251 3.00

### U.S. History 1945 to Present

This course explores key themes and topics in the recent American history, from the end of World War Two to the present, including the Cold War (origins, ideologies, evolution, fall of communism); major governmental initiatives (desegregation, McCarthyism, War on Poverty/Great Society, Vietnam War, War on Drugs, War on Terror); domestic politics (political parties, presidential elections, political realignments); social movements (civil rights, New Left, anti-war, feminism, environmentalism, gay rights, religious right); political economy (military-industrial complex, Keynesian economics and social welfare programs, stagflation, energy crisis, Reaganomics, Great Recession); and culture (race, ethnicity, religion, gender, sexual orientation, popular culture, youth subcultures and countercultures, marriage and family relations, mass media, social media, crime and punishment, consumer culture, rites of passage).

### HEALTH SCIENCES HSC-104

2.00

### Introduction to Health Care

Students will have a basic introduction to the health care delivery system, professionalism and legal and ethical responsibilities of the health care worker. The communication process will be introduced as well as an understanding of patients' needs and behavior. Aspects of patient care will be discussed involving safety, infection control, transfer techniques and vital signs.

### HSC-112 1.00 Medical Terminology

The course will provide an introduction and overview of medical language with emphasis on basic, essential terminology. Definitions, standard abbreviations, pronunciation, correct spelling, will be included.

### HSC-113

# 2.00

# Medical Terminology

The student will study terminology of the human body systems in more depth than HSC-112 Medical Terminology. The emphasis will be on recognition and functional vocabulary related to medical science. Definitions, standard abbreviations, pronunciations, correct spelling, will be included. Students with prior experience in a health field may elect to "test out" of medical terminology. See Dean of Health Science for additional information.

### HSC-172 3.00

### 75 Hour Nurse Aide Course T9905

This course provides students with a basic level of knowledge and skills to provide safe, effective resident care. This nurse aide course meets the training requirements of The Omnibus Budget Reconciliation Act of 1987 (OBRA) for aides working in nursing facilities (NF) and skilled nursing facilities (SNF).

HSC-178

# 3.00

# Advanced Nurse Aide Course

The Advanced Nurse Aide course prepares students to provide patient care in the acute care (hospital) setting.

### HSC-278

# 4.00

# Limited Practice Radiography

This course is designed to meet requirements of Chapter 42 of the Rules and Regulations for Radiation Emitting Equipment. The course emphasis is placed on providing the knowledge and skills necessary to provide maximum protection from ionizing radiation for the patient and personnel. Included in the course is basic physics as applied to x-ray machines and technology, film processing, patient positioning and preparation for radiographs of the chest and extremities, image evaluation, factors that affect the image, and radiation biology and protection.

### HSC-960 8.00

### **CT** Internship

This course is available to qualified candidates that are accepted into the internship. This course is designed to enable accepted students to become proficient in Computed Tomography (CT) exams. The student will begin their internship by observing and assisting practicing CT Technologist conducting a variety of CT exams. As the student gains knowledge and experience in the various CT exams he/she gradually moves into an independent clinical performance stage. A student must independently, with direct supervision, perform the required amount of exams to complete the CT internship. A record of practice procedures and competency must be documented for ARRT competency. Co-requisites: Registered by ARRT in Radiologic Technology, Nuclear Medicine or Radiation Therapy. Must have an Iowa Permit to Practice.

### HSC-965 8.00 MRI Internship 1

This course is available to qualified candidates that are accepted into the internship. This course is designed to enable accepted students to become proficient in Magnetic Resonance Imaging (MRI) exams. The student will begin their internship by observing and assisting practicing MRI Technologist or Radiologic Technologists conducting a variety of MRI exams. As the student gains knowledge and experience in the various MRI exams he/ she gradually moves into an independent clinical performance stage. A student must independently, with direct supervision, perform the required amount of exams to complete the MRI Internship. A record of practice procedures and competency must be documented for ARRT competency and internship completion. Co-requisites: Registered by ARRT in Radiologic Technology, Nuclear Medicine or Radiation Therapy. Must have an Iowa Permit to Practice.

# HSC-966 8.00

### MRI Internship 2

This course is available to qualified candidates that have successfully completed HSC 965 MRI Internship 1. This course is a continuation of accepted students to become proficient in Magnetic Resonance Imaging (MRI) exams. The student will continue in their internship by observing and assisting practicing MRI Technologist or Radiologic Technologists conducting a variety of MRI exams. As the student gains knowledge and experience in the various MRI exams he/she gradually moves into an independent clinical performance stage. A student must independently, with direct supervision, perform the required amount of exams to complete the MRI Internship. A record of practice procedures and competency must be documented for ARRT competency and internship completion. Corequisites: Registered by ARRT in Radiologic Technology, Nuclear Medicine or Radiation Therapy. Must have an Iowa Permit to Practice.

### HSC-967 8.00

### Ultrasound Internship I

This course is available to qualified candidates that are accepted into the internship. This course is designed to enable accepted students to become proficient in ultrasound (US) exams. The student will begin their internship by observing and assisting practicing US Technologist conducting a variety of US exams. As the student gains knowledge and experience in the various US exams he/she gradually moves into an independent clinical performance stage. A student must independently, with direct supervision, perform the required amount of exams to complete the US Internship. A record of practice procedures and competency must be documented for ARRT compentency and internship completion. Pre-requisites and/or Co-requisites: Registered by ARRT in Radiologic Technology, Nuclear Medicine or Radiation Therapy. Must have an Iowa Permit to Practice.

### HSC-968 8.00 Ultrasound Internship 2

This course is available to qualified candidates that have successfully completed HSC 967 Ultrasound Internship 1. This course is a continuation of accepted students to become proficient in ultrasound (US) exams. The student will continue their internship by observing and assisting practicing US Technologist conducting a variety of US exams. As the student gains knowledge and experience in the various US exams he/she gradually moves into an independent clinical performance stage. A student must independently, with direct supervision, perform the required amount of exams to complete US Internship 2. A record of practice procedures and competency must be documented for ARRT competency and internship completion. Prerequisite: HSC 967 Ultrasound Internship 1.

### HSC-969 8.00

### Ultrasound (us) Internship 3 - General

This course is available to qualified candidates that have successfully completed HSC 968 Ultrasound (US) Internship 2. This course is a continuation of the internship by observing and assisting practicing US Technologist conducting a variety of US exams. As the student gains knowledge and experience in the various US exams he/she gradually moves into an independent clinical performance stage. A student must independently, with direct and indirect supervision, perform the required amount of exams to complete US Internship 3. A record of practice procedures and competency must be documented for ARRT competency and internship completion.

### HSC-970 10.00

### Ultrasound Internship 3 - Vascular

This course is available to qualified candidates that are accepted into the internship. This course is designed to enable accepted students to become proficient in ultrasound (US) exams. The student must successfully complete HSC 967 & 968 Internships 1 and 2. The student will assist practicing US Technologist conducting a variety of US exams. As the student gains knowledge and experience in the various US exams he/she gradually moves into an independent clinical performance stage. A student must independently, with direct and indirect supervision, perform the required amount of exams to complete the US Internship. A record of practice procedures and competency must be documented for ARRT competency and internship completion.

# **HUMAN SERVICES**

HSV-135

# 3.00

# Women's Issues

This course will examine the issues that women may bring to the counseling or social work settings. A review of the history of women and their roles in society will be utilized as background information. In addition, the life-cycle of women, gender stereotypes, mental health issues and female sexuality will be studied. Using this information, the course will address common reasons women often seek counseling.

### HSV-162 3.00

### Intro to Human Disabilities and Services

This course introduces careers related to working with people with disabilities. It includes an introduction to special education, residential services, vocational services, and other services for children and adults with disabilities. The student will be introduced to specific disabilities, ways people with disabilities learn, child development, and literacy. It covers professionalism, teamwork, communication skills, and behavior management. The student will complete service learning projects.

# HSV-180

### Ethics for Human Services Professionals

The basic knowledge and responsibility of professional ethics and boundaries in relationship to clients, society, and professional peers will be studied. The course will focus on the interaction between the human services provider and those they work with. The course will concentrate on the importance of boundaries, ethics, and confidentiality.

### HSV-190

# 3.00

# Youth Care Issues

This course will explore techniques of guidance and discipline with Infants and Toddlers in Group Care. Students will learn keys to understanding behaviors of children and how to support the individual needs of infants and toddlers.

### HSV-220

### 3.00

### Introduction to Counseling Theories

This course provides instruction in skills of observing and recording behavior and organizing information into clear and logical reports. The course will also cover interviewing as a method of gathering and evaluating needs. It will introduce the student to the skills of establishing open relations with a client and assisting the client in understanding their needs to incorporate a more satisfying behavior.

### HSV-224

# 1.00

# Working wth Youth

Through examining current issues that affect our youth, students will develop an understanding of the characteristics and needs of difficult children. Students will practice communication, conflict resolution and behavioral management skills that promote appropriate behaviors and future successes for difficult children.

### HSV-228 3.00

### **Group Counseling Techniques**

This course will examine group interaction and processes. Attention will be given to how groups can be used to promote growth in their members as well as promote social change. The course focuses on developing an ability to identify community leadership and developing skills in mobilizing community resources to meet social needs.

### HSV-229

### 3.00 Group Facilitation Techniques

This course will examine group interaction and processes. Attention will be given to how groups can be used to promote growth in their members as well as promote social change. The course focuses on developing an ability to identify community leadership and developing skills in mobilizing community resources to meet social needs.

### HSV-255 3.00 Addictive Disease Concepts

This course will review the history of addictions and society issues. Students will examine the theoretical foundations and current concepts of the addiction process. The course includes the study of the physiological, psychological and sociological aspects of addictions, abuse and dependence. The classifications of basic pharmacology and psychoactive drugs plus the physiology impacts will be explored. Best-practice treatment modalities will be discussed.

# HSV-258 1.00

### Substance Abuse

This course includes the study of the physiological, psychological and sociological aspects of alcohol/ drug use, abuse and dependence. The classifications and basic pharmacology of drugs, basic physiology and the effects of drug use on the systems of the body and alcohol and drug tolerance will be addressed. The course also includes the etiological, behavioral, cultural and demographic aspects and relief systems about alcohol/drug use along with the process of misuse and addiction including signs, symptoms and behavior patterns.

# HSV-269 1.00

### Victim Advocacy

This course will review the complexities of domestic violence and victim advocacy. The course material will recognize abusive behaviors and demonstrate crisis intervention techniques. The focus will be also directed toward understanding victimization and violence dynamics in the home and the affects on children. Additional instruction will be provided in the use of effective victim empowerment techniques.

# HSV-275

### 3.00

# Social Justice and Advocacy

The course will look at advocacy with persons and groups who are oppressed and vulnerable. Student attention will address social injustice, poverty and discrimination plus victims of domestic assault. Advocacy will focus upon the development of the person and their environment for the fulfillment of basic human needs. This course will also explore diversity, advocacy boundary issues and ethics. Victim advocacy will also provide students the increased awareness of domestic violence elements and situations. The students will be able to identify the elements of assault dynamics. This course provides the students with oppression sensitivity and helpful intervention skills to address the oppression.

### HSV-285 3.00

# Case Management::Intake to DischargeýCase Management::intake to Discharge

This course is a building block for courses which students will take as they continue their education for employment in the Human Services field. Students will learn how to compile relevant information on clients and how to formulate this information into treatment plans and service plans. Students will learn the role of the case manager and the four essential functions of case management. Students will learn the importance of ethics and confidentiality as well as how to effectively communicate with their clients. Students will also become familiar with the various assessment tools and forms used to diagnose, develop plans, and make recommendations for levels of care.

### HSV-850 2.00 Human Services Field Exper I

The field experience is a program of supervised practice in which the students placed in various agencies learn through actual participation and observation. The experience provides a chance to apply the classroom learning experience to the field of work. In addition, the student gains many new skills and has an exposure to and gains an appreciation for the basic values of the social services.

### HSV-854 1.00

### Human Services Field Experience IA

Human Services Field Experience IA is the first course in a two-part series. The course involves supervised practice in which students in various agencies learn through actual observation and participaton. The experience provides an opportunity to apply the classroom knowledge to the field of work. The students develop new skills, while being exposed to and gaining an appreciation for the basic principles of the human services.

### HSV-855 1.00

### Human Services Field Experience IB

This course is a continuation of HSV-854 Human Services Field Experience IA. The program of supervised practice continues as students in different agencies learn through actual observation and participation. The experience provides an opportunity to apply the classroom knowledge to the field of work. In addition, the students further develop helping skills while being exposed to and gaining an appreciation for the principles of the human services. Prerequisite: HSV-854 Human Services Field Exprinence IA

# HSV-928 3.00

# Independent Studies

1, 2, or 3 credit hours This course will provide students an opportunity to explore topics and projects to meet their own personal Human Services studies' interests. The students will create an outline of their independent study. The course may be an indepth research topic, an unique community service project, or an academic capstone activity. A student must obtain written permission from the supervising staff member to enroll in this course.

### HSV-949 3.00

# Special Topics

The department will offer from time to time credit offerings in selected special areas of interest on a topical basis per semester.

# **HUMANITIES**

HUM-113

# 3.00

Exploring the Humanities This course will examine thematically the humanities (art, music, literature, etc.). Students will explore aspects of the humanities to find the interconnectedness between people's cultural views and the art they create. Instructors will make extensive use of technology in the delivery of course material, and students will use technology in required class projects.

### HUM-182 3.00 Digital App-Music, Art,Theatre

This course is designed to give students in the humanities (fine arts) a foundation in contemporary technology and methods used in today's studios. The class will cover illustrations, notation, productivity (office), and utility software used by artists, designers, and performers in the daily course of their profession. Hardware, from digital drawing tablets and digital cameras to MIDI and copy machines as tools-of-thetrade will be examined. Students will learn to create digital portfolios. No pre-requisite.

### HUM-185 3.00

### Technology and Social Change

This course is designed for students who are interested in the future of technology and its impact on their lives and on the society in which they live. The focus is on examining modes of transportation as catalysts of social change. The integration of readings, films, and experiences with the visual arts and music will provide a basis for comparison and analysis of the relationship between transportation and social change.

# INDUSTRIAL TECHNOLOGY IND-106

2.00

### Industrial Pumps & Dr Systems

This course teaches students the basic principles of various types of industrial pumps and specialized drive systems required in their operation. Students will identify components, normal operating characteristics, routine maintenance, and common failures.

### IND-108 2.00

# Advanced Safety Technology

Students gain the ability to acknowledge hazard identification, avoidance, control and prevention, understanding of OSHA compliance and regulations, importance of safety and health training, general understanding of recordkeeping. Receive OSHA 30-hour course completion cards.

### IND-110

### 1.00

### CPR, First Aid, and Safety

Students will gain the ability to emphasize hazard identification, avoidance, control and prevention, understanding of OSHA compliance and regulations, importance of Safety and Health Training, general understanding of First Aid and CPR according to the American Heart Association. Upon successful completion of this course, the student will receive their OSHA 10-hour completion card, their First Aid and CPR cards.

# IND-116

### 2.00

# Pneumatic & Hydraulic Systems

This course will cover the basic principles and hands-on applications of pneumatic and hydraulic systems. Students will learn how to read, interpret, and construct fluid systems schematic diagrams containing pneumatic and hydraulic component symbols.

### IND-126 1.00

# Precision Measurements Lab

This course will reinforce mathematical concepts learned in the Technical Math I course. Students will use machinist rules, micrometers, digital micrometers, vernier height gauges, and other precision measuring instruments to directly apply mathematical skills.

### IND-127 1.00 Shop Operations

Students will learn the basics of metal shop work. Areas of instruction will include shop safety, proper use of hand tools, maintenance of tools and equipment, and fasteners.

### IND-128 1.00

# **Blueprint Reading**

Students will learn the symbolic representation of the machining and welding trades. Students will learn to communicate symbolically using standard industry representations.

### IND-183 4.00

### Industrial Machine Maintenance

This course will introduce the student to a practical "hands-on" approach to the basic principles of industrial mechanics. The student will develop safety and troubleshooting skills needed to solve problems on real-life equipment used in industry today.

# IND-184

# 2.00

# Mechanical Processes

This course will cover the basic operation and maintenance of industrial systems. The student will learn the function and the role of a maintenance technician. Laboratory exercises will emphasize the importance of a positive mental approach to maintenance and the need to develop troubleshooting skills as well as mechanical skills.

# IND-185

2.00

# **Predictive & Preventative Maintenance**

This course will involve skill development in advanced mechanical maintenance procedures. The student will design, construct, and maintain industrial energy transfer systems. Techniques in preventative and predictive maintenance operation, utilizing the applications of laser alignment, thermography, vibration and oil analysis, and other functions, will also be covered.

### IND-201 1.00

# **10-HOUR General Industry Training Course**

The OSHA Outreach Training Program for General Industry provides training for entry level workers and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in general industry. The program also provides information regarding workers' rights, employer responsibilities, and how to file a complaint. Through this training, OSHA helps to ensure that workers are more knowledgeable about workplace hazards and their rights.

# IND-203 1.00

# Careersafe Prof Dev - Gen Industry

CareerSafe Professional Development Program (CPDP) is designed to better equip education professionals with the requisite knowledge, skills, tools and resources necessary for increased safety orientation in the classroom and as a result, improve the learning experience for students. The CPDP increases the educator?s teaching skills through applied research and action learning. Educators are provided guided action learning that enables them to establish effective safety practices, apply their safety knowledge, and deliver safety training. Additionally, the CPDP supports educators with a number of knowledge assessments, analytical tools and data to support instructional decision-making. The CPDP empowers educators to work effectively with parent and community partners to provide students with advanced knowledge and skills in the area of school and workplace safety. Through the CPDP, educators and students become advocates for best practices in safety, especially planning and hazard avoidance.

### IND-205 1.00

### Osha 10-HOUR Construction Industry

The OSHA Outreach Training Program for Construction Industry provides training for entry level workers and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in workplaces in general industry. The program also provides information regarding workers' rights, employer responsibilities, and how to file a complaint. Through this training, OSHA helps to ensure that workers are more knowledgeable about workplace hazards and their rights.

### IND-207 1.00

### Careersafe Prof Dev - Construction

CareerSafe Professional Development Program (CPDP) is designed to better equip education professionals with the requisite knowledge, skills, tools and resources necessary for increased safety orientation in the classroom and as a result, improve the learning experience for students. The CPDP increases the educator?s teaching skills through applied research and action learning. Educators are provided guided action learning that enables them to establish effective safety practices, apply their safety knowledge, and deliver safety training. Additionally, the CPDP supports educators with a number of knowledge assessments, analytical tools and data to support instructional decision-making. The CPDP empowers educators to work effectively with parent and community partners to provide students with advanced knowledge and skills in the area of school and workplace safety. Through the CPDP, educators and students become advocates for best practices in safety, especially planning and hazard avoidance.

### IND-314 1.00

### **Computer Maintenance Mgmt Sys**

The focus of the course will teach the students the concepts of why CMMS software is needed and is an important part of a maintenance department. The students will learn the terminology and the operations of CMMS software. The students will be taught how to electronically receive, create & complete aspects of work orders.

### IND-932

### 4.00

Internship

The student will be able to apply classroom instruction in a real world environment.

### IND-949 3.00 Special Topic

Plumbing Design and Installation courses will provide students with a survey of fundamental plumbing principles, practices, and systems. The course covers the design, installation, and testing of plumbing systems in residential and commercial settings. Topics include the history of plumbing, plumbing codes, tools and materials, and common joining and installation procedures. 1. Plumbing fixtures and appliances 2. Testing and inspecting plumbing systems 3. Safety and personal protective equipment 4. Press fitting for copper pipe 5. Customer service and plumbing system repair

# JOURNALISM

JOU-121 3.00

### News Writing and Reporting

This course focuses on of the principles of news gathering and news writing, with emphasis on journalistic writing. Basic news story structure and development, news evaluation, news gathering methods, interviewing, craftsmanship, and reporting techniques in general are explored. Newspaper and other news and information media are analyzed. The course is particularly recommended for communications and journalism majors and those planning careers in news media, public relations, communications, corporate communication and news and informational multimedia.

### JOU-200

### 3.00 Ap Style Editing

Get ready to learn to think like an editor. If you're already starting to think like an editor, you're probably wondering about that singular "job." There are many editing positions, and editors' titles (and their meanings) vary widely from publication to publication and even to online media. A managing editor at a small newspaper may do all the combined tasks of an assistant editor, senior editor and caption writer at a national magazine. There are associate editors, field editors, contributing editors, editors-in-chief, articles editors and more. All of them, no matter what their duties, use the same set of skills. In this class you'll learn the basics, as well as many tricks of the trade.

# JOU-210

# 3.00

# Media Law and Ethics

This course will examine the historical background and development of freedom of expression and the limitations imposed on those freedoms by statue, common law and the court's interpretation of constitutional law. The course also will give you the foundation necessary to make ethical decisions within your profession and become a more critical thinker. The case study approach will be used, with an emphasis on the principles and philosophy that underlie the various aspects of communications law.

### JOU-941 1.00 Practicum

This course of study provides the student with the opportunity to experience hands-on learning through the creation and production of mass communications projects such as The Collegian, podcasts, web sites, and digital news programming. Its purpose is to synthesize previous educational experiences applicable to related occupations. It is to resemble, as closely as possible, a real-life work situation. Pre-Requisite JOU-121 News Writing and Reporting with a grade C or better

# LITERATURE

LIT-101 3.00

### Introduction to Literature

This course includes training in understanding the forms of imaginative literature: short story, drama, poetry, and novel. Attention is given to personal and social values as they appear in selected readings. No prerequisites or corequisities.

### LIT-114 3.00

### American Literature

This course emphasizes the vast spectrum of authors writing in different genres by focusing on a particular theme in American literature. An intensive study of a few authors will be used to represent the full spectrum. Students will be expected to read and respond to the literature through both discussion and written work.

### LIT-135 3.00

# Film As Literature

This course is designed for students to learn the basics of literature interpretation and analysis through the visual medium of film. Students will learn film terminology and will study particular film genres.

### LIT-155 3.00 Madare World F

# Modern World Fiction

This course centers on reading, analysis, and discussion of contemporary short stories and novels. Emphasis is on the development of critical thinking through exposure to the major schools of modern world literature from 1945 to the present.

### LIT-210 3.00

### The Graphic Novel

This course emphasizes the genre of comic book writing and creation. This genre is a legitimate form of literature and is subject to similar scrutiny as a traditional literature course would require. The graphic novel will be explored and examined in its various forms, and thematic connections will be made among texts, outside resources, and personal experiences.

# **MEDICAL ASSISTANT**

### MAP-115 6.00

### Medical Office Management I

This course presents legal implications and ethical considerations pertaining to heath care. Basic administrative procedures performed in ambulatory health care settings are introduced to provide medical assistant students with a foundation for continued studies of the administrative duties relevant to the profession. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. This course is the first course of a two-semester sequence.

### MAP-120 6.00 Medical Office Managem

# Medical Office Management II

This course expands on basic administrative procedures presented in Medical Office Management I with emphasis on basic practice finances, managed care and insurance, and procedural and diagnostic coding performed in the Electronic Medical Record. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. Pre-requisite: Acceptance into the Medical Assistant program and successful completion of MAP-115 Medical Office Management I witha "C" (76%) or better.

### MAP-221 1.50

### .50 Iadiaal Lahawa

### Medical Laboratory Procedures 1 This course presents basic medical laboratory procedures performed in ambulatory health care settings including the use of basic laboratory equipment, blood collection by capillary and venipuncture, and basic laboratory tests performed. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. This course is the first course of a two-semester sequence. Pre-requisite: Acceptance into the Medical Assistant Program. Co-requisites: HSC-113 Medical Terminology and MAP-542 The Human Body in Health and Disease I.

# MAP-226

### 1.50 Medical Laboratory Procedures II

This course expands on basic medical laboratory procedures presented in Medical Laboratory Procedures I with emphasis on chemistry, urinalysis, and microbiology. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. Pre-requisites: Acceptance into the Medical Assistant Program and successful completion of MAP-221 Medical Laboratory Procedures I with a "C" (76%) or better.

### MAP-322 3.50

### Examination Room Techniques I

This course presents an introduction to basic clinical procedures performed in ambulatory health care settings. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. This course is the first course of a two-semester sequence. Pre-requisite: Acceptance into the Medical Assistant Program. Co-requisite: MAP-542 The Human Body in Health and Disease I.

# MAP-325 5.50

# **Examination Room Techniques II**

This course expands on basic clinical procedures presented in Examination Room Techniques I with emphasis on minor surgery, pharmacology, and more complex clinical procedures that may be performed in an ambulatory health care setting or specialty practice. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. Pre-requisite: Acceptance into the Medical Assistant Program and successful completion of MAP-322 Examination Room Techniques I with a "C" (76%) or better.

### MAP-435 2.00

### Interpersonal Relations in Health Care

This course presents concepts of effective communication necessary for caring for patients in an ambulatory health care setting. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. Pre-requisite: Acceptance into the Medical Assistant Program.

# MAP-542

### 3.00 Human Body in Health & Disease I

This course includes a study of the anatomy and physiology of each body system and common pathology related to each system. The course begins with a study of the structural organization of the human body and then proceeds with a comprehensive study of the cardiovascular system and lymphatic system. Common pathology related to these systems is studied that includes common signs and symptoms, etiology, methods of diagnosis, and treatment options. The interaction that occurs between systems and changes to the structure and function that occur across the life span within each system are identified. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. This course is the first course of a two-semester sequence. Other body systems are studied in MAP-555 The Human Body in Health and Disease II. Co-requisite: HSC-113 Medical Terminology.

### **MAP-555** 5.00

### Human Body in Health & Disease II

This course includes a study of the anatomy and physiology of each body system and common pathology related to each system. A comprehensive study of the integumentary system, skeletal system, muscular system, nervous system, sensory system, endocrine system, respiratory system, digestive system, urinary system, and reproductive system is included. Common pathology related to these systems is studied that includes common signs and symptoms, etiology, methods of diagnosis, and treatment options. The interaction that occurs between systems and changes to the structure and function that occur across the life span within each system are identified. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care. Pre-requisite: Successful completion of MAP-542 The Human Body in Health and Disease I with a "C" (76%) or better.

### MAP-610 3.50 Practicum

The course provides the student with an six week supervised practicum in an ambulatory healthcare setting, performing psychomotor and affective competencies. A minimum of 210 hours is obtained. On-site supervision is provided by an individual who has knowledge of the medical assistant profession. Students shall not receive compensation/payment, monetary or otherwise, from the practicum site for services provided as a part of practicum from the site. The course encourages the student to demonstrate critical thinking based on knowledge of academic subject matter required for competence in the medical assisting profession. Students will learn to incorporate the cognitive knowledge in performance of the psychomotor and affective domains in their practice as medical assistants in providing patient care.

### MATHEMATICS

# MAT-036

# 3.00

Pre-Technical Math

This course has been designed to give students an introduction to Technical Mathematics, including competencies in the areas of whole numbers, decimals, fractions, and mixed numbers, ratios, percentages, measurements, algebra, and solving equations.

### MAT-045 4.00

### **Fundamentals of Math**

This course is a developmental mathematics course designed to increase ability in basic mathematics. The course includes the study of arithmetic operations on whole numbers, decimals, fractions, mixed numbers, percents, ratios, proportions, simple algebraic and geometric concepts. This course does not meet graduation credit requirements for certificate, diploma, general studies, or associate degree programs.

