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DMACC

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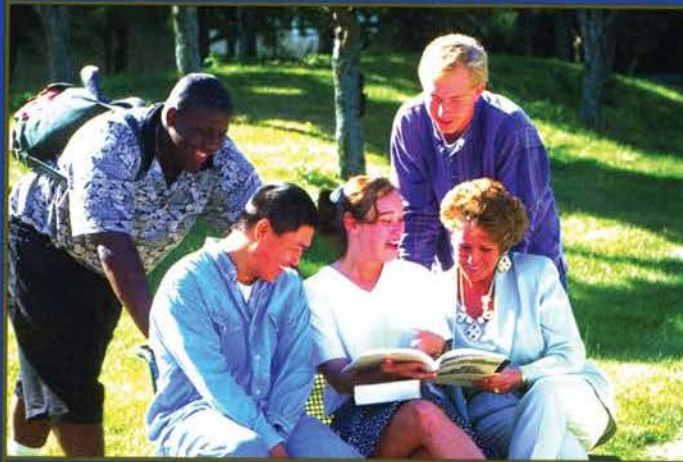
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DES MOINES AREA  
COMMUNITY COLLEGE

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CATALOG

*A Step in the Right Direction*

**DMACC**  
DES MOINES AREA  
COMMUNITY COLLEGE



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  - Fashion Merchandising and Design

## Legal Administrative Assistant

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- Medical Office Technology
- Office Technology
- Retail Merchandising
- Sales and Management
- Small Business Management

- Certificates of Specialization
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  - Accounting, Advanced
  - Administrative Support
  - Advanced Purchasing Operations
  - Clerical Specialist
  - Computer Languages
  - Data Entry I & II
  - Fashion
  - Insurance Sales
  - Management
  - Medical Transcriptionist
  - Microcomputer Application
  - Microcomputers
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  - CIM - Product Engineering*
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• Liberal Arts	AA/AS	All
• Associate in General Studies	AGS	All
<b>Preprofessional</b>		
Accounting	AA or AS	All
Architecture	AA or AS	All
Business Administration	AA or AS	All
Chiropractic	AA or AS	All
Computer Science	AA or AS	All
Dentistry	AA or AS	All
Education	AA or AS	All
Engineering	AA or AS	All
Journalism	AA or AS	All
Law	AA or AS	All
Medicine	AA or AS	All
Mortuary Science	AA or AS	All
Nursing	AA or AS	All
Optometry	AA or AS	All
Pharmacy	AA or AS	All
Physician's Assistant	AA or AS	All
Restaurant Management	AA or AS	All
Social Work	AA or AS	All
Veterinary Medicine	AA or AS	All
<b>Career Education/Vocational Programs</b>		
ASEP - General Motors	AAS	Ankeny
ASSET - Ford	AAS	Ankeny
Accounting Advanced	Certificate	Boone, Urban
Accounting Basic	Certificate	Boone, Urban
Accounting & Bookkeeping	Diploma	Boone, Urban
Accounting Specialist	AAS	Boone, Urban
Accounting Paraprofessional	AS	All except Newton
Accounting Technician	AAS	Boone, Urban
Administrative Support	Certificate	All except Newton
Agri-Business	AAS	Ankeny
Airbrush Art	Certificate	Ankeny
Architectural Drafting	Diploma	Ankeny
Auto Collision Technology	AAS	Ankeny
Paint	Diploma	Ankeny
Metals	Diploma	Ankeny
Auto Mechanics Technology	AAS	Ankeny
Auto Chassis & Power Train	Diploma	Ankeny
Auto Engines & Tune-up	Diploma	Ankeny
BSEP - GM	AAS	Ankeny
Biotechnology	AS	Ankeny
Building Maintenance	Certificate	Ankeny
Building Trades	Diploma	Ankeny
Business & Computers	AS	Boone
Business Administration	AS	All except Newton
Chemical Dependency Counseling	Certificate	Ankeny
Child Development	Diploma	Ankeny
Child Development Associate	AS	Ankeny
CIM- Manufacturing Resource Planning	Certificate	Ankeny
CIM- Product Engineering	Certificate	Ankeny
CIM- Shop Floor Control	Certificate	Ankeny
Clerical Specialist	Certificate	All except Newton
Commercial Art	AAS	Ankeny
Commercial Horticulture	AAS	Ankeny
Computer Aided Design Technology	Diploma	Ankeny
Computer Aided Design Technology	AAS	Ankeny
Computer Languages	Certificate	Ankeny
Computer Programming	AAS	Ankeny
Conditioned Air	Diploma	Ankeny
Criminal Justice	AA or AS	Ankeny
Culinary Arts	AAS	Ankeny
Data Entry I	Certificate	All except Newton
Data Entry II	Certificate	All except Newton
Dental Assistant	Diploma	Ankeny
Dental Hygiene	AAS	Ankeny
Diemaking (See Tool & Diemaking)	Diploma	Ankeny
Diesel Technology	AAS	Ankeny
Diesel Technology	Diploma	Ankeny
Dietary Manager	Certificate	Ankeny
Electronics Maintenance	AAS	Ankeny
Emergency Med Tech Basic	Certificate	Ankeny
Fashion	Certificate	Ankeny
Fashion Merchandising & Design	AAS	Ankeny
Fashion Merchandising & Design	Diploma	Ankeny
Fire Science Technology	AS	Ankeny