### MAT-063 4.00 **Elementary Algebra**

This is a first course in algebra which covers the beginning concepts of algebra through the properties of exponents. This course does not meet graduation credit requirements for certificate, diploma, general studies, or associate degree programs. Prerequisite: MAT-045 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

# MAT-102 4.00

### Intermediate Algebra

This is a second course in algebra which is a continuation of the study of the concepts developed in Elementary Algebra and proceeds through quadratic functions. Prerequisite: MAT-063 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

### MAT-111 4.00 Math for Liberal Arts

This course is designed to introduce a student in non-math related majors to some of the basic uses of mathematics in society today including uses of algorithms for problem solving. Topics covered include principles of counting, sets, probability and statistics, geometry, logic, math of finance, and number theory. This course satisfies a general education requirement in the Math/Science area. Prerequisite: MAT-063 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

# MAT-117 3.00

### Math for Elementary Teachers

This course covers topics from arithmetic and geometry that are needed by prospective elementary school teachers. Topics included in the course are critical thinking and problem solving, operations on whole numbers, numeration systems, elementary number theory, operations on rational numbers, decimal fractions and an introduction to geometric concepts. Prerequisite: MAT-063 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

# MAT-120

# 3.00

# College Algebra

College Algebra is a study of functions, their inverses and composites, topics of analytic geometry and other topics important to the study of calculus. Prerequisite: MAT-102 or equivalent with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

### MAT-127 5.00

### College Algebra and Trigonometry

This course is designed to prepare those students who are planning on taking all or part of the calculus sequence. Topics covered include algebraic, logarithmic, and exponential functions, inverse functions, sequences and series, conic sections, and the fundamentals of trigonometry. This course satisfies a general education requirement in the Math/Science area. Prerequisite: MAT-102 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

### MAT-140 3.00 Finite Mathematics

This course is a study of the topics of finite mathematics which have applications in nonphysical science areas such as business, economics, psychology, social science and natural science. Topics included are systems of linear equations and inequalities, linear programming, probability and decision theory. This course satisfies a general education requirement in the Math/Science area. Prerequisite: MAT-063 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

### MAT-150 3.00 Discrete Math

This course is designed to increase the proficiency of the student in the application of technical arithmetic, algebra, and basic trigonometry. Students will be introduced to computer number systems with the associated conversions, logical functions and Boolean logical operations.

### MAT-156 3.00

# Statistics

This is the first course in basic probability and statistics which includes the study of frequency distributions, measurers of central tendency and dispersion, elements of statistical inference. This course satisfies a general education requirement in the Math/Science area. Prerequisite: MAT-063 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

### MAT-157 4.00 Statistics

This is a course in basic probability and statistics which includes the study of frequency distributions, measures of central tendency and dispersion, elements of statistical inference, regression and correlation. This course satisfies a general education requirement in the Math/Science area. Prerequisite: MAT-063 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

### MAT-158 3.00 Statistics II

This is the second course in the statistics sequence. It includes the study of additional topics in probability, correlation, regression and statistical inference. The course also includes the topics of chi-square procedures, analysis of variance, non-parametric methods and statistical quality control. This course satisfies a general education requirement in the Math/Science area. Prerequisite: MAT-156 Statistics I with a "C" grade or better.

MAT-159 1.00

# Statistics Laboratory

This course is designed to provide students with hands-on opportunities to enhance their statistical understandings. Extensive use of technology will be employed to assist in student application of materials to real-world examples. This course satisfies a general education requirement in the Math/Science area. Two lab hours. Prerequisite: MAT-156 Statistics or concurrent enrollment

### MAT-165 3.00 Business Calculus

This course is a study of the concepts and skills of calculus which have important applications in business, economics, psychology, social science and natural science. Topics included are functions, limits, differentiation and its applications, and integration and its applications. Prerequisite: MAT-102 with "C" grade or better or the necessary score on the mandatory assessment and placement chart.

### MAT-180 2.00

### **Engineering Problems**

This course incorporates the use of log scales, electronic calculators and digital computers with emphasis on stored and library programs. It is appropriate for students entering science, mathematics or engineering fields. Prerequisite: MAT-127 or equivalent with "C" grade or better or concurrent enrollment in MAT-127.

### MAT-210 4.00

Calculus I

This is a first course in integrated calculus and analytic geometry. The concepts of analytic geometry are studied as they apply to calculus. The calculus concepts covered include the rate of change of a function, limits, derivatives of algebraic, logarithmic, trigonometric and inverse trigonometric functions, applications of the derivative and an introduction to integration. Prerequisite: MAT-127 or equivalent with "C" grade or better.

# MAT-216 4.00

### Calculus II

This is the second course of the calculus sequence. It includes the study of techniques and applications of integration, infinite series, polar equations and graphs, and vectors in two and three dimensions and vector-valued functions. Prerequisite: MAT-210 or equivalent with "C" grade or better.

### MAT-219 4.00 Calculus III

This is the third course of the calculus sequence. It contains the study of vector-valued functions, functions of several variables, multiple integration and vector analysis. Prerequisite: MAT-216 or equivalent with "C" grade or better.

# MAT-221

### 2.00 Calculus III

Calculus

This is the third course of the calculus sequence. It contains the study of functions of several variables, multiple integration and vector analysis.

### MAT-226 3.00

# Differntl Equat With Laplace Transforms

This course is the study of the elementary theory, solutions, and applications of ordinary differential equations. Prerequisite: MAT-216 or equivalent with "C" grade or better.

### MAT-743 3.00

# Technical Math

This is an applied mathematics course, which will teach or reinforce basic mathematical skills. Fundamental mathematical concepts will be applied to the real life problems of today's world.

### MAT-748 3.00 Technical Math II

Students will have instruction and practice in algebraic, geometric, and trigonometric operations essential for technical careers.

# MAT-749 4.00

# Technical Math III

The student will learn and apply concepts related to technical math as required in fields of design. Topics will include solutions of functions, differential and integral calculus, and their application in industrial settings.

# MAT-948

### 1.00 Special Projects

This course is for students with sufficient preparation in the particular interest area selected. It involves selection of an individual topic, conferences with the supervisor, and preparation of a final report. It is designed to meet the needs of a student wishing

to study a selected topic in depth. Permission of the staff member with whom the student wishes to work and the department head is required.

provides an in-depth study on a topic of general

# MAT-949

# 1.00

**Special Topics** This course, offered usually on a one-time basis only,

# interest pertaining to mathematics. MANUFACTURING

MFG-238 2.00

# Machine Processes I

This course will provide hands-on activities using the drill press, surface grinders, band saws, files, hacksaws and other tools and equipment used in the machine shop.

# MFG-256 2.00

### Introduction to Lathe Operations

This course will introduce the student to the function and application of the engine lathe. Students will learn to use the engine lathe in turning, drilling, reaming, boring and thread cutting applications.

### MFG-257

### 2.00 Advanced Lathe

This course covers advanced lathe operations. Students will learn to use the engine lathe in turning, drilling, reaming, boring, internal thread cutting applications, knurling, and taper turning.

### MFG-266

2.00

### Introduction to Mill Operations

This course will introduce the student to the safe use and operation of the vertical-milling machine. Students will learn machine set up, machining of square parts, parallel machining and milling of holes.

### MFG-305

# 2.00

# CNC Operations

This course will introduce the student to the fundamentals of computerized numerical control (CNC). Students will learn CNC programming, safety, tooling, set up, and machine operations.

### MFG-312 2.00 Advanced Cnc

### Students will learn advanced computerized numerical control programming using a computerized numerical controlled mill. The student will learn to use curve programming, subroutines, canned cycles, CNC threading, and tool difference compensation.

# MFG-320

# 3.00

# Computer Aided Machining

This course will introduce the student to the process of Computer Aided Machining (CAM). Students will use post-processors to convert computer drawings into machine tool operations.

# MFG-326

# 3.00

# Computer Aided Machining II

A continuation of Computer Aided Machining I. Includes instruction in writing and editing CNC programs, machine setup and operation, and use of Computer Aided Machining (CAM) equipment and software to program and operate CNC machines.

### MFG-400 3.00

### Introduction to Die Making

This course will introduce the student to fundamentals and design of tool and die, with an orientation of metallurgy related to the fabrication of die components.

# MFG-422

### 3.00

### Jigs and Fixtures

Students will learn specialized skills associated with the design and fabrication of work holding devices including jigs, fixtures, and other tools.

### MFG-453 2.00

### Introduction to Mold Making

This course will introduce the student to the design and operation of molds for thermoplastics. Topic areas will include cavities, cores, ejectors, pullers and shrinkage application.

### MFG-505

# 1.00

### Lean Manufacturing

This course will give students the basic concepts of a lean system. Students will learn the emphasis of waste prevention. The lean system's unique tools, techniques, and methods will be applied by students as it would happen in an industrial environment.

# MFG-506

# Quality Assurance

This course is designed to gain knowledge about quality control and applications of quality tools used in industry. The student will learn the applications or statistical process control and its applications. Also covered are Dr. Edward Deming & his 14 points for process improvement.

# MFG-932

### 4.00 Internship

The student will be able to apply classroom instruction in a real world industrial environment.

### MFG-949

### 1.00

### **Spec Top: Fabrication Processes**

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

# MANAGEMENT

### MGT-101 3.00

### **Principles of Management**

This course presents the theory and major functions of management and describes the role of the manager. Major concepts in organization are developed along with an understanding of the decision-making process and consideration of the human factor in management. Students may receive credit through a CLEP examination.

### MGT-260 3.00

### Introduction to Business Logistics

Introduction to Business Logistics with a focus on logistics systems, intra/inter firm relations, customer service, material management, inventory, information systems, and organization of the logistics function.

### MGT-261 3.00

### **Principles of Transportation Management**

A study of the Transportation Industry, including transportation history, regulation/deregulation, transportation modes, specialty carriers, pricing, and strategies.

# MGT-262

### 3.00

### **Principles of Purchasing and Logistics**

Introduction to purchasing, including strategies and concepts within the supply chain system. Supplier selection/evaluation, make/buy decisions, contracts and legal issues, purchasing ethics, negotiation tactics, and price/cost analysis.

# MGT-263

### 3.00

### Principles Distribution/Warehouse Mgt

Discussion of distribution systems and channels along with discussions of warehouse operations, layouts, and design.

### MGT-264 3.00

# Demand Planning and Inventory Management

The demand planning process linking the business plans and demand forecasts within the organization with supply chain partners, involving forecasting, material planning, customer relationships, and distribution channels concepts.

### MGT-265 3.00

### International Transport and Logistics

This course will provide a discussion of organized movement of goods and services across national borders. It will cover but not be limited to differences in cultures, business standards, infrastructure & transportation systems. This course will provide hands-on experience in global logistics.

# MGT-270 3.00

# **Operations Production Management**

This course introduces students to Operations Production Management, the science and art of ensuring that goods and services are created and delivered to the customer in the most effecient and effective cost while incorporating valued added activites, total-cost analysis, customer service, quality, profitability and multiple other factors into the practices and procedures. Today?s supply chain and manufacturing sectors must have an solid understanding of people, processes, technology and the creation of value into today?s goods and services.

### MGT-280 3.00

# Capstone

This course will give students the opportunity to apply the knowledge that they have gained in their program in a comprehensive way to business logistics and transportation management case studies. This course is recommended to be the last course taken. At least five courses with the MGT prefix are required prior to enrolling in the capstone course.

# MARKETING

# MKT-110

# 3.00

# Principles of Marketing

This survey course of the marketing field examines the movement of goods and services from the producer to the consumer. The areas of retailing, wholesaling, channels of distribution, marketing research, and pricing are approached from the total marketing concept.

### MKT-131 3.00

### Social Media Marketing

Social media has become a central component of business. Collaborative, social technology is now an essential part of many organizations including marketing, HR, legal, product management and the supply chain. In this course, we examine the organizational use of social media technologies such as photo and website editing, blogs, web analytics, and social networks, as well as the use of social media analytics to drive business strategy.

### **MKT-153** 3.00

# Advertising and Promotion

This course provides the student with an understanding of the advertising strategy principles and training for entry-level job positions in the fields of advertising and sales promotion.

# MEDICAL LAB TECH

MLT-111 4.00

# Fundamentals of Lab Science

This course is designed to acquaint the student with the field of laboratory science. The organization and role of the clinical laboratory are explored. Basic concepts in clinical laboratory testing and math are presented. Medical ethics, employment opportunities and professional organizations are included. Pre- Co-requisites: BIO-168 Human Anatomy & Physiology I with lab and HSC-113 Medical Terminology.

### MLT-120 3.00 Urinalvsis

This course is the study of the properties and constituents of urine and other body fluids. Emphasis is placed on theory and methodology of qualitative and quantitative analysis of urine. Constituent values are related to the physiology of the urinary system in health and disease. Pre- or Co-requisite: MLT-111 Fundamentals of Laboratory Science.

# MLT-133 3.00

# Erythrocyte Hematology

An introduction to clinical hematology and fundamentals of hemostasis is presented. This course focuses on red cell metabolism, hematopoiesis, evaluation of red cell morphology, and the pathogenesis of anemia. Prerequisite: MLT-111 Fundamentals of Laboratory Science. Pre- or Co-requisite: BIO-173 Human Anatomy & Physiology II with lab.

### MLT-171

### 3.00

### Immunology & Serology

The basic concepts of immunology and its application to in human disease are studied. The principles of routine techniques for serological testing and the use of lab tests for diagnosis are presented. Prerequisites: MLT-111 Fundamentals of Lab Science. Pre- or Co-requisite: BIO-173 Human Anatomy & Physiology II with lab.

### MLT-234

### 4.00

### Leukocyte Hematology/Coagulation

This course presents the disease processes leading to abnormal white and red cell morphology, and white blood cell disorders, including both benign and malignant states. An overview of hemostasis, thrombosis and anticoagulant therapy, including procedures routinely performed in the clinical hematology and hemostasis laboratory. Preor Co-requisite: MLT-111 Fundamentals of Laboratory Science.

### MLT-241 4.50

# Clinical Chemistry I

Analytical techniques are studied for precise measurement of chemical constituents of the blood and body fluids including electrolytes, protein, lipids, and enzymes. Clinical correlation of test results with states of health and disease will also be covered. Prerequisite: CHM-110 Introduction to Chemistry, CHM-111 Introduction to Chemistry Lab, MLT-111 Fundamentals of Laboratory Science and BIO-173 Human Anatomy & Physiology II with lab.

# MLT-243

### 2.00

### Clinical Chemistry II

The course includes the study of the endocrine system, tumor markers, therapeutic drugs, toxicology and vitamins, correlating test results with state of health and disease. Prerequisites: CHM-110 Introduction to Chemistry, CHM-111 Introduction to Chemistry lab and MLT-241 Clinical Chemistry I.

### MLT-250 4.00

### **Clinical Microbiology**

Microorganisms with emphasis on bacteria causing disease in man is studied. Theory and principles of identification, biochemical reactions, growth requirements and susceptibility testing will be discussed. This course also includes new technologies in the laboratory diagnosis of infectious disease. Prerequisites: BIO-186 Microbiology, and MLT-111 Fundamentals of Laboratory Science.

# MLT-253 2.00

# Parasitology & Mycology

Common human parasites, their morphology, life cycles, symptomology and techniques of identification are covered. Competencies in mycology include studying the changing etiologic role of fungi, proper specimen collection, processing and culture methods. Prerequisite: BIO-186 Microbiology and MLT-250 Clinical Microbiology.

### MLT-260 4.00

# Immunohematology

Blood transfusion science is presented including the inheritance of blood groups, donor procedures, guality control, antibody testing and crossmatching of blood. Transfusion safety and Federal regulations are also included. Prerequisites: BIO-173 Human Anatomy and Physiology II w/lab and MLT-171 Immunology & Serology.

# MLT-280 8.00

# Clinical Practicum I

Students rotate through the laboratory departments of hematology, chemistry, microbiology, blood bank, and urinalysis. Application of the knowledge and skills learned in the classroom are applied in the clinical practicum. Prerequisites: MLT-250 Clinical Microbiology, MLT-120 Urinalysis, MLT-133 Erythrocyte Hematology, MLT-171 Immunology & Serology, MLT-234 Leukocyte Hematology/Coagulation, MLT-241 Clinical Chemistry I, MLT-260 Immunohematology; ENG-105 Composition I; PSY-111 Introduction to Psychology; BIO-168 Human Anatomy & Physiology I with lab; BIO-173 Human Anatomy & Physiology II with lab and BIO-186 Microbiology. Pre- or Co-requisites: MLT-253 Parasitology and Mycology and MLT-243 Clinical Chemistry II.

### MLT-281 4.50

### Clinical Practicum II

This course is a continuation of Clinical Practicum 1. Additional rotations may take place in clinics and other industries. Prerequisites: MLT-280 Clinical Practicum I, MLT-243 Clinical Chemistry II and MLT-253 Parasitology & Mycology. Co-requisite: MLT-290 Clinical Seminar & Review.

### MLT-290 2.00

### **Clinical Seminar & Review**

Students share their experience in the clinical area through discussion of topics of interest. Case studies are presented. Medical laboratory subjects are reviewed in preparation for registry examination. Prerequisite: MLT-280 Clinical Practicum I. Corequisite: MLT-281 Clinical Practicum II.

### MASS MEDIA STUDIES

### **MMS-101** 3 00

# Mass Media

This is an introductory course on the role and functions of mass media. It includes a survey of newspapers, magazines, books, radio/television, cable TV, public relations, advertising and government regulations. Professional opportunities will be explored.

### MMS-105 3.00 Audio Production

### This course is designed to provide the student with the knowledge necessary to operate radio broadcasting equipment. Emphasis is placed on the fundamentals of planning and producing radio programs, commercials and promotions using "on air" and production studio equipment.

### **MMS-106** 1.00

### Audio Production Lab

This course is designed to give students proficiency in using radio broadcasting equipment. Emphasis is on the production of radio programs, commercials and promotions using "on air" and production studio equipment.

### MMS-111 3.00

### Video Production I

This course provides the student with information needed for single-camera and video control room production. Students will learn the creative process of turning an idea into content, the language of audio and video, and the techniques of directing and editing

### **MMS-112** 1.00

### Video Production I Lab

This course provides the student with skills needed for single-camera and video control room production. Students will apply the creative process of turning an idea into content, the language of audio and video, and the techniques of directing and editing.

### **MMS-115** 3.00

### **TV Studio Production**

This course is designed for students to gain expertise in advanced video production. Emphasis is on the production of video programs, commercials, and promotions.

# MMS-116

### 1.00

### TV Production Lab

This course is designed for students to gain expertise in advanced video production. Emphasis is on the production of video programs, commercials, and promotions.

### MMS-118

# 3.00

# Announcing

This course will focus on presentation techniques and methodology for on-air performance in radio. Emphasis is on voice and articulation, acting, persuasion, pronunciation, and the role of format in adapting an announcing style. Techniques for improving breathing, relaxation, and vocal dynamics will also be explored.

# MMS-119

### 1.00

### Announcing Lab

Students in this course will practice vocal relaxation and breathing techniques through performancebased activities. Emphasis is on improving voice and articulation, pronunciation, and presentation for broadcast news, sports, weather, commercials, and on-air announcing.

# **MMS-120** 3.00

### Media Practices 1

This course is designed for students to gain experience in the operation of a radio station. Emphasis is on the daily operation of campus radio station KICB-FM. Students perform weekly "on-air" boardshifts in addition to duties in the departments of programming, traffic, news, production, music, sports and public relations.

# MMS-121

### 3.00 Media Practices II

This course is designed for students to gain additional experience in the operation of a radio station. Emphasis is on the daily operation of campus radio station KICB-FM. Students perform weekly "on-air" boardshifts in addition to duties in the departments of programming, traffic, news, production, music, sports and public relations.

### MMS-131

### 3.00 **News Reporting**

Basic aspects of news writing are covered in this course. Topics include covering crime, disasters (accidents and/or/ natural disasters), campus news, human interest features, professional speeches and/ or press conferences, and public meetings. Students also study laws and ethics as they apply to journalism.

### MMS-145

### 3.00

# **Broadcast Writing**

This course is designed for students to gain knowledge of the principles and challenges of broadcast station management and sales teams. Emphasis is on the duties of the general manager and sales manager as they relate to personnel, the audience, programming, broadcast sales, profit, broadcast engineering and federal regulations.

### MMS-171

# 2.00

# Audio Production

This course is designed to provide the student with the knowledge necessary to operate broadcast audio equipment and to understand the properties of sound and its impact on broadcasting. Emphasis is placed on the fundamentals of planning and producing commercials and promotions using "on air", "on location", and "production studio" equipment.

# **MMS-172**

### 2.00 Video Production

In this course the student will learn the basic fundamentals of creating video for broadcast or the internet with hands on use of broadcast video equipment for sports, news, and entertainment. It will explore practical uses as well as theory for the digital platform.

### MMS-190 3.00

### **Broadcast Promotions**

This course is designed to introduce students to the basics of radio advertising sales and ad copywriting. Topics to be discussed include sales strategy, schedules, and effective ad copywriting and production techniques. Students will participate in planning sales strategy from the sales proposal to the actual production of ads for clients.

### MMS-201 3.00 Media Practices III

This course is designed for students to gain additional experience in the operation of a radio station. Emphasis is on the daily operation of campus radio station KICB-FM. Students perform weekly "on-air" boardshifts in addition to duties in the departments of programming, traffic, news, production, music, sports and public relations.

### MMS-203 3.00

### **Media Practices IV**

This course is designed to help students make the transition from college to professional radio. Students will continue to perform weekly airshifts and programming duties for KICB-FM. Emphasis is on station management. preparing resumes and aircheck tapes, interviewing techniques and job search strategies

# MMS-205 3.00

### Advanced Audio Production

This course takes students beyond the fundamentals of planning and producing radio programs live, on-air. Emphasis is on creative strategy, mixing multiple audio sources, and using digital audio editing software to perform more advanced audio production.

### MMS-206

1.00

# Advanced Audio Production Lab

This course provides the student with practical application in mixing and editing long and short form audio programming elements for radio.

### MMS-211 3.00

### Advanced Video Editing

This course is designed to give students an understanding of the basic principles of videotape editing including the equipment used, major editing systems, and the process involved in post production.

### MMS-212 1.00

### Advanced Video Editing Lab

This course is designed to give students an understanding of the basic principles of videotape editing including the equipment used, major editing systems, and the process involved in post production.

### MMS-241 3.00

# **Public Relations and Marketing**

The course will provide a comprehensive understanding of public relations' role in organizations and society; how public relations has been developed as a discipline; and the contemporary roles of public relations in organizations and society. Basic public relations principles and theories will be examined in addition to applied perspectives. Students will discuss public relations issues and trends as well as international and ethical considerations involved in the practice of public relations. Students will be encouraged to think more broadly considering the globalized communication function of public relations and having their own ideas about public relations through the discussion of misunderstandings and misperceptions about the field of public relations as well as ongoing discussions about case studies.

# **MMS-259** 3.00

# Management and Operations

In this course, students will explore the marketing strategies program directors and general managers use to draw listeners to their stations. Topics to be discussed include target audience, research, format, image, promotions, and contest strategies.

### MMS-262 3 00 Advertising and Sales

Students will learn the fundamentals of broadcast writing and editing. Students will demonstrate practical application of writing and production skills in preparing and presenting broadcast scripts to air on KICB-FM. This is a writing-intensive course.

### MMS-265 3.00

### Mass Communications Law

Students will receive an in-depth study of legal rights, privleges and regulations of the broadcast industry. Course includes an overview of the Federal Communications Commission, Supreme Court and self-regulatory agencies.

# MMS-938

### 4.00 On the Job Training

Students will participate in a professional, eightweek summer internship. The internship will provide students with job seeking and interview skills, as well as exposure to promotions, production, on-air announcing, sports, news, sales, and other areas of interest in the radio industry.

# **MEDICAL TRANSCRIPTION** MTR-120 3.00

### Medical Transcription I

This course covers skill development in medical transcription that includes authentic physician dictation by medical specialty, coordinated readings and exercises by medical specialty and supplementary information vital to every medical transcription profession. Students must complete a 5-minute timed writing at a minimum speed of 45 wpm with 5 or fewer errors without the use of the backspace key before enrolling into course.

# MTR-121 4.00

# Medical Transcription II

Students will continue to refine their medical transcription skills. The use of reference manuals and style/usage references will be reinforced. An advanced level of transcription in pharmacology, laboratory medicine and radiology will be completed by students. Prerequisite MTR 120 Medical Transcription I.

# MTR-941

# 2.00

### Practicum

This course provides an opportunity to gain practical experience through on-site training in an approved medical office setting. The actual training on the job site will be under the supervision of a designated person within the employer. A total of 2 credit hours must be earned to fulfill the Practicum requirement. A letter grade of "C" or higher must be earned in this course to satisfy the program graduation requirements.

# **MUSIC - APPLIED**

MUA-101 1.00

# Applied Voice

This course offers one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced vocal techniques. The presentation of the standard repertoire for the specific voice is required. Music majors may earn a maximum credit of 8 semester hours.

### MUA-102

### 1.00 Applied Voice II

This course is a continuation of MUA 101 and offers one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice required per day. The goal is the development of both fundamental and advanced vocal techniques. The presentation of the standard repertoire for voice is required along with participation in two studio recitals throughout the semester. Music majors may earn a maximum credit of 8 semester hours. Student must have permission of instructor.

### MUA-119 1.00

### Class Piano

Instruction on piano keyboard in a classroom setting. No previous study is required for enrollment in this entry-level course. Pianos are provided for practice and performance.

### MUA-120

### 1.00

### Applied Piano

This course offers one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced piano techniques. The presentation of the standard repertoire for piano is required. Music majors may earn a maximum credit of 8 semester hours.

### MUA-122

### 1.00 Applied Organ

This course offers one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced instrumental techniques. The presentation of the standard repertoire for organ is required. Music majors may earn a maximum credit of 8 semester hours.

### MUA-124

# 1.00

# Applied Guitar

This course offers one half-hour lesson of private instruction on guitar per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced instrumental techniques. Music majors may earn a maximum credit of 8 semester hours. Permission of the instructor.

MUA-126

### 1.00 Applied Strings

This course offers a one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced instrumental techniques. The presentation of the standard repertoire for the specific instrument is required. Music majors may earn a maximum credit of 8 semester hours.

### MUA-143 1.00 Applied Brass

This course offers a one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced instrumental techniques. The presentation of the standard repertoire for the specific instrument is required. Music majors may earn a maximum credit of 8 semester hours.

# MUA-170

### **Applied Woodwinds**

This course offers a one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced instrumental techniques. The presentation of the standard repertoire for the specific instrument is required. Music majors may earn a maximum credit of 8 semester hours.

### MUA-180 1.00

### **Applied Percussion**

This course offers a one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced instrumental techniques. The presentation of the standard repertoire for the specific instrument is required. Music majors may earn a maximum credit of 8 semester hours.

### MUA-220 1.00

### Applied Piano II

This course is a continuation of Applied Piano MUA-120 and offers one half-hour lesson of private piano instruction per week, with a minimum of 30 minutes of practice per day. (Piano majors should expect to practice at least one to two hours a day). The goal is the development of both fundamental and advanced piano technique, literacy, ear training, and musicianship. It is open to music majors and non-majors. Music majors may earn a maximum credit of 8 semester hours. Studio seminars and recitals will be offered and participation expected as discussed with instructor.

### **GENERAL MUSIC**

# MUS-102

# Music Fundamentals

This course is an introduction to music theory and the fundamental principles of traditional music, including melody, rhythm, harmony, basic skills and vocabulary. Emphasis is on music reading, application, notation, keytime signatures and aural training. This course is for majors and non majors with limited background in music fundamentals or as preparation for music major theory courses. Pre-requisites and/or Co-requisites: Permission of the instructor. Enrolled in Class Piano MUA-119 or Applied Piano MUA-120.

### MUS-104 3.00

### Exploring Music

This course is designed for all students interested in exploring music. Through listening and class participation, the students will become acquainted with the various elements of music which span a variety of cultures and times. No formal music/background is necessary to be successful in this course.

### MUS-118 2.00 Sightsinging and Ear Training I

This course introduces a progressive study of aural training and sight-singing designed to familiarize the student with the various skills needed to advance in the study of music. With emphasis placed on critical listening, the course is intended to challenge the student to achieve a maximum mastery of its content which includes, but is not limited to; aural recognition of major/minor scales, modes, triads, seventh chords and their inversions as well as basic conducting skills, melodic and rhythmic dictation and facility of sight singing. This class will meet twice per week, along with 2 hours of arranged lab. Pre-requisites and/or Co-requisites: Permission of the instructor Must be enrolled in Music Theory I or Music Fundamentals

# MUS-119 2.00

### Sightsinging and Ear Training II

This course introduces a progressive study of aural training and sight-singing designed to familiarize the student with the various skills needed to advance in the study of music. With emphasis placed on critical listening, the course is intended to challenge the student to achieve a maximum mastery of its content which includes, but is not limited to; aural recognition of major/minor scales, modes, triads, seventh chords and their inversions as well as basic conducting skills, melodic and rhythmic dictation and facility of sight singing. This class will meet twice per week, along with 2 hours of arranged lab. Pre-requisites and/or Co-requisites: Permission of the instructor Successful Completion of Music Theory I and Sight Singing and Ear Training I. Must be enrolled in Music Theory II

# MUS-120 3.00

# Music Theory I

This course introduces elementary harmony designed to familiarize the student with the study of scales, intervals, triads, seventh chords and their inversions. The course includes harmonizing melodies and figured bass lines using primary chords. This class meets three times weekly. Prerequisites and/or Co-requisites: Permission of the instructor Enrolled in Sight Singing and Ear Training I

# MUS-121

### 3.00 Music Theory II

This is a continuation of the traditional music theory sequence. The course is designed to familiarize the student with the construction and progression of primary and secondary chords and elementary modulation. This class meets three times weekly. Pre-requisites and/or Co-requisites: Permission of the instructor Successful Completion of Music Theory I and Sight Singing and Ear Training I Enrolled in Sight Singing and Ear Training I

### MUS-140 1.00

### Concert Choir

Concert Choir is the highest quality choral offering available, and is open to all students. This course involves the study and performance of quality choral literature with emphasis on choral and vocal techniques. Participation in all rehearsals and public performances is required. Maximum credit of 4 semester hours.

### MUS-141 1.00 Concert Choir II

A continuation of MUS-140, Concert Choir II provides an opportunity for any student to further his/her experience as a performer in a large choral ensemble. Emphasis is placed on the development of performance skills and the study of traditional and contemporary music stretching through a wide range of genres. Care will be given to stylistic integrity, as well as melodic, harmonic and rhythmic accuracy. Upon completion of ensemble rehearsals, students should be able to be contributing members of the ensemble's performance in a major spring production along with other college ensembles. Participation in all rehearsals and public performances is required. Maximum credit of four (4) semester hours. Student must have permission of instructor.

### MUS-145

### 1.00 Concert Band

This course is open to all students. This course involves the study and performance of quality band literature with emphasis on musicianship and interpretation. Participation in all rehearsals and public performances is required. Maximum credit of 4 semester hours.

### MUS-146

# 1.00

### **Civic Symphony**

Participation in the Fort Dodge Symphony Orchestra is possible. Acceptance into the Fort Dodge Symphony is through an individual audition procedure. Regular participation in the Symphony's scheduled rehearsals and concerts is required. Maximum credit of 4 semester hours. A minimum of two rehearsal hours per week.

### MUS-149 1.00

### Pep Band

This course involves the rehearsal and performance of pep band music. Rehearsals will focus on individual preparation of assigned music, group cohesiveness and interpretation. The rehearsals will culminate in performaces at home basketball games during January and February, as well as other college athletic and music functions during the semester. Performance dates will be set in advance and should be noted by the student. The pep band supports Iowa Central Community College events through traditional marching routines and performance of longstanding Iowa Cental compositions in addition to contemporary music selections. All members are required to attend weekly rehearsals and performances. Maximum credit of four (4) semester hours.

### MUS-157

1.00

### Vocal Jazz Ensemble

This course involves the study and performance of vocal literature, with emphasis placed on but not limited to Jazz literature. The design of the course and ensemble will be subject to voicing and performance abilities of available personnel. A minimum of two rehearsals per week. Maximum credit of 4 semester hours.

### MUS-158 1.00 Civic Chorale

Participation in the Fort Dodge Choral Society is possible. Acceptance into the Fort Dodge Choral Society is through an individual audition procedure. Regular participation in the choral Society's scheduled rehearsals and concerts is required. Maximum credit of four (4) semester hours. A minimum of (2) rehearsal hours per week.

### MUS-160 1.00

### Harmony Brigade

Acceptance into the Harmony Brigade is through an individual audition procedure. Regular participation in the Harmony Brigade's scheduled rehearsals and concerts is required. Maximum credit of 4 semester hours. A minimum of two rehearsal hours per week.

### MUS-164 2.00 Pop Singers

This course is open by audition to all students who are members of Concert Choir. The Pop Singers perform a wide variety of styles and literature with some stage movement. Public performances are given throughout the area. Participation in all rehearsals and public performances is required. Class will meet twice weekly and will meet at night periodically. Maximum credit of 8 semester hours.

### MUS-167 1.00

### Marching Band/Pep Band

This course involves the rehearsal and performance of marching band music and drill routines. Rehearsals will focus on individual preparation of assigned music and drill repetoire, group cohesiveness and interpretation. The rehearsals will culminate in performances at college athleticand music functions during the semester.Performance dates will be set in advance and should be noted by the student. The marching band supports Iowa Central Community College events through traditional marching routines and performance of longstanding Iowa Central compositions in addition to contemporary marching drills and music selections. All members are required to attend weekly rehearsals and performances. Maximum credit of four (4) semester hours. Co-requisite:Students enrolled in MUS-167 who are in Drumline must take MUS-177 Percussion Ensemble.

### MUS-171 1.00 Jazz Band II

Continues the study of a full jazz ensemble designed to explore the various styles of jazz with emphasis on musicianship and solo performances by means of improvisation. Public performances are given throughout the area. Maximum credit of 8 semester hours. Student must have permission of instructor.

### MUS-173 2.00 Jazz Band

This course is open by audition to all students who are members of the Concert Band. This is a full jazz ensemble designed to explore the various styles of jazz with emphasis on musicianship and solo performances by means of improvisation. Public performances are given throughout the area. Maximum credit of 8 semester hours.

### MUS-176 1.00 Brass Ensemble

This course involves the study and performance of brass literature, with emphasis placed on but not limited to jazz literature. The design of the course and ensemble will be subject to performance abilities of available personnel. A minimum of two rehearsals per week. Maximum credit of four (4) semester hours. Pre-requisite - Permission from the instructor.

### MUS-177 1.00 Percussion Ensemble

This course involves the study and performance of percussion literature for a variable ensemble (from duos, trios, and guartets to the large ensemble). The percussion ensemble experience is vital to a percussionist's training, as it allows students to experience literature from contemporary marching battery and pit, to jazz andworld music. The design of the course and ensemble will be subject to performance abilities of available personnel. This course is required of all percussion majors. All members are required to attend weekly rehearsals and performances. Maximum credit of four (4) semester hours. Permission of the instructor after an audition. Drumline members are required to enrollin MUS 177 Percussion Ensemble. Strongly recommended: Applied Music lessons, Pep Band

### MUS-210 2.00 Pop Singers II

This course is a continuation of Pop Singers MUS-164 and is open by audition to all students who are members of Concert Choir. The Pop Singers perform a wide variety of styles and literature with considerable stage movement and choreography. Public performances are given throughout the area. Participation in all rehearsals and public performances is required. Class will meet twice weekly and meet 1 night weekly as well. Maximum credit of eight (8) semester hours. Instructor permission.

### MUS-218 2.00

### Sightsinging and Ear Training III

This course introduces a progressive study of aural training and sight-singing designed to familiarize the student with the various skills needed to advance in the study of music. With emphasis placed on critical listening, the course is intended to challenge the student to achieve a maximum mastery of its content which includes, but is not limited to; aural recognition of major/minor scales, modes, triads, seventh chords and their inversions as well as basic conducting skills, melodic and rhythmic dictation and facility of sight singing. This class will meet twice per week, along with 2 hours of arranged lab. Pre-requisites and/or Co-requisites: Permission of the instructor Successful Completion of Music Theory I and II, and Sight Singing and Ear Training I and II. Must be enrolled in Music Theory III

### MUS-219 2.00 Signtsinging and Ear Training IV

This course introduces a progressive study of aural training and sight-singing designed to familiarize the student with the various skills needed to advance in the study of music. With emphasis placed on critical listening, the course is intended to challenge the student to achieve a maximum mastery of its content which includes, but is not limited to; aural recognition of major/minor scales, modes, triads, seventh chords and their inversions as well as basic conducting skills, melodic and rhythmic dictation and facility of sight singing. This class will meet twice per week. Along with 2 arranged hours of lab. Pre-requisites and/or Co-requisites: Permission of the instructor Successful Completion of Music Theory I, II, and III and Sight Singing and Ear Training I, II, and III. Must be enrolled in Music Theory IV

### MUS-220

### 3.00 Music Theory III

This a continuation of the traditional music theory sequence. Attention is given to the various seventh chords, chromatic harmony, chromatic modulations, complex rhythms and non-chord tones. This class meets three times weekly. Pre-requisites and/or Co-requisites: Permission of instructor Successful completion of Music Theory I, and II, and Sight Singing and Ear Training I and II Enrolled in Sight Singing and Ear Training III

### MUS-221

### 3.00 Music Theory IV

This course stresses 19th century and 20th century compositional practices, combined with an emphasis upon writing and analysis. The introduction of fundamental contrapuntal techniques is included. This class meets three times weekly. Pre-requisites and/or Co-requisites: Permission of Instructor Successful completion of Music Theory I, II, and III, and Sight Singing and Ear Training I, II, and III Enrolled in Sight Singing and Ear Training

### MUS-227

1.00

### Vocal Jazz Ensemble II

This course is a continuation of Vocal Jazz Ensemble MUS-157 and involves the study and performance of vocal literature, with emphasis placed on but not limited to jazz literature. The design of the course and ensemble will be subject to voicing and performance abilities of available personnel. A minimum of two rehearsals per week. Maximum credit of four (4) semester hours. Student must have permission of instructor.

### MUS-245

# 1.00

# Concert Band II

Concert Band II provides an opportunity to develop further proficiency on a chosen instrument. This course is a continuation course and involves the study and performance of quality band literature with emphasis on musicianship and interpretation. Participation in all rehearsals and public performances is required. Maximum credit hours of two (2) semester hours. Student must have permission of instructor.

### MUS-948 1.00 Special Projects

1,2,3,or 4 credit hours. Highly motivated students may wish to work intensively on a creative or research project not covered in the course offerings of the department. The student should possess the necessary background for such work, and initiate an application for such study. A maximum of four hours credit may be earned. Permission of the staff member with whom the student wishes to work is required.

# MUS-949 1.00

### Special Topics: Music

1,2,3, or 4 credit hours. This course, offered usually on a one-time only basis provides an in-depth study on a topic of general interest pertaining to this department.

### COMPUTER NETWORKING

### NET-110

### 3.00

### **Microcomputer Fundamentals**

Students will learn the fundamentals of MS DOS, Windows operating systems, and file management and fundamental productivity software.

# NET-152 3.00

### Advanced Networking Technology

This course will cover the advanced topics of networking topologies, advanced management utilities, plan performance management, configure network communications packets, configure the environment for different network protocols, construct network security, implement and evaluate a maintenance and prevention plan, determine appropriate action for common problems. While in the course and covering the topics the student will also be studying for a series of tests that are required for the Engineers License in networking. Prerequisites: NET 211 CISCO Networking, NET 191 Network Cabling, NET 413 Linus System Administration, NET 750 Telecommunications Serv. Exceptions subject to program coordinators' discretion.

### NET-160 3.00

### Network Design & Documentation

Students will learn to design and document networks from the ground up using industry standards. Starting with the network in our own lab, the students will learn to design a simple network and create the necessary documentation to manage a small network. The students will then develop skills to design and document a more complicated network, such as the Iowa Central campus network. They will also learn to document established networks. This will be accomplished by inspecting the campus network, using necessary tools and software to analyze the network and prepare the proper documentation. Prerequisites: NET 191 Network Cabling, NET 211 CISCO Networking, NET 222 CISCO Routers. Exceptions subject to program coordinators' discretion.

### NET-161 2.00 Network Design Documentation

Students will learn to design and document networks from the ground up using industry standards. Starting with the network in our own lab, the students will learn to design a simple network and create the necessary documentation to manage a small network. The students will then develop skills to design and document a more complicated network, such as the Iowa Central campus network. They will also learn to document established networks. This will be accomplished by inspecting the campus network, using necessary tools and software to analyze the network and prepare the proper documentation. Prerequisites: NET 191 Network Cabling, NET 211 CISCO Networking, NET 222 CISCO Routers. Exceptions subject to program coordinators' discretion.

# NET-191 2.00 Network Cabling

This course focuses on networking terminology, technologies, components, and how data is moved in the real-world network environment. Beginning with basics of data communication, the student will learn about data packet structure, frames, communication architectures, transmission methods, DCE/DTE interfaces, modulation, and multiplexing.

### NET-211 2.00 CISCO Networking

This course focuses on networking terminology, scientific notation, metric prefixes, technologies, components, and how data is moved in the real-world network environment. This course will include the use of Ohm's Law to solve series circuits and parallel circuits. Students will learn Alternating Current (A-C) fundamentals, basic circuit troubleshooting, inductance, series and parallel circuits, as AC/DC pertains to networks. Using a network instrument student will look at data communication and how the packet travels though a network. The student will learn about data packet structure, frames, communication architectures, transmission methods, signal multiplexing.

### NET-222 3.00 CISCO Routers

Protocols and router knowledge is crucial for today's networking professional. This course gives you an opportunity to compare and contrast the performance, overhead, routability, security and integrity issues surrounding today's major LAN/ WAN protocols. The student will understand how to install, configure and manage Cisco routers. This course also gives you the hands-on experience you need for configuring your routers in multi-protocol network. Students will configure routing tables, subnetted IP networks, addressing schemes and access lists on the classroom network. Students will learn how to configure routers for IP, IPX and AppleTalk, DCE/DTE interfaces, modulation, and multiplexing.Prerequisites: NET 191 Network Cabling and NET 211. Exceptions subject to program coordinators' discretion.

### NET-232 3.00 CISCO Swit

# CISCO Switched

Students will learn routed data communications using TCP/IP based Ethernet Internet works. Students will build, configure, and troubleshoot an Ethernet, TCP/IP LAN, which includes hosts, hubs, routers, switches, and all necessary cabling. Prerequisites: NET 191 Networking Cabling, NET 211 CISCO Networking and NET 222 CISCO Routers. Exceptions subject to program coordinators' discretion.

### NET-242 3.00

### CISCO Wide Area Networks (WAN)

The Advanced Wide Area Networking course provides students with a comprehensive study of the differences between the following WAN services: LAPB, Frame Relay, ISDN/LAPD, HDLC, PPP, and DDR. Students will learn to configure the routers to implement Frame Relay LMIs, maps, and subinterfaces. Identify PPP operations to encapsulate WAN data on Cisco routers. Students will identify ISDN protocols, function groups, reference points, and channels. Prerequisites: NET 191 Network Cabling, NET 222 CISCO Routers and NET 232 CISCO Switches. Exceptions subject to program coordinators' discretion.

### NET-314 4.00

### Windows Server

Students will install and configure the Microsoft Windows Network Operating System, investigate network configurations, manage users and groups, security and permissions, policies and profiles, remote server management, install applications and establish network printing. (Windows, Microsoft Windows Server)Prerequisites: NET 191 Network Cabling, NET 211 CISCO Networking, NET 110 Microcomputer Fundamentals, NET 790 PC Support I, NET 483 Network Certification+, NET CISCO Routers, and NET 791 PC Support II. Exceptions subject to program coordinators' dsicretion.

### NET-343

# 3.00

### Windows Directory Services

This course is designed to provide the student the necessary information to pass the implementing and supporting Microsoft NT Server exam. The Microsoft Certified Systems Engineer (MCSE) exams are performance-based exams that prove you can apply your knowledge in a variety of situations. The students will apply that information through extensive hands-on lab situations and comprehensive CD ROM based study material. Prerequisite: NET 314 Windows Server. Exceptions subject to program coordinators' discretion.

### NET-345

# 3.00

# Windows Scripting

Students will learn to develop and use VBScript, and WMI, scripting techniques to administer Windows operating systems. Concepts, terminology, components and the design of scripts will be addressed throughout this course. Prerequisites: NET 110 Microcomputer Fundamentals. Exceptions subject to program coordinators' discretion

### NET-347 2.00 Windows Directory Scripting

Students will learn to develop and use VBScript, and WMI, scripting techniques to administer Windows operating systems. Concepts, terminology, components and the design of scripts will be addressed throughout this course.Prerequisites: NET 345 Windows Scripting, NET 314 Windows Server and NET 413 Linux System Administration. Exceptions subject to program coordinators' discretion.

### NET-412 3.00

### Linux System Administration

UNIX Operating system will teach you how to use UNIX operating system and introduce you to the Common Desktop Environment (CDE). The class is for new users of the UNIX environment and CDE. You will learn fundamental command-line features of the UNIX environment including file system navigation, file permissions, the vi text editor, command shells, and basic network use. CDE features include Applications Manager, Text Editor, printing, and mail. Prerequisites: NET 191 Network Cabling, NET 211 CISCO Networking, NET 110 Microcomputer Fundamentals, NET 790 PC Support 1, NET 483 Network Certification+, NET 222 CISCO Routers, NET 791 PC Support II. Exceptions subject to program coordinators' discretion.

### NET-413 4.00

### Linux System Administration

UNIX Operating system will teach you how to use UNIX operating system and introduce you to the Common Desktop Environment (CDE). The class is for new users of the UNIX environment and CDE. You will learn fundamental command-line features of the UNIX environment including file system navigation, file permissions, the vi text editor, command shells, and basic network use. CDE features include Applications Manager, Text Editor, printing, and mail. Prerequisites: NET 191 Network Cabling, NET 211 CISCO Networking, NET 110 Microcomputer Fundamentals, NET 790 PC Support 1, NET 483 Network Certification+, NET 222 CISCO Routers, NET 791 PC Support II. Exceptions subject to program coordinators' discretion.

### NET-455 3.00

### Advanced Linux System Administration

This Linux/UNIX174 Advanced Operating system course will teach you how to use the advanced features in both the Linux /UNIX operating system. The course is for advanced users of the Linux/UNIX environment. You will learn how to do low-level configuration of the OS and configure different modules for hardware/software components. This course will also configure Network Server services and how to secure the Network System against Network attacks. Prerequisite: NET 413 Linux System Administration. Exceptions subject to program coordinators' discretion.

### **NET-483** 3.00

# Network + Certification

Students will learn the fundamentals of todays network operating systems including Windows and Linux based systems. Time will also be spent on networking including standards, protocols, and LAN architecture. Students will be exposed to the physical components that make up a network. Additional topics covered will include installation procedures, network services, network administration and security. Prerequisite: NET 790 PC Support I, NET 191 Network Cabling, and NET 211 CISCO Networking. Exceptions subject to program coordinators' discretion.

### NET-485 3.00 Advanced Network Security

This course will take a more hands on approach to network security. The students will look at securing network devices, remote access security, security testing and monitoring, and developing security policies and risk assessment. The students will be exposed to various types of network security software. Course will look at specifics for Windows, Linux, and Cisco IOS.

# **NET-486** 2.00

# Novell Network Certification

This course will prepare the student for the Novell Certified Network Engineer (CNE) certification process - whether you are seeking your first certification or updating your certification for Intranet ware. This course covers all seven of the Novell CNE exams. It provides a clear path to mastery of every aspect of the material a successful Novell CNE candidate needs to know.

### **NET-513** 4.00

### Novell Network Administration

Students will install and configure the Novell Network Operating System, investigate network configurations, create users and groups, and configure shared resources across the network, using login scripts, management software to mange data, install applications and establish network printing. (DOS, Windows 2000, Windows/98, Novell)

### NET-611 2.00 **Network Security**

This course will portrait things that can go wrong with a computer network and provide a discussion of the tools available to counteract them. This course will walk through a security audit and the process of developing an effective security policy. Students will learn how to implement security measures -including logging, encryption, and packet filtering--on your existing network infrastructure. Course will look at specifics for Unix, Windows NT, Cisco IOS, and NetWare. Prerequisites: NET 314 Windows Server, NET 191 Network Cabling, NET 211 CISCO Networking, NET 110 Microcomputer Fundamentals, NET 790 PC Support I, NET 483 Network Certification+, NET 222 CISCO Routers, NET 791 PC Support II, NET 413 Linux System Administration, NET 232 CISCO Switches and NET 161 Network Design and Doc. Exceptions subject to program coordinators' discretion

### NET-612 3.00 Fund. Network Security

This course will portrait things that can go wrong with a computer network and provide a discussion of the tools available to counteract them. This course will walk through a security audit and the process of developing an effective security policy. Students will learn how to implement security measures -including logging, encryption, and packet filtering--on your existing network infrastructure. Course will look at specifics for Unix, Windows NT, Cisco IOS, and NetWare.

# **NET-683** 3.00

# Internetworking Services

This course will cover the various Web topics that exist in today's Information Technology Environment and how to configure and manage those resources in your network environment. Students will examine topics that are important to organizations connected to the internet such as: Web access, maintaining and ensuring security, integrating e-mail to the web, FTP and media services, basic IP configuration and troubleshooting. This course will cover the two most popular operating systems in regards to Web server for the OS. This course will place the emphasis on skill building and concepts for Web administration of a network system.

### NET-750

### 3.00 Telecommunications Services

This course is a study of the telephone system including facilities, key systems, and PBXs. Twowire and four-wire circuits will be discussed along with E&M and SF signaling. Students will install, maintain, and troubleshoot several varieties of key systems and PBXs. Use of manufacture manuals to set up working systems is emphasized. Interfacing key systems to PBXs and PBXs to PBXs is included in the lab. This class also covers the theory of fiber optic transmission of communication signals. Subjects covered include light wave theory types and placement of cables, connectors, splicing, transmitters, and receive power budgets, etc. Students in lab will get experience in working with several types of glass fiber cable and associated electronics. Prerequisites: NET 191 Network Cabling and NET 211 CISCO Networking.

### NET-774

### 1.00 Help Desk I

Students will learn to identify systems lockups, network errors and operating systems hangups and conflicts, and apply a combination of hardware and software skills to interface, configure and troubleshoot computer controlled systems. System components that will be diagnosed and repaired are: motherboards, power supplies, memory devices, floppy disk drives, hard drives, communication interfaces, and printers.

# NET-775

### 1.00 Help Desk II

Students will learn to meet the demands of the user support industry. They will become familiar with the tools and technologies that are available in a support environment. They will also learn the processes associated with a help desk or customer service position. Time will be spent investigating the process of asset management, problem resolution tools and the office space in a support environment. Prerequisite: NET 774 Help Desk I. Exceptions subject to program coordinators' discretion.

### NET-776

### 1.00

# Help Desk III

This course uniquely prepares the student to keep the customer productive by focusing on the business needs of the customer, establishing credibility and trust, by using real world scenarios. This is the 3rd course in a series of 4 in the 2 year program. Emphasis is given to problem solving and troubleshooting, team dynamics, and interpersonal communication skills in a college campus. This course exposes the student to common industry tools and technologies used in providing exceptional customer support. Prerequisites: NET 774 Help Desk I, NET 775 Help Desk II. Exceptions subject to program coordinators' discretion.

### NET-777 1.00 Help Desk IV

This course uniquely prepares the student to keep the customer productive by focusing on the business needs of the customer, establishing credibility and trust, by handling real world scenarios. This is the 4th course in a series of 4 in the 2 year program. Emphasis is given to problem solving and troubleshooting, team dynamics, and interpersonal communication skills in a college campus. This course exposes the student to common industry tools and technologies used in providing exceptional customer support. Prerequisites: NET 774 Help Desk I, NEt 775 Help Desk II and NEt 776 Help Desk III. Exceptions subject to program coordinators' discretion.

# **NET-784** 2.00

### Help Desk Lab

Students will learn to meet the demands of the user support industry through hands-on experiences. They will become familiar with the tools and technologies that are available in a support environment. They will also learn the processes associated with a help desk or customer service position. Time will be spent in different real-life support environments and working through situational experiences.

### NET-790 3.00 PC Support I

Students will learn to identify systems lockups, network errors and operating systems hangups and conflicts and apply a combination of hardware and software skills to interface, configure and troubleshoot computer controlled systems. System components that will be diagnosed and repaired are: motherboards, power supplies, memory devices, floppy disk drives, hard drives, communication interfaces, and printers.

### NET-791 3.00

### PC Support II

Students will spend time working to hone their computer repair and troubleshooting skills through the use of "real life" situations. Time will be spent troubleshooting problems that are encountered in both work and home environments. The students will work to resolve these issues, while documenting their procedures, and practicing customer relation skills. Prerequisites: NET 790 PC Support I. Exceptions subject to program coordinators' discretion.

### **NET-949** 4.00

### Special Topics - Tech Support

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department. This course uniquely prepares the student to keep the customer productive by focusing on the business needs of the customer, establishing credibility and trust, and by handling real world scenarios. Emphasis is given to problem solving and troubleshooting, team dynamics, and interpersonal communication skills in a college campus. This course exposes the student to common industry tools and technologies used in providing exceptional customer support.

# PHYSICAL EDUCATION ACTIVITIES

PEA-187

# 1.00

Weight Training I

An introductory course designed to help each student: improve muscular strength; gain knowledge and understanding of weight training theory and practice; develop a personalized weight training program.

### PEA-195 3.00

### Essentials Athletic Strength/Cond

This course will explore the most current research of the scientific principles, concepts and Theories of strength training and conditioning as well as their practical applications to athletic performance. This course is designed to assist students who are interested in coaching or a possible career in strength training and conditioning.

### PEA-205 1.00

# Tech. & Theory of Prog Resist Training I

A progressive resistance strength training course designed to instruct students in technique, exercises, and theory of weight training periodization concepts, such as Olympic Power Lifting, Free Weight Lifting, Circuit and Cardio Circuit Training

# **COACHING OFFICIATING** PEC-107 2.00

### Sports and Society

This course will explore the relationship between sports and our society in which it exists. This course will give students an opportunity to discuss and critically think about the ethics of sports and how sports affects society. This course will also examine the document of Code of Ethics, Rights and Responsibilities, and Standards for Professional Practice and Competent Performance. This component satisfies the 5-hour ethics requirement as mandated by the Iowa Board of Educational Examiners.

# PEC-110

1.00

### Coaching Ethics, Techniques, & Theory

Techniques and Ethics of Coaching is a one credit course that will provide coaches, and future coaches, the knowledge and understanding of the techniques of coaching interscholastic athletics. In addition, this course is designed to give coaches, and future coaches, the opportunity to prepare and reflect on the many coaching concepts and responsibilities. The course format allows coaches, and future coaches, the ability to direct their effort toward a particular sport of choice.

### PEC-111 2.00

### Techniques and Theory of Coaching

This course will provide a knowledge and understanding of the techniques and theory of coaching interscholastic athletics. This is one of four courses that meets the requirements for the coaching authorization issued by the Iowa Department of Education.

### PEC-115 1.00

### Athletic Development and Human Growth

This course will provide a knowledge and understanding of human growth and development of children and youth in relation to physical activity. This is one of four courses that meets the requirements for the coaching authorization issued by the Iowa Department of Education.

### PEC-121 2.00

# Body Structure and Function

This course will provide a knowledge and understanding of the structure and function of the human body in relation to physical activity. This is one of four courses that meets the requirements for the coaching authorization issued by the Iowa Department of Education.

# PEC-123 1.00

# Anatomy for Coaching

This one (1) credit hour course will provide a basic knowledge of the structure and function of the human body in relation to physical activity. This one (1) hour credit course meets the requirement for the Structure and Function component for coaching authorization as required by the Iowa Department of Education. This one (1) hour credit course focuses on the four (4) main body systems that are appropriate to physical activity: (1) skeletal system, (2) muscular system, (3) circulatory system, and (4) respiratory system.

### PEC-127 2.00

### Care and Prevention of Athletic Injuries

This course will provide a knowledge and understanding of the prevention and care of athletic injuries and medical safety problems relating to physical activity. This is one of four courses that meets the requirements for the coaching authorization issued by the Iowa Department of Education.

### PEC-152 1.00

### Tech. and Theory of Coaching Football

Theory and practice in the coaching of football. Emphasis will be on coaching philosophies, fundamentals, psychology, and strategies. Course includes objectives, rules, regulations and policies as well as performance skills, technical information, and organization and management practices. Training and conditioning specific to football, fitting of equipment, specific safety precautions and officiating methods will also be included.

### PEC-170

### 1.00 Sports Officiating: Basketball

This course emphasizes guiding principles and standards, rules, mechanics and procedures for officiating basketball.

### PEC-171

# 1.00

# Sports Officiating: Softball

This course emphasizes guiding principles and standards, rules, mechanics and procedures for officiating softball.

PEC-172

### 1.00 Sports Officiating: Baseball

This course emphasizes guiding principles and standards, rules, mechanics and procedures for officiating baseball.

### PEC-177

1.00

### Sports Officiating: Football

This course emphasizes guiding principles and standards, rules, mechanics and procedures for officiating football.

# **GENERAL PHY ED AND HEALTH**

# PEH-141

# 2.00

First Aid

The course is a study of the fundamentals of first aid with emphasis on the prevention and emergency care of injuries of all kinds. Units using multimedia instruction and cardiopulmonary resuscitation will be given with American Red Cross certification.

### PEH-175 2.00

### Sports Psychology

This course will offer students the opportunity to learn correct concepts and applications of sport psychology. Students will learn about mental preparation for sport competition. Sport psychology will assist in enhancing both athletic performance and the social-psychological aspect of human development.

### PEH-185 3.00

# Contemporary Health Issues

This course presents a basic understanding of the relationship between the human body and the environment in which it exists. This course addresses principles and practices of personal health and disease prevention. The course also develops an appreciation for the social, economic and medical aspects of man and disease as it relates to personal and community living. Topics include dimensions of health; making consumer and health care choices; emotional maturity and stress management; physical activity; diet, nutrition, and weight management; consequences of drug, alcohol, and tobacco use; sexuality; responsible sexual behavior.

### PEH-948 1.00

# **Special Projects**

1, 2, 3, or 4 credit hours. Highly motivated students may wish to work intensively on a creative or research project. The student should possess the necessary background for such works and should initiate an application for such study. A student must obtain written permission from supervising staff member to enroll in this course.

### PEH-949 2.00 Special Topics

### The department will offer from time to time credit offerings in selected special areas of interest on a topical basis per semester.

### PHYSICAL EDUCATION TRAINING PET-105 3.00

### **Basic Athletic Training**

This course will provide a knowledge and understanding of the prevention and care of athletic injuries and medical safety problems relating to physical activity. Topical discussions survey athletic training and sports medicine specifically in the areas of pathology, epidemiology, evaluation, and management of exercise and sport induced injuries. This is one of four courses that meet the requirements for the coaching authorization issued by the lowa Department of Education.

### PET-119 3.00 Intro to Biome

# Intro to Biomechanics

This course deals with the study of muscles as they are involved in the science of human movement. Since muscles attach to bones through tendons, both skeletal and muscular structures are involved. At the completion of this course the student should be able to (1) identify on a human skeleton and/or a living subject the most important bones and bony features for the major joints of the body, (2) label the important bones and bony features on a skeletal chart, (3) draw and label major muscles on a skeletal chart, (4) identify and palpate these muscles on a human subject, (5) list and organize the muscles that produce the primary movements for all the major joints of the body, and (6) analyze basic movements in terms of muscle actions. Information will also be presented on how to strengthen and stretch most of these muscles.

# PET-141

### 3.00

# Athletic Training Field Experience

This class is designed to give students whom are interested in the field of Athletic Training the hands on experiences in the training room, as well as on the practice and playing fields. The students will assist Certified Athletic Trainers in the daily operations of the training room, practice and game preparation, as well as game coverage. Students will assist in evaluations, as well as observe treatments and partaking in the evaluation, as rehabilitation process of the student athletes. Students will also receive a brief history of Sports Medicine.

### INTERCOLLEGIATE PHYSICAL EDUC PEV-101 1.00

### Varsity Sports Conditioning

This course includes the conditioning and sport-specific activities and drills performed by student athletes in preparation for varsity sports participation. A variety of conditioning activities are emphasized, such as strength training, stretching, endurance, agility, and balance exercises. Related topics include methods of weight training, flexibility, aerobic exercises, safety, rehabilitation, and nutrition plans in preparation for varsity sports participation. A maximum of two semester hours may be earned, and no more than one semester hour of credit may be earned per academic year.

# PEV-102

### Varsity Sports Conditioning 2

This course includes the conditioning and sport-specific activities and drills performed by student athletes in preparation for varsity sports participation. A variety of conditioning activities are emphasized, such as strength training, stretching, endurance, agility, and balance exercises. Related topics include methods of weight training, flexibility, aerobic exercises, safety, rehabilitation, and nutrition plans in preparation for varsity sports participation. A maximum of two semester hours may be earned, and no more than one semester hour of credit may be earned per academic year. This class is specifically for sophomore students.

### PEV-105 1.00 Varsity Sports Pa

# Varsity Sports Participation

This course includes the knowledge and skills gained through participation in an intercollegiate sport at Iowa Central Community College. Participants must meet NJCAA eligibility requirements and must complete the season as a squad member. A maximum of 4 semester hours may be earned, and no more than 1 semester hour of credit may be earned in a sport per academic year.

# PEV-106

### Varsity Sports Participation 2

This course includes the knowledge and skills gained through participation in an intercollegiate sport at lowa Central Community College. Participants must meet NJCAA eligibility requirements and must complete the season as a squad member. A maximum of 4 semester hours may be earned, and no more than 1 semester hour of credit may be earned in a sport per academic year. This class is specifically for sophomore students

### PEV-156

### 1.00 Drill Team

This course includes the knowledge and skills gained through participation in a collegiate activity at Iowa Central Community College. A maximum of 4 semester hours may be earned; however, no more than 1 semester hour of credit may be earned per semester.

### PEV-190

### 1.00 Varsity Spirit Squad

This course includes the knowledge and skills gained through participation in a collegiate activity at Iowa Central Community College. A maximum of 4 semester hours may be earned; however, no more than 1 semester hour of credit may be earned

# PEV-949

per semester.

### 1.00

### Dance Technique and Fundamentals

This course is designed to explore the techniques and advanced skills of dance and body movement. The purpose is to provide instruction of technical elements necessary for competitive level dancers. This class will implement and combine all areas of preparation for the well rounded athletic dancer to aid in preparation of routines for performance and continued dance education and experience

# PHILOSOPHY

PHI-101

# 3.00

### Introduction to Philosophy

In this course we will read and discuss selections from historical and contemporary philosophers addressing the following questions: What is knowledge and can we have any? How is the mind related to the body? Do we have freewill? What makes right actions right and wrong actions wrong? What is it for a society to be just? What is beauty? What is the truth? This course surveys central positions held by philosophers on several central issues in philosophy such as skepticism, the mind/body problem, the existence of God, and the justification of moral norms. Arguments for and against these positions are presented and discussed, and students are encouraged to participate in the discussion.

### PHI-145 3.00 Introduction to Ethical Conflicts

This course explores contemporary ethical conflicts as a way to develop students critical thinking skills. Students will examine various moral theories and their application to ethical problem solving by the use of case studies. Students will determine principles upon which to base their decision making. Areas for discussion may include personal decision making, job and workplace ethics, the social aspects of medicine, and the morals of politics and war.

# PHYSICAL SCIENCE

PHS-120 4.00

### Exploring Physical Science

This course is a hands-on inquiry based course for prospective elementary teachers and non-science majors. Emphasis is on the search for and use of evidence as the basis for drawing conclusions. The aim of this course is to provide a well-grounded understanding of selected fundamental physical science concepts within electricity, light, heat, and the nature of matter. This course satisfies a general education requirement in the Math/Science area.

# PHS-125 4.00

# **Physical Science**

This course is an introduction to fundamental concepts of physical science through topics in physics, chemistry, astronomy, geology, meteorology and energy to give non-science majors a better understanding of their physical environment. This course satisfies a general education requirement in the Math/Science area. Three hours lecture, two hours lab. Prerequisite: MAT-102 Intermediate Algebra or equivalent

### PHS-172 4.00

# Physical Geology

This is a first course in geology. Students will learn about rocks and minerals, processes that shape the Earth's surface, and the time scale on which these processes occur. This course satisfies a general education requirement in the Math/Science area. Three hours lecture, two hours lab.

# PROFESSIONAL PHOTOGRAPHY PHT-183

# 3.00

# Photography I

This course is an introduction to camera selection and handling, the proper choice of lenses, ISO speed selection, shutter speed and aperture selection, photographic filter usage, and important elements of photographic composition. It will include theories of photography and photographic history. Students will be able to check out digital SLR cameras provided by the college, or may bring their own approved photographic equipment. Students will complete specific technique-based assignments and participate in class demonstrations, discussion and critiques. Materials fee. Pre-requisite: None

### PHT-185 3.00 Photography II

This course is a continuation of Art-184 Photography/ PHT-183 Photography I and will permit students to explore camera and lighting techniques for creating texture, simple indoor and outdoor portraiture, commercial studio photography, journalistic photography, close-ups and more. Students will be able to check out digital SLR cameras provided by the college, or may bring their own approved photographic equipment. Students will complete specific technique-based assignments and participate in class discussion, demonstrations, and critiques. Materials fee. Pre-requisite: ART-184 or PHT-183

# PHT-189 3.00

# Photography III

This course takes the contents of Photography II and elaborates on each concept, from portrait photography to other client-based photographic assignments. Students will begin narrowing their area(s) of specialty in the class. Students will be required to provide their own approved digital single lens reflex (DSLR) camera and approved multi-focal length (zoom) lens. Materials fee. Prerequisite: PHT-185

### PHT-192 3.00

### Photography IV

Photography IV is a continuation of Photography III. This is the point in the program where students will concentrate their energy into one or two specialties (for example: portraiture, journalism (including sports), commercial photography, or wedding photography). Students will be required to provide their own approved digital single lens reflex (DSLR) camera and approved multi-focal length (zoom) lens. Materials fee. Pre-requisite PHT189

### PHT-195 3.00

# Basic Set Prop Design-Const-Painting I

Students will explore the tools and techniques necessary to create an environment supportive of the photographic subject. No text. Materials fee. Pre-requisites: Acceptance in Professional Photography Program and PHT-185

### PHT-196 3.00 Bscset-Propdesn-Const-Paint II

Students will continue to explore the tools and techniques necessary to create an environment supportive of the photographic subject. No text. Materials fee. Pre-requisites: Acceptance in Professional Photography Program and PHT-195

### PHT-230 3.00

### Advanced Portraiture

This course will develop the student?s understanding of the various forms of portraiture, the use of specific tools and materials, and the interpersonal skills necessary for taking effective and compelling photographs. Students will be required to provide their own approved digital single lens reflex (DSLR) camera and approved multi-focal length (zoom) lens. No text. Materials fee. Pre-requisite: PHT-189

### PHT-233 3.00 Commercial Photography

### This course will cover the vast field of commercial photography, from taking fashion photos to product photography, to photographing architecture. Students will be required to provide their own approved digital single lens reflex (DSLR) camera and approved multi-focal length (zoom) lens. No text. Materials fee. Pre-requisite: PHT-185

### PHT-250 2.00

# Marketing in Photography

Students will learn to identify, target and reach potential markets with the appropriate advertising materials. Students will understand how to budget for marketing campaigns, spend wisely, and to use various media formats to reach specific groups. The course will also cover when to advertise, how to use promotions, and, in general, how to motivate clients to choose specific packages or photographic formats. No text. Pre-requisite: PHT-185

### PHT-258

### 2.00 The Business of Photography

# This course will cover an understanding of the tools and techniques of operating a successful photography business and to organize, administer, and market photographic services and products as they pertain to the needs of a targeted audience. No text. Pre-requisites: Acceptance in Professional Photography Program, BUS-102 and PHT-250

### PHT-288

### 3.00 Photography in Journalism

This course will cover how to photograph newsworthy people, places, and sporting, political, and community events for newspapers, journals, magazines, and television. Students will be able to check out digital SLR cameras provided by the college, or may bring their own approved photographic equipment. No text. Material fees. Pre-requisite: PHT-183 or equivalent.

### PHT-299 1.00

### Photography Portfolio Development

Students will identify different types of photographs that represent the spectrum of the photographic subjects and disciplines that they have been educated in. This is the type of collection that graduates of the program will present to potential clients or employers as evidence of the student?s range of skills and expertise. No text. Materials fee. Pre-requisite: PHT-189

# PHYSICS

PHY-162

# 4.00

# College Physics I

This course provides a general background for those who do not plan advanced study in physics or engineering. Topics covered include elementary mechanics, including kinematics and dynamics of particles; work and energy; linear and angular momentum; rotational motion; gravitation; thermodynamics; and oscillation. This course satisfies a general education requirement in the Math/Science area. Prerequisite: Minimum ALEKS math placement score of 30 is required. Enrollment in or completion of MAT-127 or an ALEKS math placement score above 45 is strongly recommended.

### PHY-172 4.00 College Physics II

This course is a continuation of PHY-162 College Physics I. Topics covered include waves; electric forces and fields; direct and alternating currents; magnetic forces and fields; ray optics and image formation; and atomic structure. Prerequisite: PHY-162 with a "C" grade or better

### PHY-184 4.00

# Applied Physics

The Applied Physics course blends basic technical principals with laboratory practice that involves realistic devices used by technicians in their everyday work. Students will gain hands-on experience using applied laboratory experiments to better understand mechanical, fluid, electrical and thermal systems.

### PHY-212 5.00

### Classical Physics I

For engineering and science majors. 3 hours of lecture each week plus 1 recitation and 1 laboratory each week. Topics include linear and angular particle mechanics (kinematics, dynamics, work, energy, momentum, oscillations, graviation) and mechanical systmes of particles (fluids, waves and sound). Prerequisite:Concurrent enrollment in MAT-210 Calculus I or completion with a C or better. The latter is strongly recommended.

### PHY-222 5.00 Classical Physics

# Classical Physics II

This course is a continuation of PHY-212 Classical Physics I. Topics covered include oscillations and waves; electric forces and fields; direct and alternating currents; magnetic forces and fields; ray optics and image formation; and atomic structure. Prerequisite: PHY-212 with a "C" grade or better

### PHY-948 1.00

### **Special Projects**

This course is open to students showing satisfactory preparation in a particular area of interest. Involves individual topic, conferences and preparation of reports. Designed to meet the needs of students wishing to study a selected topic in depth. Permission of the department chair and the staff member with whom the student wishes to work is required.

# PHY-949 1.00

### **Special Topics**

This course, offered usually on a one-time basis only, provides an in-depth study on a topic of general interest pertaining to this department.

### PRACTICAL NURSING PNN-121 1.50

### **Clinical Practicum 1**

This course provides an opportunity for students to apply Fundamentals of Nursing in Health Care in the clinical setting with adult clients through the use of assessment, nursing diagnosis, planning, interventions and evaluation. A pass/fail grade is earned for this clinical course. Prerequisites: Cardiopulmonary Resuscitation (CPR), Mandatory Reporter for child and adult abuse, completion of a 75-hour Nurse Aide class, on state of Iowa Nurse Aide Registry and BIO-168 Human Anatomy & Physiology I with lab. Co-requisites: HSC-112 or HSC-113 Medical Terminology, BIO 173 Human Anatomy & Physiology II with lab, BIO-151 Nutrition, PSY-121 Developmental Psychology, PNN-127 Fundamentals of Nursing in Health Care and PNN-206 Medication Administration for Nurses.

### PNN-127 5.00

### Fundamentals of Nursing in Health Care

This course introduces the art and science of nursing practice. Professionalism, nursing roles, critical thinking, ethical and legal concepts are emphasized. The concepts of the nursing process, communication, safety, pharmacology, the health-illness continuum and cultural diversity are introduced. Skills and technology utilized in the routine care of adult clients in traditional health care settings are presented. Prerequisites: Cardiopulmonary Resuscitation(CPR), Mandatory Reporter for child and adult abuse, completion of a 75-hour Nurse Aide class, on state of Iowa Nurse Aide Registry and BIO-168 Human Anatomy & Physiology I with lab. Co-requisites: HSC-112 or HSC-113 Medical Terminology; PSY-121 Developmental Psychology; BIO-151 Nutrition; BIO-173 Human Anatomy & Physiology II with lab; PNN-121 Clinical Practicum 1; PNN-206 Medication Administration for Nurses.

### PNN-206 1.00

### Medication Administration for Nurses

This course provides a basic foundation of pharmacology concepts and math calculations for the adult and pediatric patient in the clinical setting. Syringe usage, injections and nonparenteral routes, reconstitution, and safe medication administration are emphasized. Drug classifications, nursing implications, and side effects of medications are introduced. Prerequisites: Cardiopulmonary Resuscitation(CPR), Mandatory Reporter for child and adult abuse, completion of a 75-hour Nurse Aide class, on state of Iowa Nurse Aide Registry and BIO-168 Human Anatomy & Physiology I with lab. Co-requisites: HSC-112 or HSC-113 Medical Terminology; PSY-121 Developmental Psychology; BIO-151 Nutrition; BIO-173 Human Anatomy & Physiology II with lab; PNN-121 Clinical Practicum I, PNN-127 Fundamentals of Nursing in Health Care. NOTE: This course does not meet the requirements for certified nurse aides (CNA) to administer medications. A CNA may only administer medications under their scope of practice, after completing a medication course designed for CNAs and under the delegated authority of a nurse.

### PNN-311 1.00

### PN Issues & Trends

This course is designed to help the practical nursing student develop an awareness and understanding of responsibilities to self and career. The course content includes historical perspectives, ethical and legal considerations, professional organizations, leadership skills, career opportunity review, health resources and career responsibilities. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, PSY-121 Developmental Psychology, HSC-112 or HSC-113 Medical Terminology, BIO-151 Nutrition, BIO-168 Human Anatomy & Physiology II with lab, BIO-173 Human Anatomy & Physiology II with lab. Co-requisites: PNN-811 Selected Clinical Nursing, PNN-731 Clinical Practicum.

### PNN-621 8.50

### Life Span Health Care

This course is designed for the beginning nursing student and introduces the health care needs of individuals and families. It presents content on the nurse's role in health promotion, maintenance and disease prevention while looking at the effects of the environment on the health of children, pregnancy, adults and the elderly. The focus is on common health problems associated with each body system and an introduction of pharmacology in the therapeutic management of disease. Prerequisites: PNN-127 Fundamentals of Nursing in Health Care, PNN-121 Clinical Practicum 1, PNN-206 Medication Administration for Nurses, HSC-112 or HSC-113 Medical Terminology, BIO-151 Nutrition, PSY-121 Developmental Psychology, BIO-173 Human Anatomy & Physiology II with lab. Co-requisite: PNN-622 Clinical Practicum 2.

### PNN-622

### 4.00 Clinical Practicum 2

This course provides an opportunity for students to apply Life Span Health Care theory in the clinical setting with different age groups through the use of assessment, nursing diagnosis, planning, intervention and evaluation. Prerequisites: PNN-127 Fundamentals of Nursing in Health Care, PNN-121 Clinical Practicum 1,PNN-206 Medication Administration for Nurses,HSC-112 or HSC-113 Medical Terminology, BIO-151 Nutrition, PSY-121 Developmental Psychology, BIO-173 Human Anatomy & Physiology II with lab. Co-requisite: PNN-621 Life Span Health Care.

# PNN-731

# 2.50

# Clinical Practicum

This course provides the practical nursing student with the clinical opportunity to demonstrate further proficiency in the care of adult medical/ surgical patients and a limited experience with a leadership role. A pass/fail grade is earned for this clinical course. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, PSY-121 Developmental Psychology, HSC-112 or HSC-113 Medical Terminology, BIO-151 Nutrition, BIO-168 Human Anatomy & Physiology I with lab, BIO-173 Human Anatomy & Physiology II with lab. Co-requisite: PNN-811 Selected Clinical Nursing, PNN-311 PN Issues and Trends.

### PNN-811 1.00 Selected Clinical Nursing

This course is designed to assist the practical nursing student to understand common adult health problems with emphasis on the nursing process and pharmacology. Prerequisites: PNN-621 Life Span Health Care, PNN-622 Clinical Practicum 2, PSY-121 Developmental Psychology, HSC-112 or HSC-113 Medical Terminology, BIO-151 Nutrition, BIO-168 Human Anatomy & Physiology I with Iab, BIO-173 Human Anatomy & Physiology II with Iab. Co-requisites: PNN-311 PN Issues and Trends, PNN-731 Clinical Practicum.

# POLITICAL SCIENCE

POL-111 3.00

### American National Government

This survey course introduces the general principles, policies, and problems of the national government in the United States. Fundamentals of American democracy; constitutionalism; the nature of federalism; the rights and duties of citizens; the institutions and processes of the executive, legislative, and judicial branches of government; the role of public opinion and the media; and the participation of interest groups, social movements, and political parties in the U.S. political system are emphasized.

POL-112 3.00

# American State and Local Government

This survey course introduces the general principles and problems of representative government at the state and local levels in the United States. A discussion of current political issues and alternative public policies impacting on states and localities will be included in the course.

### POL-121 3.00

### **International Relations**

This course involves the study of international affairs, including major theories and concepts relating to comparative political systems, international organizations, foreign policy, international economics, global politics, diplomacy, and international conflict. The course is designed to give the student a better understanding of international relations in the world today, with an emphasis on issues relating to global awareness and intercultural diversity.

# PSYCHOLOGY

PSY-111 3.00

# Introduction to Psychology

This course includes the tools for the study of psychology, basic psychological processes, personality and social behavior, contemporary knowledge of motives, intelligence, learning and emphasis on the language of modern psychology.

### PSY-112 3.00

### Psychology of Human Relations

The basic psychological principles of human behavior and the operation of these principles in helping students to understand themselves and their relationships with others socially, in the family and the world of work, are examined in this course.

### PSY-121 3.00 Developmental Psychology

This course traces the fundamental patterns of normal health development from conception to death. Each developmental period is examined in light of the characteristics of the period and the demands of the American culture. Recent research in the studies relating to different ages is reviewed.

### PSY-222 3.00

### Child Psychology

This course focuses on the normative and nonnormative influences of the physical, cognitive and socioemotional procsses of children from conception to age 12. The course will also examine how the dynamics of family, school, and society affect development.

PSY-224 3.00

### Adolescent Psychology

This course concentrates on the bidirectional view of how physical changes affect socioemotional and cognitive processes for adolescents age 10-19. It also includes the tools for the study of learning theories, community resources, and familial support needed to help adolescents successfully transition into adulthood.

### PSY-241 3.00

### Abnormal Psychology

This course involves the study of abnormal behavior, including major theories, concepts of psychopathology, and methods of classification. The course is designed to give the student a better understanding of the causes of severe personality and behavior disorders and suggested methods of treatment and control.

### PSY-251 3.00

# Social Psychology

This course explores the fundamental social influence on human beliefs and human behavior. Social psychology will help students understand their own behavior and the behavior of others with whom they interact in the social environment.

# PSY-281

### 3.00 Educational Psychology

This course examines classroom behavior with emphasis on motivation and promotion of learning and introduces the nature and theories of learning, measurement of learning, personal characteristics of pupils and educational procedures.

# PSY-949

2.00

# Special Topics

The department will offer from time to time credit offerings in selected special areas of interest on a topical basis per semester.

# RADIOLOGIC TECHNOLOGY

### RAD-122

4.00

### Radiographic Procedures I

The student will study patient positioning and common procedures performed in the Radiology Department. Procedures include: upper and lower extremities, chest and abdomen. A vital part of this course will be theory of exposure, film development and dark room techniques. Prerequisite: Cardiopulmonary Resuscitation (CPR) and BIO 163 Essentials of Anatomy & Physiology Co-requisite: RAD-210 Clinical Education I; RAD-320 Imaging I.

### RAD-142 4.00 Radiographic Procedures II

This course is a continuation of Radiographic Procedures I in which the student will be given an in depth integrated coverage of the thoracic viscera, abdomen, digestive system, and urinary system. Prerequisite: RAD-122 Radiographic Procedure I Co-requisite: RAD-230 Clinical Education II; RAD-430 Radiographic Physics; RAD-360 Imaging II.

# RAD-163 2.50

# Radiographic Procedures III

This course is a continuation of Radiographic Procedures 2. The student will study radiographic anatomy and procedures of the skull and it's contents. Emphasis will be given to those procedures commonly performed in the radiology department. Prerequisite: RAD-142 Radiographic Procedures II Co-requisite: RAD-270 Clinical Education III; RAD-182 Special Procedures

# RAD-182

### 2.00

### Special Procedures

Students will study detailed anatomy, physiology, and radiographic procedures of the central nervous and circulatory systems. Contrast medias, procedures used, and reactions are discussed. Also presented are new technologies and modalities within Radiology. Prerequisite: RAD-142 Radiographic Procedures II Co-requisite: RAD-163 Radiographic Procedures III; RAD-270 Clinical Education III.

### RAD-210

# 4.00

# Clinical Education I

This course enables the student to become oriented to the health facility and the department of radiology. Time is allotted the student to observe procedures, under direct supervision and gain beginning skills in Radiography. Prerequisite: Cardiopulmonary Resuscitation (CPR) and BIO-163 Essentials of Anatomy & Physiology. Corequisite: RAD-122 Radiographic Procedures I; RAD-320 Imaging I.

### RAD-230 4.00

### Clinical Education II

This clinical practicum is a continuation of Clinical Education I. In addition to doing the procedures learned in the first semester, the student observes more complex examinations and gradually assumes an increasing amount of responsibility for the performance of those procedures. Prerequisite: RAD-210 Clinical Education I; BIO-163 Essentials of Anatomy & Physiology; HSC-113 Medical Terminology; HSC-104 Introduction to Health Care; RAD-320 Imaging I; RAD-122 Radiographic Procedures I Co-requisite: RAD-142 Radiographic Procedures II; RAD-430 Radiographic Physics; RAD-360 Imaging II.

# RAD-270

### 3.50 Clinical Education III

This clinical practicum builds on Clinical Education I and II. It focuses on special procedures, computerized tomography, angiography, magnetic resonance, ultrasonography and nuclear medicine. Prerequisite: RAD-230 Clinical Education II Corequisite: RAD-163 Radiographic Procedures III; RAD-182 Special Procedures. RAD-320 2.00 Imaging I

The principles of radiographic imaging are investigated in this course. The history and methods of recording radiographic images are explored. Special emphasis will be placed on the factors that determine image quality. Prerequisite: Cardiopulmonary Resuscitation (CPR) and BIO-263 Essentials of Anatomy & Physiology Co-requisite: RAD-122 Radiographic Procedures I; RAD-210 Clinical Education I

### RAD-365 2.00 Imaging II

This course is a continuation of RAD-320 Imaging I in which the student will continue to explore the principles of radiographic imaging. Imaging principles will involve such items as automatic processing, film characteristics, and geometrical factors. Prerequisite: RAD-320 Imaging I Corequisite: RAD-230 Clinical Education II; RAD-430 Radiographic Physics; RAD-142 Radiographic Procedures II.

### RAD-430 3.00

### **Radiographic Physics**

Explores the physical concepts of energy, the structure of matter, electrostatics, electrodynamics, magnetism, electromagnetism, electric generators and motors. The principles of electricity are studied as it relates to x-ray circuits, rectification, and x-ray production. X-ray tubes, rating charts, and interaction of x-rays with matter are included. Prerequisite: RAD-210 Clinical Education I Corequisite: RAD-230 Clinical Education II; RAD-360 Imaging II; RAD-142 Radiographic Procedures II.

# RAD-510

# 6.00

Clinical Education IV

Clinical experience in the fourth semester is primarily spent in continuous practice in improving the techniques and procedures previously experienced, with on going film critique. Prerequisite: RAD-162 Radiographic Procedures III; RAD-270 Clinical Education III Co-requisite: RAD-770 Film Critique and Evaluation; RAD-895 Quality Assurance.

### RAD-570 8.00

# **Clinical Education V**

The student gains experience in the art of pediatric radiography. The clinical practicum also serves as a continuation of clinical experience providing opportunity to demonstrate competency in all phases of radiologic technology. Prerequisite: RAD-510 Clinical Education IV Co-requisite: RAD-740 Radiologic Pathology; RAD-850 Radiation Protection and Biology.

### RAD-620 4.50

### Clinical Education VI

Students will continue to perform radiographic procedures with minimal supervision, exercising independent judgement, perfecting the techniques and procedures previously experienced. Prerequisite: RAD-570 Clinical Education V Corequisite: RAD-690 Cross Sectional Anatomy; RAD-946 Seminar.

### RAD-690 1.00 Cross Sectional

Cross Sectional Anatomy

This course includes the principles and applications of cross sectional anatomy. The student will explore regions of the body in a transverse, sagittal, or coronal section and will be able to identify the anatomy of that area. Prerequisite: RAD-570 Clinical Education V Co-requisite: RAD-946 Seminar; RAD-620 Clinical Education VI.

RAD-738 2.00 Radiologic Pathology

This course is designed to acquaint the student with certain changes which occur in disease and injury and their application to radiologic technology. Prerequisite: RAD-510 Clinical Education IV Corequisite: RAD-570 Clinical Education V; RAD-850 Radiation Protection and Biology.

### RAD-770 2.50

# Film Critique and Evaluation

Criteria for diagnostic quality radiographs are studied. The principles of film evaluation is emphasized as it relates to technique, collimation and shielding, position and radiographic quality. Prerequisite: RAD-270 Clinical Education III Corequisite: RAD-895 Quality Assurance; RAD-540 Clinical Education IV.

### RAD-850 3.00

### Radiation Protection & Biology

This course explores the history and biological effects of ionizing radiation. Methods of radiation measurement detection and protection are discussed. Prerequisite: RAD-430 Radiographic Physics; RAD-510 Clinical Education IV Corequisite: RAD-740 Radiologic Pathology; RAD-570 Clinical Education V.

### RAD-896 2.00

### Quality Assurance

Explores the theory and practice of quality assurance in the diagnostic radiology department. The use of quality assurance test tools, interpretation of results and management of a quality assurance program through record keeping is investigated in the laboratory. Prerequisite: RAD-270 Clinical Education III Co-requisite: RAD-770 Film Critique and Evaluation; RAD-510 Clinical Education IV.

# RAD-946

# 2.00

# Seminar

The student will re-examine previously learned material. Special topics will be selected for group discussion. Prerequisite: RAD-570 Clinical Education V Co-requisite: RAD-690 Cross Sectional Anatomy; RAD-620 Clinical Educational VI.

# READING

RDG-010

# 1.00

# Reading I

This course provides opportunities for students to implement a variety of study strategies to improve comprehension of college textbooks. The major focus is on application of study strategies to specific college texts. This course does not meet graduation credit requirements for certificate, diploma, general studies, or associate degree programs.

### RDG-048 4.00 Basic Reading

This course introduces the student to strategies that, when applied properly, will increase reading skills. The major focus is on application exercises that reinforce reading and study skills. This course does not meet graduation credit requirements for certificate, diploma, general studies, or associate degree programs.

### RECREATION AND FACILITIES MGT REC-120 3.00

### . - .....

# Sports Facililties Management

This course is the Introduction course within the Sports and Recreation Management Program, and will teach the student skills specific to managing sports and recreation facilities. Illustrative examples of facilities students will gain knowledge of include: recreation and fitness centers, and specialty facilities such as sports complexes, golf/tennis clubs, swimming pools, arenas and stadiums. The student will gain valuable information on the dayto-day operations of these various sports facilities and the intricacies involved in each different facility. Overviews in critical areas of facility management include: staffing, customer service, human relations, budgeting, analysis of financial statements, inventory control, safety, physical plant operations, risk management, and marketing.

### REC-130 3.00

# Introduction to Recreation Administratio

This course will teach the student skills specific to managing a sports/recreation organization. Illustrative examples of sports/recreation administration students will gain knowledge of include: the different types of recreation organizations that exist and their functions, the positions and job duties within a sports/recreation organization, current trends and issues affecting the sports/recreation industry, facility planning, fundraising, and various principles in leadership/ styles of leadership.

# RELIGION

**REL-105** 

# 3.00

### Introduction to Religion

This course examines various ways in which religion has been a social force in world cultures. A study is made of various religious answers to the ultimate questions posed by human life, including ideas about what is good or bad.

# STUDENT DEVELOPMENT

SDV-035

### 1.00 Classroom Assistance

This course emphasizes the need for students to develop skills relating to classroom subject matter. Topics include course study techniques, vocabulary building, problem-solving, and organizational skills.

# SDV-107

# 1.00

# Health Science College Experience

This course will introduce Pre-Health Science students to the college's expectations, environment, and resources so that they may become competent learners.

SDV-108 1.00

# The College Experience

This course will introduce students to the college's expectations, environment, and resources so that they may become more competent learners.

### SDV-112 2.00 Success Seminar

Success Seminar is designed to ensure a student's success in college classes, programs, activities, and eventual transfer or employment. A mentor will explore proven strategies for student and life success. Personal development skills as well as exposure to college and cultural activities are integrated into the curriculum. Topics include self-management, interdependence, self-awareness, learning and study skills, emotional intelligence, self-acceptance, communicating effectively, and creative and critical thinking. Students with a COMPASS Reading Score of 0-79 or an ACT Reading Score of 0-17 will be placed in Success Seminar.

### SDV-116 1.00

### **Strategies for Online Academic Success**

This course is specifically designed for the online learner and will introduce students to the college's expectations, environment, and resources so that they become more competent learners.

# SDV-118 3.00

# The Online Experience

This course will provide online students the understanding and expectation of learning in an online environment. Students will learn skills such as time management and study habits. They will also learn about academic integrity and how to become a successful online student. Prerequisites: Enrolled in an eight-week online program

### SDV-166 1.00

### **Employee Relations I**

This course will develop the student's awareness of factors affecting job success. Classroom learning activities will model respect for others, cooperative attitudes, and the benefits of diversity.

# SDV-167

### 1.00 Employee Relations II

This course focuses on the human relations' aspects essential for new employees to fit into an existing organization. Teamwork and industry field trips will support the job getting and keeping functions of this course. Time management and interviewing questions will be presented. Prerequisite:Employee Relations I or instructor permission.

### SDV-168 1.00

### **Employee Relations III**

This course involves the student in the job application process. This course focuses on learning specific job seeking skills including networking, locating Internet job leads, writing an effective resume and cover letter, applying for a job, and interviewing for a job. Prerequisite: Employee Relations II

# SDV-195 1.00

# Student Government

lowa Central's Student Government consists of a governing body known as the Student Senate. The purpose of the course is to grant college elective credit in social sciences to students participating in student government. Active involvement in the planning and implementation of student activities and community service projects sponsored by the Student Senate are the main focus of the course. Enrollment in the course is optional for members of the Student Senate. A maximum of 4 semester hours may be earned.

### SDV-196 1.00 Getting Involved

Iowa Central Community College's Student Ambassador program is designed to foster and develop student leaders. Ambassadors will promote the College by assisting in student recruitment, community relations, and other internal and external public relations functions for the President's Office and Student Services. Enrollment in the course is mandatory for students serving as Student Ambassadors. A maximum of 4 semester hours of elective credit may be earned.

### SOCIAL MEDIA AND MARKETING SMM-110 2.00

### Writing for the Web

This course will explore the unique constraints of writing on the World Wide Web. Our emphasis will be on discovering new graphic and rhetorical structures for thinking and writing which are best suited for the nonlinear environment of the web. This course will apply techniques of professional writing for real world audiences, both communitybased and commercial including text messaging, e-mail, community reviews and comments, web journals ("weblogs" or "blogs"), web pages, and communally-edited collections ("wikis"). Students will create or contribute to such texts, examine the conventions that have developed for each particular form, and reflect upon their cultural significance.

# SMM-170 3.00

### Social Media Campaigns

In this course, students explore the applications of social media in journalism and public relations, including driving traffic to other platforms, engaging directly with information consumers and establishing a brand online. We will study current technologies and others as they emerge during the semester.

# SMM-200 3.00

### **Emerging Media Technologies**

This course offers theoretical and applied approaches to journalism and citizen media strategies and tactics needed for the profession. Sample topics include social media and journalism, breaking news journalism, ethics in journalism, and entrepreneurship in journalism. Students work in a newsroom environment to utilize mobile devices and social media platforms to identify compelling story ideas, effectively break news, and report on important news events and issues while applying theories and concepts of online social networking to journalism. Students develop their own professional social media portfolios and build online communities.

# SMM-210 3.00

### Web Analytics

This course will explore basic online research principles and then examine two themes: web analytics and social media monitoring. Web analytics reviews the effectiveness of company communications and customer interactions on a range of digital marketing platforms including website, social media presences and mobile marketing. Social media monitoring involves using tools to listen to conversations about a brand across digital platforms and taking appropriate action.

### SMM-910 3.00 Internship

To offer qualified students an opportunity to gain academic credit for professional media work that enhances the skills they have learned in their courses. Students are supervised by the program coordinator in their related field. Internships may be in advertising, journalism, public relations or telecommunications.

### SOCIOLOGY

SOC-110 3.00

### Introduction to Sociology

This course is a concise study of human behavior from the perspective of Sociologists. It will examine the ways in which social interaction, social processes, and social institutions comprise our sociological imagination. The course will also explore the ways that personality, status, role, class, gender, age, race, and ethnicity affect human interaction and institutions.

### SOC-115

### 3.00

# Social Problems

This course is an examination of social phenomena that have been defined as social problems in contemporary society. The course provides an understanding of some of the causes, effects and proposed solutions to these defined problems based upon the latest research.

### SOC-120 3.00

# Marriage & Family

This course is a study of personal relationships and how they are developed and maintained from courtship through family living.

### SOC-130 3.00

### Introduction to Gerontology

This course will identify and trace the history and development of major social policies and programs that affect older persons, especially in the area of health care. The course will take a broad view and examine the physical aging process, particularly as it relates to psychological and sociological age changes. Attitudes toward aging and the impact that the increasing number of elderly have on society will be examined. In addition, the course will focus on individuals and organizations that play a role in developing and implementing policies involving senior citizens. The course will provide a broad background for those working with older adults.

### SOC-140

### 3.00

### Human Behavior in the Soc Environment

The basic knowledge and conceptual perspectives for understanding individuals, families, groups, communities, organizations, and cultures will be studied. The course will focus on the interactions between and among human biological, social, psychological, and cultural systems as they affect and are affected by human behavior.

### SOC-150 3.00

### Introduction to Human Services

A survey is made of the historical development and philosophy of the social service in today's society. Emphasis is placed on the programs and agencies available in Iowa with their services, resources and methods of delivery.

# COURSE DESCRIPTIONS

### SOC-200 3.00 Minority Group Relations

This course examines majority-minority group relations from a sociological perspective focusing primarily on race and ethnic relations, but also the intersecting identities of gender, social class, and other oppressed groups in American society. Students will learn historical perspectives of these selected majority-minority groups and the cultural consequences of privilege, oppression, and social inequality. Prerequisities: SOC 110 is recommended, but not required.

# SOC-949 3.00

### Special Topics

This offering provides an in-depth study of a special topic of general interest.

### SPEECH

SPC-101 3.00

### Fundamentals of Oral Communication

This course is designed to develop the basic skills of oral communication by studying the process and theory of communication. Emphasis is placed on the preparation and delivery of individual and group presentations in various speaking situations. Prerequisite: ENG-105 Must receive a C or better.

### SPC-112 3.00 Public Spe

# Public Speaking

This course is designed to develop the basic skills of speech communication by studying the process from invention through delivery. Emphasis is placed on the preparation and delivery of presentations. Prerequisite: ENG 105 Must receive a C or better.

### SPC-122 3.00

# Interpersonal Communication

Interpersonal communication is the study of oneon-one communication in a variety of settings. The study of this primarily dyadic form of communication will focus on the workplace, family, friends and romantic partners. Verbal, nonverbal, listening and conflict management will also be addressed.

### SPC-132 3.00

### **Group Communication**

This course analyzes the problem-solving techniques utilized in small-group decision making. The selection, investigation and analysis of several current questions provide practical experience in the discussion roles of both participant and leader.

### SPC-140 3.00 Oral Interpr

# Oral Interpretation

This course provides experience in the oral presentation of three major literary genres -- prose, poety, and drama -- for the purpose of making such forms come alive for the listening audience. The class begins with group exercises that culminate in a performance of Children's Literature.

# WELDING

### WEL-110 2.00

### **Blueprint Reading for Welders**

Students will learn the symbol representation of the welding trades. They will learn to communicate symbolically using standard industry representations.

### WEL-122 2.00 Beginning Welding

The Beginning Welding course offers students instruction in flat and horizontal position welding. The welding process covers Shielded Metal Arc Welding (AC-DC), Gas Metal Arc Welding (MIG), Oxy-Acetylene Cutting and welding, braze welding, plasma arc cutting, and Gas Tungsten Arc Welding.

### WEL-170 2.00

### Shielded Metal Arc Welding

This course is designed to give students proficiency in the theory and operation of shielded metal arc welding equipment. Emphasis is on safety and welding in the flat and horizontal positions.

### WEL-171 2.00

### Advanced Shielded Metal Arc Welding

This course is designed to give students advanced theory and skills in shielded metal arc welding. Emphasis is on safety, welding in the vertical and overhead positions. Prerequisite: WEL 170 SMAW

# WEL-178 2.00

### Advanced Gas Metal Arc Welding

This course is designed to give students advanced theory and skills in gas metal arc welding. Emphasis is on safety, tubular and pipe welding and welding in the vertical and overhead positions. Materials used for welding are carbon steel, aluminum, stainless steel, and Flex Cored Arc Welding. Prerequisite: WEL 181 GMAW

### WEL-181 2.00 Gas Metal Arc Welding

This course is designed to give students proficiency in theory and operations of gas metal arc welding equipment. Emphasis is on safety and welding in the flat and horizontal positions.

# WEL-190

### 2.00 Gas Tungsten Arc Welding

This course is designed to give students proficiency in theory and operation of GTAW equipment. Emphasis is on safety, and welding in the flat and horizontal position.

# WEL-196

# 2.00

# Advanced Gas Tungsten Arc Welding

This course is designed to give students advanced theory and skills in gas tungsten arc welding. Emphasis is on safety, and welding in the vertical and overhead positions. Materials used for welding are aluminum, stainless steel, carbon steel, and titanium. Prerequisite: WEL 190 GTAW

# WEL-213

# Fabrication, Layout, Estimating & Repair

This course will cover aspects of measurement and geometry of circles, squares and triangles. It also covers calculation of bends by braking, rolling, and welding 90 degree angles and 360 degree circles. The students will do the calculations for the fabrication of sliding joints, transitions, and guard for pulley systems by operating sheet metal equipment, layout tools, and welding. Co-Requisite: WEL 122 Beginning Welding

### WEL-214 2.00 Advanced Fabrication

This course will cover the billing of materials, blueprint layout techniques, layout tools, operating sheet metal equipment, and welding. The students will use these skills to do the fabrication of a sand shovel, trailer, and more complex projects. Making jigs template development and job estimating are also addressed. Co-Requisite: WEL 122 Beginning Welding. Prerequisite: WEL 213 Fabrication, Layout Estimating & Repair

# WEL-299

### 2.00 Pre-Pipe Welding

This course is designed to give students advanced theory and Shielded Metal Arc Welding and Gas Tungsten Arc Welding in the vertical and overhead positions, pipe 1F and 2F.

### WEL-301

### 2.00

### **Pipe Welding**

This is an advanced welding course designed to give students theory and application of pipe welding. Welding processes used will be oxyfuel welding, shielded metal arc welding and gas tungsten arc welding. Students will weld various pipe diameter and thickness of ferrous and nonferrous pipe in all positions. Prerequisite: WEL 170 Shielded Metal Arc Welding

### WEL-340

### 2.00

### Maintenance Welding

Students will apply welding skills to the repair and modifications of machines and fixtures, as required by factory maintenance personnel. Prerequisite: WEL 122 Beginning Welding

### WEL-710 3.00

# Robotic Welding

This course will give students experience utilizing the same robots and software that are used in industry. Integration of robotic automation will teach design and manufacturing concepts. This course covers basic operations of FANUC Robots, using the teach pendant as the main interface point.

# WEL-949

### 1.00 Spec Top: Gma Sma Oxy Welding

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department.

# APPENDIX

Associate in Arts Degree Sheet Associate in Science Degree Sheet Associate of Professional Studies Degree Sheet Placement Chart General Education Course List Health Sciences Core Program Standards Advanced Standing Courses

# Associate of Arts Degree Sheet

### Graduation Requirements:

Successfully complete 60 hours with a 2.00 GPA (at least 12 semester hours taken at lowa Central), and pay non-refundable \$25 graduation fee.

### **Transfer Students:**

Are your transfer courses on the Iowa Central transcript? If not, see Student Records.

### I. COMMUNICATION: ENGLISH/SPEECH **9** Hours Required

- ENG 105 Composition I (3)
- ENG 106 Composition II (3)
- SPC 112 Public Speaking (3)

\*These credits can only be used for Category V SPC 122 Interpersonal Communication (3)\* SPC 132 Group Communication (3)\*

### **II. MATH AND SCIENCE**

**8 Hours Required** 

[one course from each of the following areas]

### Math:

- MAT 111 Math for Liberal Arts (4)
- MAT 120 College Algebra (3)
- MAT 127 College Algebra & Trig. (5)
- MAT 130 Trigonometry (3)
- MAT 140 Finite Math (3)
- MAT 156 Statistics (3)
- MAT 157 Statistics (4)
- MAT 158 Statistics II (3)
- MAT 159 Statistics Laboratory (1)
- MAT 165 Business Calculus (3)
- MAT 210 Calculus I (4)

### Science:

- BIO 102 Introductory Biology (3)
- BIO 103 Introductory Biology Lab (1)
- BIO 112 General Biology I (4)
- BIO 113 General Biology II (4)
- BIO 168 Human Anat & Phys I w/ Lab (4)
- BIO 173 Human Anat & Phys II w/ Lab (4)
- CHM 110 Introduction to Chemistry (3)
- CHM 111 Introduction to Chemistry Lab (1)
- CHM 165 General Chemistry I (4)
- CHM 175 General Chemistry II (4)
- ENV 111 Environmental Science (4)
- PHS 120 Exploring Physical Science (4)
- PHS 125 Physical Science (4)
- PHY 162 College Physics 1 (4)
- PHY 212 Classical Physics I (5)

### **III. SOCIAL SCIENCE**

**9** Hours Required

[one course from at least two of the following three areas]

### Human Relations:

www.iowacentral.edu/catalog

- ANT 105 Cultural Anthropology (3)
- PSY 111 Introduction to Psychology (3)
- PSY 121 Developmental Psychology (3)
- PSY 251 Social Psychology (3)
- SOC 110 Introduction to Sociology (3) Ē.
- SOC 115 Social Problems (3)
- SOC 120 Marriage and Family (3)
- SOC 200 Minority Group Relations (3)

### ASSOCIATE IN ARTS DEGREE

OWA CENTRA

**V. DISTRIBUTED REQUIREMENTS** 

VI. INSTITUTIONAL REQUIREMENT

SDV 108 The College Experience (1)

SDV 118 The Online Experience (3)

VII. COMPUTER LITERACY

CIS 162 C++ (4)

SDV 116 Strategies for Online Success (1)

CSC 110 Introduction to Computers (3)

EDU 255 Technology in the Classroom (3)

NET 110 Microcomputer Fundamentals (3)

[16 hours may be selected from Arts & Science courses or

**ELECTIVE COURSE CHOICES ON REVERSE** 

Developmental courses that DO NOT apply

toward 60 hours to graduate:

0-37

0-60

61-79

P 0-33

P 34-36

A 0-50

No Developmental Courses Required

ACT

0-13

0-13

14-17

0-15

16-19

ALEKS

0-13

14-29

COMPASS

16 hours of vocational courses may be used]

SDV 107 Health Science College Experience (1)

**1 Hour Required** 

**3 Hours Required** 

VIII. ELECTIVES

**16 Hours Required** 

Course

ENG 025 (4)

RDG 048 (4)

RDG 010 (1)

MAT 045 (4)

MAT 063 (4)

Retest

5 additional hours required from categories I-IV

**EFFECTIVE FALL 2016** Approved 08/22/14

### Civic Responsibility:

- GEO 121 World Regional Geography (3)
- ECN 120 Principles of Macroeconomics (3)
- ECN 130 Principles of Microeconomics (3)
- POL 111 American National Govt. (3)
- POL 112 American State/Local Govt. (3)
- POL 121 International Relations (3)

### History:

- HIS 112 West Civ: Ancient to Early Mod (4)
- HIS 113 West Civ: Early Mod to Present (4)
- HIS 151 U.S. History to 1877 (3)
- HIS 152 U.S. History Since 1877 (3)

### **IV. HUMANITIES**

### **9 Hours Required**

[one course from at least two of the following four areasl

### Aesthetic Perspective:

- ART 101 Art Appreciation (3)
- ART 133 Drawing (3)
- ART 151 Design 1 (3)
- ART 203 Art History I (3) П
- ART 204 Art History II (3)
- DRA 101 Introduction to Theater (3)
- DRA 130 Acting 1 (3)
- ENG 221 Creative Writing (3)
- HUM 113 Exploring the Humanities (3)
- П LIT 101 Introduction to Literature (3)
- LIT 114 American Literature (3)
- LIT 155 Modern World Fiction (3)
- MUS 104 Exploring Music (3)
- SPC 140 Oral Interpretation (3)

### Ethical/Religious Perspective:

- HUM 185 Technology & Social Change (3)
- PHI 101 Introduction to Philosophy (3)
- PHI 145 Introduction to Ethical Conflicts(3)
- REL 105 Introduction to Religion (3)

### **Cultural Studies:**

Modern Language:

П

П

П

П

- CLS 130 African Cultures (3)
- П CLS 141 Middle Eastern History & Culture (3)
- CLS 150 Latin American History & Culture (3)

ASL 131 American Sign Language I (3)

ASL 161 American Sign Language II (3)

FLC 141/142 Elementary Chinese I/II (4)

FLF 141/142 Elementary French I/II (4)

FLG 141/142 Elementary German I/II (4)

FLS 141/142 Elementary Spanish I/II (4) FLS 241/242 Intermediate Spanish I/II (4)

FLS 271/272 Advanced Spanish I/II (4)

FLG 241/242 Intermediate German I/II (4)

144

- CLS 165 Understanding Cult.-Japan (3)
- CLS 167 Understanding Cult.-China (3)
- CLS 170 Russian History & Culture (3) П
- CLS 181 American Diversity (3) П
- CLS 210 Cultures in Transition (3)
## Associate of Science Degree Sheet

## Graduation Requirements:

Successfully complete 60 hours with a 2.00 GPA (at least 12 semester hours taken at ICCC), and pay non-refundable \$25 graduation fee.

### **Transfer Students:**

Are your transfer courses on the ICCC transcript? If not, see Student Records.

## I. COMMUNICATION:ENGLISH/SPEECH 9 Hours Required

- ENG 105 Composition I (3)
- ENG 106 Composition II (3)
- □ SPC 112 Public Speaking (3)

### \*These credits can only be used for Category V SPC 122 Interpersonal Communication (3)\* SPC 132 Group Communication (3)\*

## **II. MATH AND SCIENCE**

20 Hours Required

[one course from at least each of the following areas]

### Math:

- □ MAT 120 College Algebra (3)
- MAT 127 College Algebra & Trig. (5)
- □ MAT 130 Trigonometry (3)
- □ MAT 140 Finite Math (3)
- □ MAT 156 Statistics (3)
- □ MAT 157 Statistics (4)
- □ MAT 158 Statistics II (3)
- □ MAT 159 Statistics Laboratory (1)
- □ MAT 165 Business Calculus (3)
- MAT 210 Calculus I (4)
- MAT 216 Calculus II (4)
- MAT 219 Calculus III (4)
- MAT 226 Differential Equations with Laplace (3)

#### Science:

- □ BIO 112 General Biology I (4)
- BIO 113 General Biology II (4)
- BIO 151 Nutrition (3)
- BIO 168 Human Anat & Phys I w/ Lab (4)
- BIO 173 Human Anat & Phys II w/ Lab (4)
- D BIO 186 Microbiology (4)
- □ CHM 165 General Chemistry I (4)
- CHM 175 General Chemistry II (4)
- □ CHM 261 Organic Chemistry I (4)
- □ CHM 271 Organic Chemistry II (4)
- □ PHY 162 College Physics 1 (4)
- D PHY 172 College Physics II (4)
- PHY 212 Classical Physics I (5)
- PHY 222 Classical Physics II (5)

### **III. SOCIAL SCIENCE**

6 Hours Required [one course from at least two of the following three areas]

#### Human Relations:

- ANT 105 Cultural Anthropology (3)
- PSY 111 Introduction to Psychology (3)
- PSY 121 Developmental Psychology (3)
- PSY 251 Social Psychology (3)
- □ SOC 110 Introduction to Sociology (3)
- □ SOC 115 Social Problems (3)
- SOC 120 Marriage and Family (3)
- SOC 200 Minority Group Relations (3)

# ASSOCIATE IN SCIENCE DEGREE

**OWA CENTRAL** 

OMMUNITY COL

V. DISTRIBUTED REQUIREMENTS

VI. INSTITUTIONAL REQUIREMENT

SDV 108 The College Experience (1)

SDV 118 The Online Experience (3)

**VII. COMPUTER LITERACY** 

CIS 162 C++ (4)

SDV 116 Strategies for Online Success (1)

CSC 110 Introduction to Computers (3)

EDU 255 Technology in the Classroom (3)

16 hours of vocational courses may be used]

NET 110 Microcomputer Fundamentals (3)

[16 hours may be selected from Arts & Science courses or

ELECTIVE COURSE CHOICES ON REVERSE

Developmental courses that DO NOT apply

toward 60 hours to graduate:

0-37

0-60

61-79

P 0-33

P 34-36

A 0-50

No Developmental Courses Required

ACT

0-13

0-13

14-17

0-15

16-19

ALEKS

0-13

14-29

APPENDIX

COMPASS

**1 Hour Required** 

**3 Hours Required** 

VIII. ELECTIVES

**16 Hours Required** 

Course

ENG 025 (4)

RDG 048 (4)

RDG 010 (1)

MAT 045 (4)

MAT 063 (4)

Retest

2 additional hours required from categories I-IV

SDV 107 Health Science College Experience (1)

[AS.UNDC]

## EFFECTIVE FALL 2016 Approved 02/11/14

### Civic Responsibility:

- GEO 121 World Regional Geography (3)
- ECN 120 Principles of Macroeconomics (3)
- ECN 130 Principles of Microeconomics (3)
- POL 111 American National Govt. (3)
- POL 112 American State/Local Govt. (3)
- POL 121 International Relations (3)

## History:

- HIS 112 West Civ: Ancient to Early Mod (4)
- HIS 113 West Civ: Early Mod to Present (4)
- HIS 151 U.S. History to 1877 (3)
- HIS 152 U.S. History Since 1877 (3)

## IV. HUMANITIES

### 3 Hours Required

[one course from one of the following four areas]

#### Aesthetic Perspective:

- □ ART 101 Art Appreciation (3)
- ART 133 Drawing (3)
- ART 151 Design 1 (3)
- ART 203 Art History I (3)
- ART 204 Art History II (3)
- DRA 101 Introduction to Theater (3)
- DRA 130 Acting 1 (3)
- ENG 221 Creative Writing (3)
- HUM 113 Exploring the Humanities (3)
- LIT 101 Introduction to Literature (3)
- LIT 114 American Literature (3)
- LIT 155 Modern World Fiction (3)
- MUS 104 Exploring Music (3)
- SPC 140 Oral Interpretation (3)

### Ethical/Religious Perspective:

- HUM 185 Technology & Social Change (3)
- PHI 101 Introduction to Philosophy (3)
- D PHI 145 Introduction to Ethical Conflicts(3)
- REL 105 Introduction to Religion (3)

#### **Cultural Studies:**

Modern Language:

П

П

Π.

- CLS 130 African Cultures (3)
- CLS 141 Middle Eastern History & Culture (3)
- CLS 150 Latin American History & Culture (3)

ASL 131 American Sign Language I (3)

ASL 161 American Sign Language II (3)

FLC 141/142 Elementary Chinese I/II (4)

FLF 141/142 Elementary French I/II (4)

FLG 141/142 Elementary German I/II (4)

FLS 141/142 Elementary Spanish I/II (4)

FLS 271/272 Advanced Spanish I/II (4)

FLS 241/242 Intermediate Spanish I/II (4)

145

FLG 241/242 Intermediate German I/II (4)

- CLS 165 Understanding Cult.-Japan (3)
- □ CLS 167 Understanding Cult.-China (3)
- CLS 170 Russian History & Culture (3)
- CLS 181 American Diversity (3)
- CLS 210 Cultures in Transition (3)

## Graduation Requirements:

Successfully complete a minimum of 64 hours with a 2.00 GPA (at least 12 semester hours taken at ICCC), and pay non-refundable \$25 graduation fee.

### **Transfer Students:**

Are your transfer courses on the ICCC transcript? If not, see Student Records.

### I. COMMUNICATION: ENGLISH/SPEECH 9 Hours Required

- ENG 105 Composition I (3)
- ENG 106 Composition II (3)
- □ SPC 112 Public Speaking (3)

\*These credits can only be used for Category V SPC 122 Interpersonal Communication (3)\* SPC 132 Group Communication (3)\*

## **II. MATH AND SCIENCE**

**6 Hours Required** 

[3 semester hours from each area]

#### Math:

- MAT 111 Math for Liberal Arts (4)
- MAT 120 College Algebra (3)
- MAT 127 College Algebra & Trig. (5)
- MAT 130 Trigonometry (3)
- MAT 140 Finite Math (3)
- MAT 156 Statistics (3)
- □ MAT 157 Statistics (4)
- MAT 158 Statistics II (3)
- MAT 159 Statistics Laboratory (1)
- □ MAT 165 Business Calculus (3)
- □ MAT 210 Calculus I (4)

### Science:

- □ BIO 102 Introductory Biology (3)
- BIO 103 Introductory Biology Lab (1)
- BIO 112 General Biology I (4)
- BIO 113 General Biology II (4)
- BIO 168 Human Anat & Phys I w/ Lab (4)
- BIO 173 Human Anat & Phys II w/ Lab (4)
- CHM 110 Introduction to Chemistry (3)
- □ CHM 111 Introduction to Chemistry Lab (1)
- CHM 165 General Chemistry I (4)
- CHM 175 General Chemistry II (4)
- ENV 111 Environmental Science (4)
- □ PHS 120 Exploring Physical Science (4)
- PHS 125 Physical Science (4)
- D PHY 162 College Physics 1 (4)
- PHY 212 Classical Physics I (5)

### **III. SOCIAL SCIENCE**

**3 Hours Required** 

### Human Relations:

www.iowacentral.edu/catalog

- ANT 105 Cultural Anthropology (3)
- PSY 111 Introduction to Psychology (3)
- PSY 121 Developmental Psychology (3)
- PSY 251 Social Psychology (3)
- □ SOC 110 Introduction to Sociology (3)
- SOC 115 Social Problems (3)
- □ SOC 120 Marriage and Family (3)
- SOC 200 Minority Group Relations (3)

## ASSOCIATE OF PROFESSIONAL STUDIES DEGREE-CAREER OPTION

**IOWA CENTRAL** 

V. DISTRIBUTED REQUIREMENTS

VI. INSTITUTIONAL REQUIREMENT

SDV 108 The College Experience (1)

SDV 118 The Online Experience (3)

**VII. COMPUTER LITERACY** 

CIS 162 C++ (4)

Administration, Human Services

SDV 116 Strategies for Online Success (1)

CSC 110 Introduction to Computers (3)

EDU 255 Technology in the Classroom (3)

NET 110 Microcomputer Fundamentals (3)

YOU MUST ALSO COMPLETE THE REQUIREMENTS FOR ONE

OF THE APS-CAREER OPTION PROGRAMS LISTED:

Accounting Associate, Business, Criminal Justice, Health Care

Developmental courses that DO NOT apply toward

60 hours to graduate:

ACT

0-13

0-13

14-17

0-15

16-19

ALEKS

0-13

14-29

COMPASS

0-37

0-60

61-79

P 0-33

P 34-36

A 0-50

No Developmental Courses Required

SDV 107 Health Science College Experience (1)

**1 Hour Required** 

**3 Hours Required** 

Course

ENG 025 (4)

RDG 048 (4)

RDG 010 (1)

MAT 045 (4)

MAT 063 (4)

Retest

9 additional hours required from categories I-IV

OMMUNITY COLLEGE

[ACC.APS; BUS.APS; CJUS.APS; HSER.APS] [HCAB.APS – 8 week online only]

EFFECTIVE FALL 2016 Approved 02/11/14

## Civic Responsibility:

- □ GEO 121 World Regional Geography (3)
- ECN 120 Principles of Macroeconomics (3)
- ECN 130 Principles of Microeconomics (3)
- POL 111 American National Govt. (3)
- POL 112 American State/Local Govt. (3)
- POL 121 International Relations (3)

## History:

- HIS 112 West Civ: Ancient to Early Mod (4)
- HIS 113 West Civ: Early Mod to Present (4)
- HIS 151 U.S. History to 1877 (3)
- HIS 152 U.S. History Since 1877 (3)
- Secure Contractor Contra

## IV. HUMANITIES

#### **3 Hours Required**

### Aesthetic Perspective:

- ART 101 Art Appreciation (3)
- ART 133 Drawing (3)
- ART 151 Design 1 (3)
- ART 203 Art History I (3)
- ART 204 Art History II (3)
- DRA 101 Introduction to Theater (3)
- DRA 130 Acting 1 (3)
- □ ENG 221 Creative Writing (3)
- HUM 113 Exploring the Humanities (3)
- LIT 101 Introduction to Literature (3)
- □ LIT 114 American Literature (3)
- □ LIT 155 Modern World Fiction (3)
- MUS 104 Exploring Music (3)
- □ SPC 140 Oral Interpretation (3)

#### Ethical/Religious Perspective:

- HUM 185 Technology & Social Change (3)
- PHI 101 Introduction to Philosophy (3)
- PHI 145 Introduction to Ethical Conflicts (3)
- REL 105 Introduction to Religion (3)

Modern Language:

## **Cultural Studies:**

- CLS 130 African Cultures (3)
- CLS 141 Middle Eastern History & Culture (3)
- CLS 150 Latin American History & Culture (3)

ASL 131 American Sign Language I (3)

ASL 161 American Sign Language II (3)

FLC 141/142 Elementary Chinese I/II (4)

FLF 141/142 Elementary French I/II (4)

FLG 141/142 Elementary German I/II (4)

FLS 141/142 Elementary Spanish I/II (4)

FLS 271/272 Advanced Spanish I/II (4)

FLS 241/242 Intermediate Spanish I/II (4)

146

FLG 241/242 Intermediate German I/II (4)

- □ CLS 165 Understanding Cult.-Japan (3)
- □ CLS 167 Understanding Cult.-China (3)
- CLS 170 Russian History & Culture (3)
- CLS 181 American Diversity (3)
- CLS 210 Cultures in Transition (3)

COMMUNITY COLLEG			ant And				Writing I	lacement	Scores		
R	Placement C	Chart 20:	16-2017		Placem	nent Test	EN Basi	<b>G-025</b> * c Writing	ENG-101 Elements of Writing	ENC	- <b>-105</b> sition I
	eading Placement Score	Se							Smitt	> 5	OR
	SDV-112 Success Semin	ar	No Cours	4	ACCUPLAC WritePlacer	ER		1-2	3-4	4 + in ACCU	≥66 PLACER
Placement Test	RDG-048* RD	G-010*	Required	,						Compre	ling hension
	Basic Reading Re	cading I			COMPASS (	(Writing)		0-37	38-64	-65-	100
ACCUPLACER (Reading Comprehension)	< 43	44-65	≥ 66		ACT (Englis	(h)		0-13	14-17	18	36
COMPASS (Reading)	0-60	61-79	> 80		Written Exp	ant bression)					0
ACT (Reading)	0-13	14-17	≥ 18		Fall of Jr.	Year	• •	< 243	243-290	∧ /	06
IA Assessment (Reading)					Midyear of Spring of	of Jr. Year Jr. Year		< 247	247-292 247-295		95 95
Fall of Jr. Year Midwear of Ir Year	< 246 < 248 < 248	40-28/ 48-289	> 280 		ASSET (Wri	iting Skills)		23-34	35-39	40	54
Spring of Jr. Year	< 250 2	50-292	 ≥ 293		SAT (Writir	(gr	2(	0-334	335-429	430	-800
ASSET (Reading Skills)	< 35	35-39	<u>&gt;</u> 40		ACCUPLAC	ER		7-44	45-73	74-	120
SAT (Reading)	< 335 3.	35-429	≥ 430		(Sentence Skills)			:	2		221
				Math F	lacement	Scores					
*denotes a developmental course that is non-transferable and does not count towards graduation **denotes SYP Programs (Concurrent	Placement Test	<b>MAT</b> Fundament	- <b>045</b> * tals of Math	MAT Elementat	- <b>063</b> * y Algebra	MAT Intermedia Math for 1 Math for 1 MAT Finite MAT	<b>F-102</b> the Algebra <b>P-111</b> beral Arts beral Arts <b>T-117</b> <b>F-117</b> <b>F-140</b> Math <b>F-157</b> Strics	MA College Al MA College Al MA Tragor MA Busines	F-120 Algebra F-127 gebra & Trig gebra & Trig T-130 fometry F-165 for calculus	<b>MAT</b> Calcu	<b>.210</b> <sup>us I</sup>
	EKS (%)	-0	-13	14	-29	30	-45	46	-75	76-1	00
2014-2015 Catalog CO	MPASS (Math)	P (	)-33	P 34- A (	63 or 1-50	*	*	*	*	*	
All placement scores	T (Mathematics)	-0	-15	16	-19	20	-23	24	-27	28-3	66
are valid for 3 years $IA_{\overline{A}}$ (Mating the from the start the $F$	Assessment h Total/ Mathematics) 7 all of Jr. Year	Math Total < 777	Mathematics < 778	Math Total 277-310	Mathematics 278-313	Math Total 311-317	Mathematics 314-371	Math Total 318-376	Mathematics	Math Total > 376	Mathematics >330
course you are placed	Midyear of Jr. Year Spring of Jr. Year	< 279 < 282	<ul><li>280</li><li>282</li></ul>	279-313 282-316	280-316 282-319	314-320 317-323	317-324 320-326	321-329 324-331	325-332 327-335	> 329 > 331	>332 >335
ASS	SET (Numerical Skills)	23	-37	38	-45	46	-48	49	-55	49-:	5
SAT	r (Math)	200	-384	385	-474	475	-549	550	-619	620-	800
AC	CUPLACER (Arithmetic)	20	-48	49	-90	91-	103	104	-119	104-	19

# Mandatory Assessment and Placement Chart

## Approved General Education Courses - 2016-2017 College Year

Please note that the degree type code may be different for some courses. This approved course list may change for the following college year.

## Degree Type Code:

AAS - Associate of Applied Science, AAA - Associate of Applied Arts, D - Diploma

English/Spe	ech Communications
BUS-114	Workplace Communications (3) - AAS, AAA, D
BUS 121	Business Communication (3) - AAS, AAA, D
ENG 105	Composition I (3) - AAS, AAA, D
ENG 106	Composition II (3) - AAS, AAA, D
ENG 111	Technical Writing (3) - AAS, AAA, D
SPC 122	Interpersonal Communication (3) - AAS, AAA, D
SPC 112	rublic speaking (3) - AAS, AAA, D
Mathematic	5
BUS 112	Business Math (3) - AAS, AAA, D
MAT 111	Math for Liberal Arts (4) - AAS, AAA, D
MAT 120	College Algebra (3) - AAS, AAA, D
MAT 127	College Algebra & Trigonometry (5) - AAS, AAA, D
MAT 130	Irigonometry (3) - AAS, AAA, D Einite Meth (2) - AAS, AAA, D
ΜΔΤ 156	Statistics (3) - AAS, AAA, D
MAT 157	Statistics (4) - AAS, AAA, D
MAT 158	Statistics II (3) - AAS, AAA, D
MAT 159	Statistics Laboratory (1) - AAS, AAA, D
MAT 150	Discrete Math (3) - AAS, AAA, D
MAI 165	Business Calculus (3) - AAS, AAA, D
MAT 7/3	Calculus (4) - AAS, AAA, D Technical Math (3) - AAS, AAA, D
MAT 748	Technical Math (3) - AAS, AAA, D
Science	
BIO 102	Introductory Biology (3) - AAS, AAA, D
BIO 103	Introductory Biology Lab (1) - AAS, AAA, D
BIO 112 BIO 113	General Biology I (4) - AAS, AAA, D General Biology II (4) - AAS, AAA, D
BIO 163	Essentials of Anatomy and Physiology (4) - AAS, AAA, D
BIO 168	Human Anatomy and Physiology I w/lab (4) – AAS, AAA, D
BIO 173	Human Anat & Phys II w/lab (4) - AAS, AAA, D
CHM 110	Introduction to Chemistry (3) - AAS, AAA, D
	Introduction to Chemistry Lab (1) - AAS, AAA, D
CHM 175	General Chemistry II (4) - AAS, AAA, D
ENV 111	Environmental Science (4) - AAS, AAA, D
PHS 120	Exploring Physical Science (4) - AAS, AAA, D
PHS 125	Physical Science (4) - AAS, AAA, D
PHS 172	Physical Geology (4) - AAS, AAA, D
PHY 184	Applied Physics (4) - AAS, AAA, D
PHY 212	Classical Physics I (5) - AAS, AAA, D
Social Scien	ce
ADM 220	Career Development Skills (1) - AAS, AAA, D
RUS 161	Human Relations (3) - AAS, AAA, D
ECN 120	Principles of Macroeconomics (3) - AAS, AAA, D
ECN 130	Principles of Microeconomics (3) - AAS, AAA, D
GEO 121	World Regional Geography (3) - AAS, AAA, D
HIS 151	U.S. History to 1877 (3) - AAS, AAA, D
HIS 152	U.S. History since 1877 (3) - AAS, AAA, D Wortern Cive Angient to Early Medern (4) AAS, AAA, D
HIS 113	Western Civ.: Farly Modern to Present (4) - AAS, AAA, D
POL 111	American National Government (3) - AAS, AAA, D
POL 112	American State/Local Government (3) - AAS, AAA, D
POL 121	International Relations (3) - AAS, AAA, D
PSY 111	Introduction to Psychology (3) - AAS, AAA, D
FST 112 PSY 121	rsychology of Human Relations (3) - AAS, AAA, D Developmental Psychology (3) - AAS, AAA, D
PSY 251	Social Psychology (3) - AAS, AAA, D
SDV 166	Employee Relations I (1) - AAS, AAA, D
SDV 167	Employee Relations II (1) - AAS, AAA, D
SDV 168	Employee Relations III (1) - AAS, AAA, D
SOC 110	Introduction to Sociology (3) - AAS, AAA, D Social Problems (3) - AAS, AAA, D

- SOC 115 SOC 120 SOC 128
- Introduction to Social Sciences (3) AAS, AAA, D Minority Group Relations (3) AAS, AAA, D SOC 200

Humanities	
AGC 201	American Agricultural History (3) - AAS
ART 101	Art Appreciation (3) - AAS, AAA, D
ART 133	Drawing (3) - AAS, AAA, D
ART 151	Design I (3) - AAS, AAA, D
ART 184	Photography (3) - AAS, AAA, D
ART 203	Art History I (3) - AAS, AAA, D
ART 204	Art History II (3) - AAS, AAA, D
ASL 131	American Sign Language I (3) - AAS, AAA, D
ASL 161	American Sign Language II (3) - AAS, AAA, D
CLS 130	African Cultures (3) - AAS, AAA, D
CLS 141	Middle Eastern History & Culture (3) - AAS, AAA, D
CLS 150	Latin American History & Culture (3) - AAS, AAA, D
CLS 165	Understanding Cult. Japan (3) - AAS, AAA, D
CLS 167	Understanding Cult. China (3) - AAS, AAA, D
CLS 170	Russian History & Culture (3) - AAS, AAA, D
CLS 181	American Diversity (3) - AAS, AAA, D
CLS 210	Cultures in Transition (3) - AAS, AAA, D
CLS 170	Russian History & Culture (3) - AAS, AAA, D
DRA 101	Introduction to Theatre (3) - AAS, AAA, D
DRA 130	Acting I (3) - AAS, AAA, D
ENG 221	Creative Writing (3) - AAS, AAA, D
FLC 141-142	Elementary Chinese I/II (4) - AAS, AAA, D
FLF 141-142	Elementary French I/II (4) - AAS, AAA, D
FLG 141-142	Elementary German I/II (4) - AAS, AAA, D
FLG 241-242	Intermediate German I/II (4) - AAS, AAA, D
FLS 141-142	Elementary Spanish I/II (4) - AAS, AAA, D
FLS 241-242	Intermediate Spanish I/II (4) - AAS, AAA, D
FLS 271-272	Advanced Spanish I/II (4) - AAS, AAA, D
HUM 113	Exploring the Humanities (3) - AAS, AAA, D
HUM 185	Technology & Social Change (3) - AAS, AAA, D
LIT 101	Introduction to Literature (3) - AAS, AAA, D
LIT 114	American Literature (3) - AAS, AAA, D
LIT 155	Modern World Fiction (3) - AAS, AAA, D
MUS 104	Exploring Music (3) - AAS, AAA, D
PHI 145	Introduction to Ethical Conflict (3) - AAS, AAA, D
REL 105	Introduction to Religion (3) - AAS, AAA, D
SPC 140	Oral Interpretation (3) - AAS, AAA, D

## Institutional Requirement

SDV-107	The Health Science College Experience (1) - AAA
SDV-108	The College Experience (1) - AAA
SDV-116	Strategies for Online Academic Success (1) - AAA
SDV-118	The Online Experience (3) - AAA
•	
Computer L	iteracy

CIS-162	C++ (4) - AAA, AAS, D
CSC-110	Introduction to Computers (3) - AAS, D
NET-110	Microcomputer Fundamentals (3) - AAS, D

## **Business**

AGB 235	Introduction to Agriculture Markets (3) - AAS, AAA
BUS 102	Introduction to Business (3) – AAS, AAA
MKT 110	Principles of Marketing (3) – AAS, AAA
ACC 142	Financial Accounting (3) – AAS, AAA

Updated 7/26/2016

## Core Performance Standards for all Health Sciences Programs

lowa Community colleges have developed the following Core Performance Standards for all applicants to Health Care Career Programs. These standards are based upon required abilities that are compatible with effective performance in health care careers. Applicants unable to meet the Core Performance Standards are responsible for discussing the possibility of reasonable accommodations with the designated institutional office. Before final admission into a health career program, applicants are responsible for providing medical and other documentation related to any disability and the appropriate accommodations needed to meet the Core Performance Standards. These materials must be submitted in accordance with the institution's ADA Policy.

\* The student is encouraged to meet with the Special Populations Coordinator and Health Science Dean.

Capability	Standard	Some Examples of Necessary Activities (Not all inclusive)
Cognitive- Perception	The ability to gather and interpret data and events, to think clearly and rationally, and to respond appropriately in routine and stressful situations.	<ul> <li>Identify changes in patient/client health status</li> <li>Handle multiple priorities in stressful situations</li> </ul>
Critical Thinking	Utilize critical thinking to analyze the problem and devise effective plans to address the problem.	<ul> <li>Identify cause-effect relationships in clinical situations</li> <li>Develop plans of care as required</li> </ul>
Interpersonal	Have interpersonal and collaborative abilities to interact appropriately with members of the healthcare team as well as individuals, families and groups. Demonstrate the ability to avoid barriers to positive interaction in relation to cultural and/or diversity differences.	<ul> <li>Establish rapport with patients/clients and members of the healthcare team</li> <li>Demonstrate a high level of patience and respect</li> <li>Respond to a variety of behaviors (anger, fear, hostility) in a calm manner</li> <li>Nonjudgmental behavior</li> </ul>
Communication	Utilize communication strategies in English to communicate health information accurately and with legal and regulatory guidelines, upholding the strictest standards of confidentiality.	<ul> <li>Read, understand, write and speak English competently</li> <li>Communicate thoughts, ideas and action plans with clarity, using written, verbal and/or visual methods</li> <li>Explain treatment procedures</li> <li>Initiate health teaching</li> <li>Document patient/client responses</li> <li>Validate responses/messages with others</li> </ul>
Technology Literacy	Demonstrate the ability to perform a variety of technological skills that are essential for providing safe patient care.	<ul> <li>Retrieve and document patient information using a variety of methods</li> <li>Employ communication technologies to coordinate confidential patient care</li> </ul>
Mobility	Ambulatory capability to sufficiently maintain a center of gravity when met with an opposing force as in lifting, supporting, and/or transferring a patient/client.	• The ability to propel wheelchairs, stretchers, etc. alone or with assistance as available
Motor Skills	Gross and fine motor abilities to provide safe and effective care and documentation.	<ul> <li>Position patients/clients</li> <li>Reach, manipulate, and operate equipment, instruments and supplies</li> <li>Electronic documentation/ keyboarding</li> <li>Lift, carry, push and pull</li> <li>Perform CPR</li> </ul>
Hearing	Auditory ability to monitor and assess, or document health needs.	• Hears monitor alarms, emergency signals, ausculatory sounds, cries for help
Visual	Visual ability sufficient for observations and assessment necessary in patient/client care, accurate color discrimination.	<ul> <li>Observes patient/client responses</li> <li>Discriminates color changes</li> <li>Accurately reads measurement on patient client related equipment</li> </ul>
Tactile	Tactile ability sufficient for physical assessment, inclusive of size, shape, temperature and texture.	<ul> <li>Performs palpation</li> <li>Performs functions of physical examination and/or those related to therapeutic intervention</li> </ul>
Activity Tolerance	The ability to tolerate lengthy periods of physical activity.	<ul> <li>Move quickly and/or continuously</li> <li>Tolerate long periods of standing and/or sitting as required</li> </ul>
Environmental	Ability to tolerate environmental stressors.	<ul> <li>Adapt to rotating shifts</li> <li>Work with chemicals and detergents</li> <li>Tolerate exposure to fumes and odors</li> <li>Work in areas that are close and crowded</li> <li>Work in areas of potential physical violence</li> <li>Work with patients with communicable diseases or conditions</li> </ul>

# Advanced Standing Course List

CC#	Course Title	Sem. Hrs	Requirements	
ADM-105	Intro to Keyboarding	1	Obtain 35 words a minute on a 3-minute timed writing with 3 or fewer errors	
ADM-108	Keyboarding Skills Development	1	Obtain 65 words a minute on a 5-minute timed writing with 5 or fewer errors	
ADM-131	Office Calculators	1	Pass all three components of the advanced standing test in one sitting.	
AGA-380	Integrated Pest Management	4	Present Department of Agriculture and Land Stewardship (IDALS) Pesticide Applicators License, Commercial or Private prior to taking Iowa Central's Advanced Standing Integrated Pest Management Test-Out exam. Must pass Test-Out exam with at least an 85%.	_
AUT-108	Introduction to Transportation	3	Pass all three tests, Hands-On, Performance and Safety with an 80%. At least 1 year of shop experience. Maximum of 2 attempts to pass Safety test. Students that successfully pass all 3 tests move into second semester of the program.	
AVI-170	Flight Lab 1 Lesson 1-26	1.8	Hold Private Pilot License	
AVI-211	Instrument Ground School	3	Have passed Commercial and Instrument	_
AVI-240	Flight Lab 2 Lessons 1-38	1.9	Hold Private Pilot License	
AVI-241	Flight Lab 3 Lessons 38-64	1.7	Hold Commercial Instrument	
AVI-300	Flight Instructor Ground School	3	Federal Aviation Administration written exam, Fundamentals of Instruction, Flight Ground Instructor	
AVI-242	Flight Lab 4 Lessons 64-85	1.4	Hold Commercial Instrument	
AVI-249	General Aviation Operations Management	3	Pass final written test	
AVI-275	Aviation Regulations	2	Pass final written test	
AVI-124	Maintenance for Pilots	2	Pass final written test	_
AVI-272	Flight Lab 6 Lessons 1-10	0.3	Obtain Multi Engine Rating	
AVI-130	Private Pilot Ground School	3	Hold Private Pilot License	
AVI-131	Private Pilot II	3	Hold Private Pilot License	
AVI-273	Flight Lab 7 Lessons 11-15	0.2	Obtain Multi Engine 1 Rating	-
AVI-271	Flight Lab 5 Lessons 1-15	0.8	Obtain Federal Aviation Administration Certificate, Certified Flight Instructor	
BUS-112	Business Mathematics	3	Complete written test with 80% accuracy	
CAD-101	Introduction to CAD	3	Pass exam	
CAD-138	Virtual Modeling 1	2	Pass written test with 80% accuracy	
CAD-155	Engineering Graphics 1	2	Pass exam	
CAD-156	Engineering Graphics 2	3	Pass written test with 80% accuracy	_
CAD-157	Engineering Graphics 3	2	Pass written test with 80% accuracy	
CAD-164	Solid Modeling I	2	Pass written test with 80% accuracy	
CAD-166	Solid Modeling II	2	Pass exam	_

CC#	Course Title	Sem. Hrs	Requirements
CRJ-110	Patrol Procedures	3	Present a certificate of completion from the
CRJ-133	Consitutional Criminal Procedure	3	State of Arkansas 115 hour part-time
			Auxiliary Police Course for a total of 6 credit hours
CRJ-110	Patrol Procedures	3	Present a certificate of completion from a
CRJ-133	Constitutional Criminal Procedure	3	law enforcement academy endorced by the
CRJ-141	Criminal Investigation	3	California Commission on Peace Officer
CRJ-152	Defensive Tactics	3	Standards and Training for a total
		-	of 12 credit hours
CRJ-133	Constitutional Criminal Procedure	3	Present Certificate of completion from a
CRJ-152	Defensive Tactics	3	State of California Department of Corrections
			Training Academy for a total of 6 credit hours
CRJ-120	Introduction to Corrections	3	Present a certificate of completion from the
CRJ-152	Defensive Tactics	3	Corrections Coporation of America
			Pre-Service Orientation & Basic Training
			for a total of 6 credit hours
CRJ-110	Patrol Procedures	3	Present State of Florida Basic Police
CRJ-133	Constitutional Criminal Procedure	3	Recruit Training Certification
CRJ-141	Criminal Investigation	3	for a total of 12 credit hours
CRJ-152	Defensive Tactics	3	
CRJ-110	Patrol Procedues	3	Present State of Illinois Law Enforcement
CRJ-133	Constitutional Criminal Procedure	3	Training and Standards Board Certification
CRJ-141	Criminal Investigation	3	for a total of 12 credit hours
CRJ-152	Defensive Tactics	3	
CRJ-120	Introduction to Corrections	3	Present State of Iowa Department
CRJ-152	Defensive Tactics	3	of Corrections Certification
			for a total of 6 credit hours
CRJ-100	Introduction to Criminal Justice	3	Present lowa Law Enforcement Academy
CRJ-110	Patrol Procedures	3	Certification for a total of 18 credit hours
CRJ-132	Judicial Process	3	
CRJ-133	Constitutional Criminal Procedure	3	
CRJ-141	Criminal Investigation	3	
CRJ-152	Defensive Tactics	3	
CRJ-100	Introduction to Criminal Justice	3	Present State of Maryland
CRJ-110	Patrol Procedures	3	Basic Police Academy Certification
CRJ-133	Constitutional Criminal Procedure	3	for a total of 18 credit hours
CRJ-141	Criminal Investigation	3	
CRJ-152	Defensive Tactics	3	
CRJ-160	Introduction to Forensic Investigation	n 3	
CRJ-110	Patrol Procedures	3	Present a Certificate of Completion from the
CRJ-132	Judicial Process	3	Eastern Missouri Law Enforcement Training
CRJ-133	Constitutional Criminal Procedure	3	Academy for a total of 15 credit hours
CRJ-141	Criminal Investigation	3	
CRJ-152	Defensive Tactics	3	
CRJ-110	Patrol Procedures	3	Present Certification of Police Academy
CRJ-132	Consitutional Law	3	Training sanctioned by the State of Nebraska
CRJ-133	Consitutional Criminal Procedure	3	Peace Officers Education and Training
CRJ-141	Criminal Investigation	3	for a total of 15 credit hours
CRJ-152	Defensive Tactics	3	
CRJ-100	Introduction to Criminal Justice	3	Present State of New Jersey
CRJ-110	Patrol Procedures	3	Basic Police Academy Certification
CRJ-133	Consitutional Criminal Procedure	3	for a total of 15 credit hours
CRJ-141	Criminal Investigation	3	
CRJ-152	Defensive Tactics	3	

CC#	Course Title	Sem. Hrs	Requirements	
CRJ-110	Patrol Procedures	3	Present State of Oregon Department of	E
CRJ-133	Consitutional Criminal Procedure	3	Public Safety Standards and Training	
CRJ-141	Criminal Investigation	3	Certification for a total of 12 credit hours	E
CRJ-152	Defensive Tactics	3		E
CRJ-100	Introduction to Criminal Justice	3	Present Commonwealth of Pennsylvania	F
CRJ-110	Patrol Procedures	3	Police Officers Education & Training	-
CRJ-133	Constitutional Criminal Procedure	3	Commission Certification	E
CRJ-141	Criminal Investigation	3	for a total of 15 credit hours	-
CRJ-152	Defensive Tactics	3		E
CRJ-120	Corrections	3	Present State of Pennsylvania Department	E
			of Corrections Training Academy	E
			Certification for a total of 3 credit hours	-
CRJ-110	Patrol Procedures	3	Present State of Tennessee Basic Training	E
CRJ-133	Constitutional Criminal Procedure	3	Academy Certification or State of Tennessee	E
CRJ-141	Criminal Investigation	3	Basic Police Academy Certification for a	E
CRJ-152	Detensive lactics	3	total of 12 credit hours	E
CRJ-110	Patrol Procedures	3	Present a Certificate of Completion from a	E
CRJ-133	Constitutional Criminal Procedure	3	United States Department of Defense Civilian	E
CRJ-141	Criminal Investigation	3	Police Training for a total of 12 credit hours	E
CRJ-152	Detensive lactics	3		E
CRJ-110	Patrol Procedures	3	Present State of Utah Certificate of Completion	E
CRJ-141	Criminal Investigation	3	from a Law Enforcement Academy endorsed	E
CRJ-152	Defensive Tactics	3	by the Utah Department of Public Safety for a	E
			total of 9 credits.	EM
CRJ-100	Introduction to Criminal Justice	3	Present Virginia State Police Academy	EM
CRJ-110	Patrol Procedures	3	Certification or Virginia State Police	EN
CRJ-133	Constitutional Criminal Procedure	3	Department Certification for	EN
CRJ-141	Criminal Investigation	3	a total of 18 credit hours	EP
CRJ-152	Defensive lactics	3		EM
CKJ-100		3		EM
CRJ-110	Patrol Procedures	3	Present a certificate of completion from a	EM
CRJ-132	Constitutional Law	3	law enforcement academy endorsed by the	
CRJ-133	Consitutional Criminal Procedure	3	Commission for a total of 19 gradit hours	
CRJ-141 CRJ-152	Defensive Tactics	3	Commission for a total of to credit hours	F
D2F-032	Commercial Drivers License	Z	Present Commercial Drivers License ID Card	
EGT-400	Intro to Engineering Design	3	Pass written exam	
EGT-410	Principles of Engineering	3	Pass written exam	HC
ELE-104	Print, Reading, & Estimating	1	Pass written exam	HC
ELE-111	AC Fundamentals	3	Pass written exam	НС
FI F-114	DC Fundamentals	3	Pass written exam	ЦС
ELE 12/	Tools/Adapters/In	2	Pass written exam	10
ELE-124		2		H:
ELE-149	UL & Electrical Safety	2	Pass written exam	H
ELE-155	National Electrical Code 1	2	Pass written exam	
ELE-156	National Electrical Code 2	2	Pass written exam	
ELE-158	National Electrical Code 3	2	Pass written exam	IN
ELE-164	Residential Wiring	2	Pass written exam	IN II
ELE-167	Ind. Electrical Systems	3	Pass written exam	
ELE-170	Power Distribution	2	Pass written exam	II.

CC#	Course Title	Sem. Hrs	Requirements
ELE-187	Advanced Industrial Electical Systems	4	Pass written exam
ELE-195	Motor Controls	3	Pass written exam
ELE-198	Solid State Motor Controls	2	Pass written exam
ELE-204	Programmable Logic Theory	2	Pass written exam
ELE-205	Advanced Programmable Controllers	2	Pass written exam
ELE-206	Networking PLC's	2	Pass written exam
ELE-221	Instrumentation & Control	3	Pass written exam
ELE-932	Internship	4	Must meet previous experience criteria per Coordinator
ELE-932	Internship	4	Present Journeyman's/Union Card: Proof of Apprenticeship
ELE-104	Print, Reading, & Estimating	1	Individuals with a valid state electrical license:
ELE-111	AC Fundamentals	3	which includes Electrical Journeyman's License
ELE-114	DC Fundamentals	3	and/or Electrical Masters License will
ELE-124	Tools/Adapters/Instrument.	2	receive advanced standing credit (with the
ELE-149	UL & Electrical Safety	2	program coordinators approval) for one or
ELE-155	National Electrical Code 1	2	more of the listed courses.
ELE-156	National Electrical Code 2	2	
ELE-158	National Electrical Code 3	2	
ELE-164	Residential Wiring	2	
ELE-170	Power Distribution	2	
ELE-932	Internship	4	
EMS-760	NCS Paramedic 1	43	Submit an official non-credit transcript to
EMS-761	NCS Paramedic 2		Student Records showing proof of
EMS-762	NCS-Paramedic 3		Paramedic Specialist (PS) or Paramedic and
EMS-763	NCS-Paramedic 4		present a current certification card for PS or
EMS-764	NCS-Paramedic 5		Paramedic to the EMS Coordinator
EMS-810	Advanced Cardiac Life Support - A	ACLS	Submit an official non-credit transcript to
EMS-815	Pediatric Advanced Life Support - F	PALS	Student Records showing proof of completion
EMS-820	Prehospital Trauma Life Support - PH	TLS	of ACLS. PALS, or PHTLS and present a
	h		current course completion card for ACLS.
			PALS, or PHTLS to the EMS Coordinator.
FIR-144	Fundamentals of Fire Fighting	4.5	Present original certificate(s) of Nationally Certified Fire Fighter I with National Certification number from either International Fire Service Accreditation Congress or from National Board
			on Fire Science Professional Qualifications
HCM-108	Safety and Sanitation	3	Pass ServSafe exam
HCM-143	Food Preparation Lecture	3	Pass written exam
HCM-144	Food Preparation Lab	3	Pass cooking and knife skills exam
HCM-148	Food Fundamentals	3	Pass written exam
HSC-113	Medical Terminology	2	Pass final written exam
HSC-172	Nurse Aide	3	Submit an official non-credit transcript from an accredited insitution to Student Records showing proof of completion of the 75 hours Nurse Aide course, along with successful completion of state and written skills testing
IND-110	CPR, First Aid, and Safety	1	Present certification cards for OSHA and CPR/First Aid
IND-126	Precision Measurements	1	Pass written test with 80% accuracy
IND-127	Shop Operations	1	Pass written test with 80% accuracy Pass lab exercise with 80% proficiency

# Advanced Standing Course List (cont.)

IND-128	Blueprint Reading	1	Pass written test with 80% accuracy
IND-182	Boiler Maintenance Fundamentals	2	Obtain Boiler Operator II Certification from the lowa Association of Custodians and Assistants
IND-184	Mechanical Process	2	Pass exam
IND-201	OSHA 10-Hour Training - General	1	At time of registration, you must choose
IND-203	OSHA 10-Hour Training - General	1	either General Industry or Construction
IND-205	OSHA 10-Hour Training - Construction	1	Industry track based on your program.
IND-207	OSHA 10-Hour Training - Construction	1	
MAT-743	Technical Mathematics	3	Pass written test with 80% accuracy
MFG-256	Introduction to Lathe Operations	2	Pass exam
MFG-256 MFG-266	Introduction to Lathe Operations	2 2	Pass exam Pass exam
MFG-256 MFG-266 MFG-932	Introduction to Lathe Operations Introduction to Mill Operations Internship	2 2 4	Pass exam Pass exam Present Journeyman's/Union Card: Proof of Apprenticeship

WEL-178	Adv. Gas Metal Arc Welding	2	Pass exam
WEL-181	Gas Metal Arc Welding	2	Pass exam
WEL-190	Gas Tungsten Arc Welding	2	Pass exam
WEL-196	Adv. Gas Tungsten Arc Welding	2	Pass exam
WEL-213	Fabrication, Layout, Est. & Repair	2	Pass exam
WEL-301	Pipe Welding	2	Pass exam
20 Classes	Various	Various	Must have completed the El

ous Must have completed the Electrolux Apprenticeship - contact Student Records for a complete list.

# Certification will be considered if the test was taken within a three year time period prior to the first time enrolling for the CNT Program at Iowa Central

NET-152 NET-343	Adv. Networking Technology Windows Directory Services	3 3	Microsoft Certified Systems Engineer (MCSE) is 7 tests.
NET-191 NET-211 NET-222	Network Cabling Cisco Networking Cisco Routers	2 2 3	INTRO 640-821 is 1 test.
NET-232 NET-242	Cisco Switches Cisco Wide Area Networks (WAN)	3 3	ICND 640-811 is 1 test.
NET-314	Microsoft Windows Server	4	Microsoft Certified Systems Administrator (MCSA) is 4 tests.
NET-483	Network + Certification	3	N+ is 1 test.
NET-612	Fundamentals of Network Security	3	Provide Security + Certification.
NET-790	PC Support I	3	Provide A+ Certification.
NET-791	PC Support II	3	Provide A+ Certification.
RAD-122	Radiographic Procedures 1	4	Pass final written exam and lab competency exam
RAD-142	Radiographic Procedures 2	4	Pass final written exam and lab competency exam
RAD-149	Cross Sectional Anatomy	1	Pass final written exam
RAD-163	Radiographic Procedures 3	2.5	Pass final written exam and lab competency exam
RAD-320	Imaging 1	2	Pass final written exam
RAD-365	Imaging 2	2	Pass final written exam
RAD-430	Radiographic Physics	3	Pass final written exam
RAD-740	Radiologic Pathology	2	Pass final written exam
RAD-850	Radiobiology	3	Pass final written exam
RAD-895	Quality Assurance	2	Pass final written exam
WEL-110	Print Reading for Welders	2	Pass exam
WEL-122	Beginning Welding	2	Pass exam
WEL-170	Shielded Metal Arc Welding	2	Pass exam
WEL-171	Adv. Shielded Metal Arc Welding	2	Pass exam



# Administration

Daniel P. Kinney President A.A., Coffeyville Community College B.B.A., Pittsburg State University M.S., University of Kansas Ed.D., University of Arkansas

Thomas J. Beneke Vice President of Enrollment Management and Student Development A.A., Iowa Central Community College B.A., Northwestern College M.S., Wayne State College

Laurie M. Hendricks Vice President of Development and Alumni Relations B.B.A., University of Iowa

Dreand R. Johnson Vice President of Instruction B.A., Texas Southern University M.L.A., Houston Baptist University Ph.D., University of Texas

James B. Kersten Vice President of External Affairs and Government Relations B.A., Drake University

Angela A. Martin Vice President of Business Affairs B.A., Buena Vista University

# Full-Time Faculty & Staff

Neale J. Adams Business and Industrial Technology Dean A.A., Iowa Central Community College B.S., Tennessee Technological University M.B.A., Upper Iowa University

Randy R. Aljets Grounds Coordinator

Brenda J. Anderson Associate Instructor, Dental Hygiene Program B.S., University of Iowa

**Danny J. Anderson Storm Lake Center Director** B.A., University of Northern Iowa

Todd R. Anderson Instructor, Communications Department B.S., Minnesota State University, Mankato M.A., Minnesota State University, Mankato

Tricia K. Anderson Instructor, Communications Department B.A., Governors State University M.A., Olivet Nazarene University

Paul J. Arens Emergency Medical Services Coordinator and Adjunct Instructor NRP, Kirkwood Community College B.S., University of Iowa M.Ed., University of Sioux Falls

Jacob R. Astor Housing Coordinator and Assistant Baseball Coach A.A., Des Moines Area Community College B.G.S., Southern Arkansas University Heather L. Bacon Community and Continuing Education Secretary A.A., Iowa Central Community College A.S., Iowa Central Community College

Debra L. Bahls Athletic Compliance Coordinator & International Admissions

**Caleb A. Bakker** Assistant Athletic Trainer B.A., Buena Vista University

Tami J. Barrett Distance Learning Coordinator Diploma, Iowa Central Community College A.A.S., Iowa Central Community College A.A., Iowa Central Community College B.A., Buena Vista University

Colleen A. Bartlett Intermediary Networks and Career Academy Specialist A.A., Iowa Central Community College B.S., Upper Iowa University

David J. Barwin Instructor, Business Department; Coordinator, Business AS Program; and Men's & Women's Golf Coach B.S., Edinboro University M.B.A., Western International University

Warren K. Bauer Senior Computer System Analyst Associate, American Institute of Business

Jared M. Beauchamp Student Development Assistant and Head Women's Soccer Coach B.A., Francis Marion University

Cory A. Beck Associate Instructor/Coordinator, Diesel Technology Program A.A.S., Des Moines Area Community College

Christel L. Becker Special Instructor, Nursing Program A.A.S., Iowa Central Community College B.S.N., University of Phoenix M.S.N., University of Phoenix

Luke E. Becker Financial Aid Coordinator A.A., Iowa Central Community College B.S., Iowa State University

Michael S. Becker Associate Instructor, Diesel Technology Program Diploma, Universal Technical Institute

Shan L. Beecher Physical Facilities Director A.A., Iowa Central Community College

Michelle B. Beets Professor, Business Department; Coordinator, Web Technology Program; and Coordinator, Graphics Technology Program A.A.S., Iowa Central Community College B.S., Northwest Missouri State University M.S., Iowa State University

Kelly V. Bender Transportation Technology Center Secretary Susan E. Beneke Distance Learning Enrollment Coordinator A.A., Iowa Central Community College A.A.S., Iowa Central Community College

Toby J. Beneke Turf Management and Athletic Fields Coordinator A.A.S., Iowa Central Community College

Bryson V. Bergerud Instructor, Bioscience/Biotechnology Program; and Coordinator, Biotechnology Program B.S., Iowa State University M.S., Drake University

John H. Berglund Webster City Center Physical Facilities Coordinator A.A., Iowa Central Community College

Marshall L. Bickford Distribution Services Coordinator A.A., Iowa Central Community College B.A., University of Northern Iowa

Julaine K. Bidleman Iowa Central Fuel Testing Laboratory Manager A.A., Iowa Central Community College B.A., Buena Vista University

Nigel D. Bigbee Housing Coordinator and Assistant Men's & Women's Track & Field Coach B.S., Indiana State University

Scott J. Birdsell Associate Instructor/Coordinator, Turf Grass Management Program B.B.A., University of Iowa

Jay A. Birkey TRIO Student Support Services Program Director B.A., University of Northern Iowa M.S., University of Nebraska at Omaha

Sara J. Black Special Instructor, Nursing Program A.A., Iowa Central Community College A.D.N., Iowa Central Community College B.S.N., Chamberlain College of Nursing

**Kylia R. Bleam** Enrollment/Recruiting Specialist A.A., Iowa Central Community College B.A., University of Northern Iowa

Kelli P. Bloomquist

Instructor/Coordinator, Digital Mass Communications Program; and Publications Supervisor, Newspaper A.A., Iowa Central Community College B.A.S., University of Iowa M.A., University of South Dakota

Paul F. Bloomquist Instructor, Humanities Department; Director, Instrumental Music; and Supervisor, Jazz Band B.A., Simpson College M.M., Southern Oregon University

Shelly R. Blunk Economic Workforce Development and Continuing Education Executive Director A.A., Iowa Central Community College B.A., University of Northern Iowa M.B.A., Upper Iowa University Douglas L. Boelter Associate Instructor/Clinical Coordinator, Radiologic Technology Program A.A.S., Northeast Community College R.R.T., Sacred Heart School of Radiography B.A., Mount Marty College

Summer M. Boes Advanced Instructor/Coordinator, Early Childhood Education Program B.S., Iowa State University M.A., Western Governor's University

Janel E. Bothe Business Office Bookkeeper

Robert L. Brabender Intercollegiate Athletics Assistant Director, Athletic Fundraising Assistant Director, and Assistant Football Coach B.S., Bemidji State University M.S., North Dakota State University

Daniel A. Brown Student Development Assistant, Head Men's & Women's Cross Country Coach & Assistant Men's & Women's Track & Field Coach B.A., Luther College M.S., Springfield College

Mary K. Bruhl Economic Development Secretary Diploma, Iowa Central Community College

David R. Busch Instructor, Mathematics Department B.S., Iowa State University M.S., Iowa State University

Brandon W. Bush Student Life & Activities Assistant Director A.A., Iowa Central Community College B.A., Buena Vista University

Brittany J. Bush Business Department Associate A.A.S., Iowa Central Community College A.A., Iowa Central Community College

William E. Bush Transportation Technology Center Field Trainer

Andrew P. Campbell Mechanical Maintenance Coordinator: Geothermal Security Systems A.A.S., Iowa Central Community College

Andrew W. Carlson Associate Instructor/Coordinator, Automotive Restoration Program Diploma, Des Moines Area Community College

Richard B. Carlson Custodian

Sandra J. Cherry Associate Instructor/Coordinator, Process Technology Program B.S., University of Wisconsin, Stevens Point

Phouthasone Chounthirath Construction Technician, Adjunct Instructor, and Carpentry Program Coordinator Diploma, Iowa Central Community College

Linsey M. Christie Financial Aid Director B.A., Buena Vista University Heidi L. Clark Instructor, Nursing Program B.S.N., Grand View University M.S.N., Allen College

Christopher L. Cleveland Advanced Instructor, Electrical Technology Program A.A.S., Ivy Tech State College B.A., Purdue University M.ED., Western New England University

Terry A. Coleman Housing Assistant Director and Assistant Men's & Women's Rodeo Team Coach B.S., Missouri Valley College

Elizabeth I. Collins Advanced Instructor/Coordinator, Science Department B.S., Humboldt State University M.S., Wake Forest University

Joel R. Collins Instructor/Coordinator, Computer Integrated Fabrication Program A.A.S, Iowa Central Community College

Jennifer M. Condon Liberal Arts & Sciences Dean B.A., Iowa State University M.S.Ed., Iowa State University

Maria L. Conell Enrollment Management & Student Development Secretary B.A.S., Buena Vista University

Jeremy D. Conley Housing Director and Assistant Football Coach A.A., Iowa Central Community College

Nancy J. Conrad Financial Aid Processor A.A., Iowa Central Community College B.A., Buena Vista University

Thaddeus M. Cooper Associate Instructor, Electrical Technology Program; and Coordinator, Robotics Technology/ Technician Program A.A.S., Northwest Iowa Community College Diploma, Northwest Iowa Community College

Michael A. Craft Instructor, Education & Psychology Department B.S., Iowa State University M.A., Iowa State University

Troy D. Crampton Institutional Technology Director and Adjunct Instructor A.A.S., Iowa Central Community College

Krystal M. Crandall Distance Learning Financial Aid Assistant Director Diploma, North Iowa Area Community College A.S., North Iowa Area Community College A.A., North Iowa Area Community College B.S., Buena Vista University

Tracy L. Crippin-Haake Triton Enrichment Center Director A.A., Iowa Central Community College B.A., Buena Vista University M.S., Walden University Patricia O. Croonquist Advanced Instructor, Humanities Department; and Coordinator, Modern Language Program A.A., Iowa Central Community College B.A., Iowa State University M.Ed., Iowa State University

Nikole N. Cummins Enrollment/Recruiting Specialist B.A., Buena Vista University M.B.A., Upper Iowa University

Averille K. Cupples Literacy/HSED Instructor/Facilitator, North Central Correctional Facility A.A., Blue Mountain Community College B.S., Eastern Oregon University M.T.E., Eastern Oregon University

Betty L. Daniel Instructor, Nursing Program; and Coordinator, Nursing Program, Webster City Center B.S.N., Morningside College

Sara J. Davis Driver Education Coordinator A.A., Iowa Western Community College B.A., Grand View College

Paul A. DeCoursey Public Information Director A.A.S., Hawkeye Community College

Joanna F. DeLeon Storm Lake Adult Education/ Literacy Associate Coordinator B.A., William Penn University

Lesa F. Dencklau Performing Arts Coordinator/ Dance Teams Coach/Choreographer B.F.A., Drake University

Ralph A. Desiderio Campus Security Specialist A.A.S., Brooklyn College/USMC

Martin R. Dettman Physical Facilities Coordinator

Scott Deuel Decker Auditorium Manager and Technical Theatre Coordinator

**Cindy L. DeWall** Associate Instructor, Dental Hygiene Program A.A.S., Hawkeye Community College A.A., Iowa Central Community College B.A., Buena Vista University

Susan T. Doyle Adult Education/Literacy Associate Coordinator B.S., Creighton University

William D. Drissel Professor, Social Science Department B.S., University of North Alabama M.A., Auburn University

Jennifer J. Dutcher Instructor, Humanities Department and Co-Coordinator, Art Program B.A., University of Iowa M.A., University of Iowa

Edward B. Dyvig Associate Instructor/Co-Coordinator, Electrical Technology Program A.A.S., Iowa Central Community College Rachel J. Eger Accounts Payable Coordinator Certificate, Iowa Central Community College

Julie A. Ehresmann Advanced Instructor, Science Department B.S., South Dakota State University M.S., Drake University

Dale D. Eldridge Assistant Professor/Co-Coordinator, Automotive Technology Program A.A.S., Iowa Central Community College A.A., Iowa Central Community College

Lindsay N. Eslick Health Sciences Compliance Coordinator Associate, AIB College of Business

Lori J. Evans Financial Aid Assistant Director A.A.S., AIB

Julie K. Evenson Administrative Assistant and Physical Facilities Scheduling Coordinator

Barbara J. Farnham Enrollment Management & Student Development Secretary Certificate, Iowa Central Community College

Rusty J. Farrington Assistant Professor, Humanities Department B.A., University of Iowa M.A., University of Iowa

Jeremiah D. Feine Student Development Assistant, Assistant Men's and Women's Cross Country Coach, and Assistant Men's and Women's Track & Field Coach B.A., Midland University

Roger D. Feldhans Custodian

Michelle S. Filmer Associate Coordinator, Corrections Education, Fort Dodge Correctional Facility and North Central Correctional Facility Assoc, American Institute of Business

Susan E. Flattery Enrollment Management & Student Development Secretary Certificate, Iowa Central Community College

Bradley A. Foote Housing Coordinator and Assistant Men's & Women's Track & Field Coach B.S., Southern Illinois University

Justin M. Ford Physical Facilities Assistant Director A.A., Iowa Central Community College

John L. Fowler Professor, Automotive Technology Program Certificate, Wyoming Technical Institute A.A.S., Iowa Central Community College

Jeffrey A. Frank Transportation Technology Center Director

Dean S. Fryar Transportation Technology Center Field Trainer Certificate, Iowa Central Community College Nicole C. Fusco Instructor, Science Department A.A., Iowa Central Community College B.S., Buena Vista University M.S., University of Nebraska, Kearney

Leann S. Gatewood Instructor, Business Department; and Coordinator, Administrative Specialist Program B.B.A., Mount Mercy College M.B.A., University of Phoenix

Gregory S. Gernhart Website Technology Specialist A.A.S., Iowa Central Community College A.G.S., Iowa Central Community College

Jennifer L. Gernhart Instructor, Science Department A.A., Iowa Central Community College B.S., Buena Vista University M.S., University of Nebraska, Kearney

Jorja M. Gibbins Storm Lake Center Secretary

Kathy M. Goebel Instructional Television Coordinator A.A., Iowa Central Community College

**Amber R. Graves** Health Services Coordinator B.A., Augustana College

Rochelle R. Green Instructor/Coordinator, Professional Photography Program A.A., Iowa Central Community College B.A., University of Northern Iowa M.A., Nova Southeastern University

Sheryl A. Griffith Professor, Mathematics Department B.A.E., Wayne State College M.A., Emporia State University

**Cynthia J. Grimm** Advanced Instructor, Science Department B.A., University of Northern Iowa M.S., University of Iowa

Mary A. Gronbach Simulation Center Coordinator A.D.N., Iowa Central Community College B.S.N., University of Iowa

Carl L. Gross Assistant Professor, Science Department A.A., Iowa Central Community College B.A., University of Northern Iowa M.H.P., Illinois Institute of Technology

Ronald D. Grossnickle Transportation Technology Center Field Trainer

Luke J. Grove Business Office Director A.A., Iowa Central Community College B.A., Buena Vista University

Megan E. Grove Enrollment Management Assistant Director A.A.S., Iowa Central Community College B.L.S., Iowa State University M.Ed., Iowa State University JoAnne K. Gruver Liberal Arts & Sciences Secretary Certificate, Iowa Central Community College

**Erin E. Guddall** Adult Education/Literacy ESL Associate Coordinator A.A., Iowa Central Community College B.A., University of Northern Iowa

Shawn M. Haake Assistant Professor, Education and Psychology Department; and Coordinator, Education Program B.A., Iowa State University M.S., Iowa State University M.Ed., Iowa State University

**Gregg A. Haden** Intercollegiate Athletics Assistant Director and Head Men's and Women's Bowling Coach B.A., Buena Vista University

Laura E. Hall Housing Coordinator and Assistant Men's & Women's Bowling Coach B.A., Midland University

Richard S. Hall Custodian

Adrienne J. Hamilton Database Programmer B.S., Dakota State University

Michael L. Hanlon Custodian

John M. Hansen Associate Professor/Coordinator, Mathematics Department B.A., Augustana College M.S., South Dakota State University

Shannon C. Hanson Physical Facilities Assistant A.A.S., Iowa Central Community College

Belinda L. Harris Physical Facilities Evening Shift Coordinator

September F. Harris Custodian A.A., Iowa Central Community College

Troy A. Harris Electrical Technology Technician and Adjunct Instructor A.A., Iowa Central Community College

Joshua A. Hayes Iowa Central Fuel Testing Laboratory Supervisor A.A.S., Iowa Central Community College A.A., Iowa Central Community College

Emily K. Haynes Dental Hygiene Clinic Manager A.A.S., Iowa Central Community College A.A., Iowa Central Community College

Joshua D. Hays Technology Specialist and Adjunct Instructor A.A.S., Iowa Central Community College

Donald A. Heck Iowa Central Fuel Testing Laboratory Director and Adjunct Instructor B.A., University of Nebraska-Omaha Ph.D., University of Nebraska Medical Center Suzanne E. Heistand Community and Continuing Education Coordinator A.A., Iowa Central Community College B.A., Buena Vista University M.M., University of Phoenix

Chad D. Helle Intramurals Director, Student Life & Activities Coordinator, and Assistant Men's Basketball Coach A.A., Iowa Central Community College B.S., Viterbo College

Lindsay E. Henderson National Emergency Grant Program Director A.A., Iowa Central Community College B.S., Iowa State University

Nicole R. Henricks Financial Aid Coordinator A.A., Iowa Central Community College A.A.S., Lower Columbia College

Susan E. Henry Custodian

Robert D. Hepperle Instructor/Co-Coordinator, Automotive Technology Program A.A.S., Dunwoody Institute

Michael C. Herrington Associate Instructor/Coordinator, Logistics and Transportation Management Program A.A., Iowa Central Community College B.S., Arizona State University

David M. Hilbert Custodian

Michael J. Hirst Associate Instructor/Coordinator, Culinary Arts Program; and Coordinator, Restaurant & Hospitality Management Program Certificate, EHO Health & Safety Certificate, EHO Food Hygiene Certificate, Food Hygiene and Food Handling Cookery for the Catering Industry, Westminster Catering College

Ronald J. Hoffman Transportation Technology Center Field Trainer

Emily J. Holtapp Health Sciences Associate A.A., Iowa Lakes Community College B.A., Briar Cliff University M.Ed., Iowa State University

Zachary J. Holthaus Mechanical/HVAC Maintenance Coordinator

Guy J. Horn Head Athletic Trainer B.A., Midland University M.S.E., Wayne State College

Sara A. Horn Student Development Assistant, Adjunct Instructor, and Head Volleyball Coach B.S., University of Nebraska-Lincoln M.S., Wayne State College

Jamie A. Hoshaw Transportation Technology Center Associate B.A., University of Northern Iowa Joshua C. Howell Liberal Arts and Sciences Associate B.A., Iowa State University

Dawn A. Humburg Professor, Business Department; and Coordinator, Accounting Associate Program B.A., Buena Vista University M.Ed., Iowa State University Ph.D., Iowa State University

Paul J. Hunt Intercollegiate Athletics Assistant Director and Assistant Softball Coach B.A., Presentation College

John D. Huskamp Custodian

Lisa M. Hylton Professor, Business Department A.A., Iowa Central Community College B.A., Drake University M.B.A., University of Kansas J.D., Drake University

Nancy A. Irving Student Accounts Receivable Coordinator Certificate, Spencer School of Business

Robin D. Isabell Instructor, Nursing Program B.S.N., Indiana University M.S.N., Walden University

Dennis J. Ivory Custodian

Teresa W. Jackson Advanced Instructor, Communications Department; Director, Theatre; and Coordinator, Community/Student Performances B.S.E., Northeast Missouri State Univ. M.A., Northeast Missouri State Univ.

Garnet A. Johns Industrial Mechanics Program Coordinator, Industrial Trainer, and Adjunct Instructor Certificate, Iowa Central Community College

Allen R. Johnson Transportation Technology Center Coordinator Certificate, Iowa Central Community College

Eric W. Johnson Willow Ridge Grounds Superintendent A.A., Iowa Central Community College A.A.S., Iowa Central Community College

Stacy J. Johnson Instructor, Business Department B.A., University of Northern Iowa M.B.A., Upper Iowa University

Mary A. Jones Custodian

Nathan A. Jones Distance Learning Help Desk and iNET Specialist A.A.S., Iowa Central Community College

Rhonda K. Jones Iowa Central Fuel Testing Laboratory Coordinator A.A., Iowa Central Community College B.A., Iowa State University B.A., Buena Vista University Craig A. Juilfs Enrollment/Recruiting Specialist A.A., Iowa Central Community College B.L.S., Iowa State University M.Ed., Iowa State University

Paul H. Juilfs Custodian

Jessica L. Kavanaugh Career Services Specialist and Adjunct Instructor B.S., Iowa State University

Amanda J. Kehm Instructor, Mathematics Department B.S., Creighton University M.A.T., University of Nebraska-Lincoln

Gabriel L. Kellner Willow Ridge General Manager A.A., Iowa Central Community College B.S., Iowa State University

Daniel R. Kemnitz Electrical Technology Program Co-Coordinator, Industrial Trainer, and Adjunct Instructor A.A.S., Northwest Iowa Community College

Carrie J. Kephart Associate Instructor, Nursing Program; and Coordinator, Nursing Program, Storm Lake Center A.D.N., Iowa Central Community College B.S.N., University of Iowa

Courtney A. Kopp Registrar A.A., Iowa Central Community College B.A., University of Northern Iowa

Michelle M. Kraft Campus Security Specialist A.S., Iowa Central Community College

Joshua P. Kraushaar Associate Instructor, Medical Laboratory Technician Program B.S., Morningside College

Kelvin G. Kruger Student Development Assistant, Adjunct Instructor, and Head Women's Basketball Coach B.A., Northwestern College M.A., University of South Dakota

Kelly G. Kuester Iowa Central Fuel Testing Laboratory Technician Diploma, Iowa Central Community College A.A.S., Iowa Central Community College

Scott A. Kuester Advanced Instructor/Coordinator, Fire Science Technology Program Nationally Certified Fire Fighter and Instructor International Fire Service Accreditation Congress

Anne M. Macek Lachelt Professor, Science Department A.A., Iowa Central Community College B.A., University of Northern Iowa D.V.M., Iowa State University

Bridget L. Lambright Head Men's & Women's Rodeo Team Coach B.S., Missouri Valley College M.A., Lindenwood University Allen J. Langenwalter Associate Instructor, Diesel Technology Program Diploma, Universal Technical Institute

Janet S. Lansing TRIO Student Support Services Program Project Specialist B.S., Missouri Western State College

Daisy K. Lantz Custodian

Rae L. Larson Advanced Instructor, Communications Department B.S., Iowa State University M.A., Jones International University

Kathy S. Lawler Distance Learning Financial Aid Coordinator A.A., Iowa Central Community College B.A., Buena Vista University

George E. Lawman Technology Specialist and Adjunct Instructor A.A.S., Iowa Central Community College

Jennifer M. Singsank Leffler Instructor, Nursing Program R.N., Nebraska Methodist College M.S.N., Nebraska Methodist College

Jody D. Lewis Custodian

Gary A. Lombard Transportation Technology Center Field Trainer

Gregory A. Lombard Physical Facilities Coordinator (Apartment Maintenance)

Karen L. Lombard Board of Directors' Secretary and Administrative Assistant

Sharisse L. Lombard Accounts Receivable Coordinator A.A., Iowa Central Community College A.S., Iowa Central Community College B.A., Buena Vista University

Wayne C. Lussman Transportation Technology Center Field Trainer

Christopher M. Madison Technology Specialist and Adjunct Instructor A.A.S., Iowa Central Community College

Mitchell G. Madland Housing Coordinator and Assistant Football Coach B.A., Winona State University

David D. Mann Student Development Assistant, Adjunct Instructor and Assistant Football Coach B.A., Concordia College M.S., St. Cloud State University

Timothy J. Martin Distance Learning Dean A.A., Iowa Central Community College B.S., Iowa State University M.Ed., Iowa State University

## Marc A. Matthes Computer Networking Program Director and Distance Learning Developer

and Distance Learning Developer A.A., Iowa Central Community College Certified in MCSE, MCP&I, MCT, CNA, CCNA, CCNI, LPI BST-BS Technology, Excelsior College

John S. Matthews Custodian

Ronald K. Maulsby Special Instructor, Secondary Career Automotive Technology Program A.A.S., Iowa Central Community College A.S.E. Master Certified Automotive Technician

Harry Anthony Mayer Life Skills Instructor/Facilitator, North Central Correctional Facility B.A., University of Nebraska-Omaha

Samantha E. McClain Bookstore Manager A.A., Iowa Central Community College B.A., University of Northern Iowa M.Ed., Iowa State University

Lacee M. McLaren Bookstore Assistant Manager A.A., Ellsworth Community College B.A., University of Northern Iowa

Laurence R. McLuckie Instructor/Coordinator, Human Services Program A.A., Iowa Central Community College B.S., Iowa State University B.B.A., University of Iowa M.B.A., Drake University

Alan R. McNeil Sports Media Specialist, Broadcasting Coordinator, and Adjunct Instructor

Stacy L. Mentzer

Institutional Effectiveness Executive Director and Medical Laboratory Technician Program Coordinator M.L.T., Iowa Central Community College B.A., University of Phoenix M.A.E.D., University of Phoenix

Julie A. Mertens Simulation Center Assistant Coordinator A.A.S., Northeast Community College

Justin T. Meyer Student Development Assistant, Adjunct Instructor, and Head Baseball Coach A.A., Iowa Central Community College

Kelly S. Meyer Professor/Coordinator, Medical Assistant Program A.A., Iowa Central Community College A.A.S., Iowa Central Community College B.A., Buena Vista University

Gretchen L. Miller Storm Lake Center Associate B.A., Iowa State University M.A., University of Northern Colorado

Phyllis A. Minnihan Industrial Technology Department Associate Diploma, CE School of Commerce Amy M. Moffitt

Testing Services Coordinator A.A., Iowa Central Community College B.A., Iowa State University

Lucas A. Moffitt Student Development Assistant and Head Wrestling Coach A.A., Iowa Central Community College B.A., University of Iowa

Richard L. Morain Transportation Technology Center Field Trainer Cert., Iowa Central Community College

Amanda M. Murphy Assistant to Athletic Director and Head Cheer Coach B.S., Iowa State University

Mitchell D. Murphy Student Development Assistant and Assistant Cheer Coach A.A.S., Iowa Central Community College A.A., Iowa Central Community College B.A., Luther College

Christina E. Murray Willow Ridge Food Service Manager and Adjunct Instructor A.A., Iowa Central Community College A.A.S., Iowa Central Community College

Dennis W. Myers Student Development Assistant and Head Men's & Women's Track & Field Coach B.A., Siena Heights College

Jeff A. Nelsen Institutional Technology Director and Adjunct Instructor A.A.S., Iowa Central Community College B.A., Buena Vista University

Brent D. Nelson Triton Enrichment Center Assistant and Head Rugby Coach A.A., Iowa Central Community College B.A., Wartburg College

Kolette K. Nelson Payroll Coordinator A.A., Scottsdale Community College

Kristen A. Nerem-Lowery TRIO Student Support Services Program Tutor Coordinator/Education Specialist B.S., Wayne State College M.S., Wayne State College

Denise A. Norem Professor, Nursing Program A.D.N., Iowa Central Community College B.S.N., University of Iowa M.S.N., Thomas Edison State College

Joan E. O'Hearn Webster City Center Associate A.A., Iowa Central Community College Diploma, American Institute of Commerce

Melissa L. Osai Business Department Secretary A.A., Iowa Central Community College B.A., Buena Vista University Daniel J. Oswald Carpentry Program Industrial Trainer and Adjunct Instructor Diploma, Iowa Central Community College

Branden J. Otto Welding Program Industrial Trainer and Adjunct Instructor Diploma, Iowa Central Community College

## Jerry D. Patterson Life Skills Instructor/Facilitator Fort Dodge Correctional Facility A.A.A., Des Moines Area Community College A.A., Iowa Central Community College

A.S., Iowa Central Community College B.S., Iowa State University

David L. Pearson Student Life & Activities Director and Fort Dodge Community Recreation Center Executive Director A.A., Iowa Central Community College B.A., Buena Vista University

Rick E. Pederson Instructor, Communications Department A.A., Iowa Central Community College B.A., Grand View College M.Ed., Iowa State University

Justin R. Peters Financial Aid Coordinator A.A., Iowa Central Community College B.A., Wartburg College

Neil A. Peterson Associate Instructor/Coordinator, Engineering and Design Technology Program A.A.S., North Iowa Area Community College

Tera M. Peterson Industrial Technology Department Secretary

Joshua M. Phillips Instructor, Business Department B.A., University of Northern Iowa M.A., University of Missouri-Kansas City

Theresa L. Phillips Adult Education/Literacy Secretary A.A., Iowa Central Community College A.S., Iowa Central Community College

**Geoffrey J. Phillipson** Associate Instructor, Culinary Arts Program Diploma, International Hotel School Diploma, South African Chefs Academy

Michael K. Pieper Custodian

Sandra J. Pieper Human Resources Coordinator Diploma, American Institute of Business

Samantha K. Pingel Intermediary Networks Specialist A.A., Iowa Central Community College B.A., Buena Vista University

Joseph J. Plane Student Development Assistant and Head Men's and Women's Swim Coach B.S., Western Michigan University

Roger M. Plantz Mechanical Maintenence Coordinator Jason L. Pochinski Campus Security Specialist A.S., Iowa Central Community College

Samuel E. Poulsen Storm Lake Center Custodian A.A.S., Iowa Central Community College

Diane L. Powers-Willard Professor, Education and Psychology Department A.A., Iowa Central Community College B.A., Buena Vista University M.A., Christian Bible College M.S., Drake University Ph.D., Christian Bible College

Sarah K. Rahe Economic Development Assistant Director B.S., Iowa State University M.Ed., Iowa State University

Michelle L. Ramthun Assistant Professor, Communications Department; and Coordinator, Humanities Department A.A., Iowa Central Comm. College B.A., Univ. of Northern Iowa M.A., Iowa State University

Sarah J. Ramthun Assistant Registrar B.A., University of Northern Iowa

Wilson M. Rathjen Housing Coordinator and Assistant Football Coach A.A., Iowa Central Community College B.S., University of Iowa

Todd A. Redenius Student Development Assistant, Adjunct Instructor, and Head Men's and Women's Tennis Coach B.S., University of Iowa M.P.A., Drake University

Kayla M. Reeves Willow Ridge Assistant Food Service Manager and Adjunct Instructor A.A.S., Iowa Central Community College

Samantha J. Reeves Academic Assistance and Accommodations Coordinator A.A., Iowa Central Community College B.A., University of Northern Iowa

Kelli A. Reuter Mental Health Counselor A.A., Iowa Central Community College B.A., Buena Vista University M.S., Buena Vista University

Lindsey A. Rial Student Records Coordinator A.A., Hawkeye Community College B.A., University of Northern Iowa

Mark J. Rial Student Development Assistant and Assistant Wrestling Coach B.A., University of Northern Iowa

Michael S. Richards Associate Instructor, Agriculture Technology Program; and Supervisor, Post Secondary Agricultural Student (PAS) Club B.S., Northwest Missouri State University Bryce L. Roberts Welding Program Industrial Trainer and Adjunct Instructor A.T., McPherson College

Divinity B. O'Connor DLR Roberts Associate Professor, Social Science Department B.A., Iowa State University M.A., Iowa State University

Justin R. Robertson Instructor, Communications Department and Coordinator, Developmental Writing and Reading B.A., University of Missouri-Columbia M.F.A., University of Wyoming

Michael E. Robertson Associate Instructor/Coordinator, Agriculture Technology Program B.S., Iowa State University

Kimberly J. Robeson Business Office Supervisor A.A., Iowa Central Community College

Carrie A. Rock Secondary Education Coordinator A.A., Iowa Central Community College B.S., Iowa State University M.Ed., Iowa State University

Pablo I. Rodriguez Student Development Assistant and Assistant Men's Soccer Coach B.S., Rutgers University

Robert D. Roest Physical Facilities Assistant Coordinator

Lindsey M. Rossow Student Success and Division Activities Coordinator A.A., Iowa Central Community College B.B.A., University of Iowa

Shelly K. Rustvold Administrative Secretary

Gail Renee St. Pierre-Piper Instructor/Coordinator, Dental Hygiene Program Certificate, Iowa Western Community College A.A., Iowa Western Community College A.S., Laramie County Community College B.S., University of Nebraska Omaha M.A., University of Nebraska

Rick A. Sandquist Intercollegiate Athletics Director and Head Softball Coach B.S.Ed., Arkansas State University M.S.Ed., Northwest Missouri State University

Joan D. Sappingfield Health Sciences Secretary

Sara A. Scharf Enrollment Management Director A.A., Iowa Central Community College B.A., Buena Vista University M.Ed., Iowa State University

Amy M. Schmidt Associate Instructor, Nursing Program A.D.N., Western Iowa Technical Community College B.S.N., Creighton University Barbara J. Scholtens HSED Instructor/Facilitator, North Central Correctional Facility A.S., Iowa lakes Community College B.S., Iowa State University

Kenneth R. Scholtens Associate Instructor, Automotive Technology Program

Kathleen M. Schreier Advanced Instructor, Humanities Department; Director, Vocal Music; and Supervisor, Iowa Central Singers B.A., College of Saint Teresa M.Ed., Iowa State University

Shawna L. Schuler Associate Instructor, Medical Laboratory Technician and Medical Assistant Programs A.A., Iowa Central Community College A.A.S., Iowa Central Community College B.S., University of Phoenix

Steven L. Schwendemann Professor, Science Department B.A., Central University D.C., Palmer College of Chiropractic

Joshua J. Schwering Custodian

Nicklaus W. Sesker Carpentry Program Construction Technician and Adjunct Instructor Diploma, Iowa Central Community College Certificate, Des Moines Area Community College

John A. Sheehan Webster City Center Custodian

Jennifer W. Shivers Liberal Arts & Sciences Associate A.A., Iowa Central Community College B.A., Buena Vista University

Michael H. Shute Custodian

Amy R. Simpson Assistant Professor, Communications Department B.A., Iowa State University M.S., Iowa State University

Jeremy J. Smith Athletic Bands Director and Adjunct Instructor B.S., Morningside College

Kathryn M. Smith Physical Facilities Night Shift Coordinator

**Steven C. Smothers** Physical Facilities Coordinator (Apartment Maintenance)

Stormy K. Smothers Long-Term Care Program Coordinator A.A.S., Iowa Central Community College

Melody A. Sorenson Custodian A.A.S., Iowa Central Community College

Daryl L. Starrett Custodian B.S., Northeast Missouri State Trina J. Staton Health Sciences Dean B.S.N., Morningside College Diploma, Albany Medical Center (NY) M.S.N., University of Phoenix

Brandon T. Steburg Custodian

Eric L. Stein Student Development Assistant and Assistant Baseball Coach A.A., Iowa Central Community College B.A., Grand View College

Lyle D. Stevens Instructor/Coordinator, Social Science Department B.S., Ed, Northwest Missouri State University M.A., Northwest Missouri State University

Darla K. Stewart HSED/Title I Instructor/Facilitator, Fort Dodge Correctional Facility B.S., Iowa State University

Donald R. Stewart, Jr. HSED Instructor/Facilitator Fort Dodge Correctional Facility B.S., Iowa State University

Peggy L. Stickrod Region V HazMat Response Commission Coordinator and CFO

Erik J. Stroner Instructor/Coordinator, Communications Department B.A., University of Iowa M.A., University of Northern Iowa

Thomas C. Stupp Structural Maintenance Coordinator Diploma, Carpentry Iowa Central Community College

Harlan G. Swanson Transportation Technology Center Field Trainer A.A., Iowa Central Community College

Ben Taylor Athletic Marketing & Communications Specialist and Head Men's Soccer Coach B.A., Drury University

Harlan A. Thompson Welding Program Coordinator, Industrial Trainer, and Adjunct Instructor Certificate, Iowa Lakes Community College

Lisa K. Traufler TRIO Student Support Services Program Advisement Counselor B.A., Sacred Heart University B.A., Buena Vista University M.A., Saint Mary's University

Heather K. Trobec Athletic Trainer B.S., Saint Cloud State University M.S., Saint Cloud State University

Kevin D. Twait Athletic Fundraising Director and Head Football Coach B.A., Buena Vista University M.S., Missouri State University Jerry S. Twito HSED Instructor/Facilitator Fort Dodge Correctional Facility A.A., Iowa Central Community College B.A., Buena Vista University

Pamella M. Uhlenkamp Advanced Instructor, Business Department; and Supervisor, Business Professionals of America (BPA) Club A.A.S., A.A., Iowa Central Community College B.A., Buena Vista University M.B.A., Upper Iowa University

Abbie J. Underberg Education Coordinator/College Liaison/Prisons, Fort Dodge Correctional Facility and North Central Correctional Facility A.A., Iowa Central Community College B.A., Beuna Vista University

Colleen K. VanGundy Admissions Activities Coordinator

Shane M. Van Meer Enrollment/Recruiting Specialist A.A., Iowa Central Community College B.A., Buena Vista University

Jodi J. Vannoni Willow Ridge Assistant Manager and Adjunct Instructor A.A.S., Iowa Central Community College

Melissa S. Vorrie Career Navigator Specialist B.A., Simpson College

Laura C. Walters Instructor, Mathematics Department; and Coordinator, Developmental Mathematics B.S., Culver-Stockton College M.S., Iowa State University

Lori L. Walton Academic Resource Center Director B.A., Coe College M.S., Drake University

Ann M. Waynar Adult Education/Literacy Coordinator B.S., University of Nebraska at Omaha M.A., Ball State University

John W. Weber Professor, Mathematics Department B.A., University of Northern Iowa M.A., University of Northern Iowa

Randy J. Weiss Special Instructor/Coordinator, Automotive Collision Technology Program

Nathaniel C. West Housing Coordinator and Assistant Men's Basketball Coach B.S., Birmingham Southern College

Kara M. Weyand Instructor, Humanities Department; and Co-Coordinator, Art Program B.F.A., University of Missouri - Columbia M.F.A., Iowa State University

**Kimberly N. Whitmore** Human Resources Director B.A., Buena Vista University Kelly J. Wirtz Webster City Center Director B.A, Iowa Wesleyan College M.Ed, Iowa State University

Joseph M. Wright Associate Instructor/Coordinator, Criminal Justice Program B.A., Loras College

Linda K. Zehr Distribution Services Assistant Coordinator

# Index A

Academic Assistance	32
Academic Load	. 18
Academic Resource Center	32
Accommodations	, 32
Accounting Associate Program	40
Accreditation	8
Adding Courses	25
Administration	154
Administrative Specialist Program	. 41
Administrative Withdrawal	. 24
Admissions Policy	18
Adult Education/Literacy	. 24
Advanced Placement	. 24
Advanced Standing	. 24
Advanced Standing Course List	150
Advisors	. 18
Agricultural Program	. 42
Agricultural Technology Program	42
Art Program	43
Assessment of Student Academic Achievement .	24
Associate Degree Nursing Program	. 74
Associate of Applied Arts Information	. 27
Associate of Applied Science Information	. 27
Associate of Arts Information	26
Associate of General Studies Information	. 27
Associate of Professional Studies Information	. 27
Associate of Science Information	26
Athletic Training Program	. 44
Athletics	32
Attendance Regulations	. 24
Audit Policy	25
Automatic Grade Book Alert	. 24
Automotive Collision Technology Program	44
Automotive Technology Program	. 45
Auto Restoration Technology Program	45

## В

Baking & Pastry Arts Program 46	,
Billing	
Biotechnology Program 46	)
BIT Center 25	
Bookstore	
Buena Vista University - F.D. Center	)
Business Program 47	
Business Administration Program	

# С

Campus Crime8
Campus Maps Inside Cover
Career Services
Carpentry Program 48
Centers
Fort Dodge Center8
Storm Lake Center 8
Webster City Center8
Certificate Program Information
Changing Grades
Chiropractic Program 48
Clubs/Organizations
Coaching Authorization Program
College Level Examination Program (CLEP) 24
College Networking Policy8
College Transfer Information
College Transfer Majors
Compliances8
Alcohol, Tobacco, Other substances
Campus Crime8
College Networking Policy 8
Discrimination8
FERPA9
Photography and Film Rights Policy
Social Networking Policy13
Student Conduct Code
Student Rights and Responsibilities
Title IX14
Other Compliance Information
Computer Integrated Fabrication Technology Program 50
Computer Networking Technology Program 51
Computer Repair Program51
Concerts and Lectures
Continuing Education25
Counseling Services
Course Cancellation25
Course Descriptions91
Credit by Examination24
Criminal Justice Program52
Culinary Arts & Hospitality Program53

# D

-	
Dean's List	28
Degree Check Sheets 144, 145, 14	46
Dental Hygiene Clinic	33
Dental Hygiene Program	54
Dentistry Program	55
Developmental Education	25
Diesel Technology Program	55
Dietetics & Food Science Program	56
Digital Mass Communications Program	56
Diploma Program Information	27
Discontinued Programs/Courses	25
Discrimination	. 8
Distance Learning	26
Dropping Courses	25

# Е

Earlybird Courses	26
Early Childhood Education Program	57
Economic Development Services	26
Electrical Technologies Program	58
Electrical/Mechanical Technician Program	59
Elementary Education Program	57
EMS Training	27
Emergency Medical Services Program	60
Emergency Procedures	9
Engineering Program	61
Engineering & Design Technology Program	61
English/Communication Studies	62
Enrollment and Assessment	27

## F

Faculty List	154
Family and Consumer Science Program	62
FERPA	9
Final Grades	28
Financial Aid	18
Fire Science Program	63
FlexNet Courses	26
Foundation	14

# G

General Education	27
General Education Course List	18
Geography Program	53
Grade Appeals	28
Grading System	27
Graduation Requirements 2	28
Graphics Technology Program	54

# Н

Harassment and Violence Policy 10
Health & Beauty Management Program 64
Health Care Administration Program 65
Health Science Core Performance Standards 149
Health Services
High School Equivalency Preparation24
History of Iowa Central 14
History Program
Honor Society
Honors
Housing/Apartments
Human Services Program
HVAC Technology Program

## I

Incomplete Grades 2	28
Industrial Business Degree Program	57
Industrial Mechanics Program 6	57
Industrial Robotics and Automation 6	8
Information Media/Library 3	2
Institutional Goals 1	5
International Student Admission 1	8
Intramurals	33

# J

# Κ

## L

Liberal Arts & Sciences Program	3
Long Term Care Courses 28	3

## Μ

## Ν

# 0

## Ρ

Pharmacy Program76
Phi Theta Kappa 28
Philosophy of Iowa Central 15
Photography and Film Rights Policy 13
Physical Education Program77
Physical Therapy Program77
Political Science/Government Program78
Practical Nursing Program 75
Pre-Law Program78
President's List
Process Plant Technology Program
Professional Photography Program 80
PSEO (Post-Secondary Enrollment Options) 26
Psychology Program 80
Publications

## R

Radiologic Technology Program	81
Refunds	20
Religious Studies Program	82
Repeating Courses	28
Requital of Grades	27
Residency Policy Guidelines	20

## S

Scholarships19
Scholastic Dishonesty 29
Sciences Program
Secondary Education Program 58
Semi Truck Driving
Service Excellence Values15
Social Networking Policy13
Social Sciences Program
Sociology Program
Sources of Financial Aid 18
Staff List 154
Student Activities
Student Ambassadors
Student Conduct Code 13
Student Government
Student ID Cards 20
Student Initiated Withdrawal25
Student Rights and Responsibilities 13
Supply Chain Management Program 84

# т

Testing 32
Theatre 33
Theatre Program85
Title IX 14
Tobacco and Nicotine Vapor Policy
TOEFL 18
Transfer Agreements
Transfer of College Credit into Iowa Central 20
Transfer of College Credit into Regents
TRIO: Student Support Services
Triton Enrichment Center
Triton Network System26
Tuition and Fees 20
Turfgrass Management Program
TV and Radio Production Program

## V

Veterans' Benefits	19
Veterinary Medicine Program	87
Vision Statement	15
Vocational Rehabilitation	34

## W

Ways to Apply for Admission	18
Weather Related Cancellations and Delays	29
Web Technology Program	88
Welding Technology Program	88
Withdraw and Total Withdraw from College	25