Program	Award	Campus
Fire Specialist	Certificate	Ankeny
Graphic Arts	Certificate	Ankeny
Graphic Arts	Diploma	Ankeny
Graphic Arts	AAS	Ankeny
Health Care Administration	AS	Ankeny
High Tech Electronics-Biomedical	Certificate	Ankeny
High Tech - Biomedical	AAS	Ankeny
High Tech - Computers	AAS	Ankeny
High Tech - Robotics/Automation	AAS	Ankeny
Hospitality Business	Diploma	Ankeny
Hotel & Restaurant Management	AAS	Ankeny
Human Services	AS	Ankeny, Urban
Insurance Sales	Certificate	Ankeny
Job Shop Machinist	Diploma	Ankeny
(see Tool & Diemaking)		
Legal Administrative Assistant	AAS	Urban
(see Secretarial Careers)		
Legal Assistant	AS	Urban
Legal Assistant	Certificate	Urban
Leisure Studies - Holistic Wellness	AS	Boone
Leisure Studies - Rec Leadership	AS	Boone
Long Term Care Administrator	Certificate	Ankeny
Management	Certificate	Ankeny
Management	AAS	Ankeny
Marketing	AAS	Ankeny
Medical Assistant	Diploma	Ankeny
Medical Laboratory Technology	AAS	Ankeny
Medical Office Technology	AAS	Ankeny
Medical Office Technology	Diploma	Ankeny
(see Secretarial Careers)		
Medical Transcriptionist	Certificate	Ankeny
Microcomputers	Certificate	Ankeny
Microcomputer Application	Certificate	All except Newton
Nursing - Advanced Standing	AAS	Ankeny, Boone
Nursing - Associate Degree	AAS	Ankeny, Boone, (Carroll Terms 1-2-3)
Nursing - Practical	Diploma	Ankeny, Boone, Carroll
Office Technology	AAS	All except Newton
Office Technology	Diploma	All except Newton
Phlebotomy	Certificate	Ankeny
Production Art	Certificate	Ankeny
Purchasing Management	Certificate	Ankeny
Purchasing Management, Advanced -	Certificate	Ankeny
Quality Technician	Certificate	Ankeny
Quality Technician	Diploma	Ankeny
Quality Technician	AAS	Ankeny
Real Estate Sales	Certificate	Ankeny
Residential Care Facility Adm.	Certificate	Ankeny
Respiratory Therapy	AAS	Ankeny
Retailing	Certificate	Ankeny
Retail Merchandising	Diploma	Ankeny
Sales	Certificate	Ankeny
Sales & Management	Diploma	Ankeny
<b>Secretarial Careers</b>		
Legal Administrative Assistant	AAS	Urban
Medical Office Technology	Diploma	Ankeny
Medical Office Technology	AAS	Ankeny
Office Technology	Diploma	All except Newton
Office Technology	AAS	All except Newton
Small Business	Certificate	Ankeny
Small Business Management	Diploma	Ankeny
Supervision	Certificate	Ankeny
Technical Management	Certificate	Ankeny
Telecommunications Technology	AAS	Ankeny
Tool & Diemaking	AAS	Ankeny
Travel Personnel	Certificate	Ankeny
Upholstery	Diploma	Ankeny
Upholstery I	Certificate	Ankeny
Upholstery II	Certificate	Ankeny
Upholstery III	Certificate	Ankeny
Welding	Diploma	Ankeny
Welding - Oxy-acetylene Welding	Certificate	Ankeny
Welding - Shielded Metal Arc Welding	Certificate	Ankeny
Welding - Gas Metal Arc Welding	Certificate	Ankeny
Welding - Gas Tungsten Arc Welding	Certificate	Ankeny
Welding - Blueprint Reading	Certificate	Ankeny
Welding - Structural Welding	Certificate	Ankeny
Welding - Pipe Welding	Certificate	Ankeny
Word Processing	Certificate	All except Newton

# Profile of DMACC

This section contains information on . . .

History  
Philosophy and Purpose  
Accreditation  
The Campuses

## Ankeny Campus

2006 South Ankeny Boulevard  
Ankeny, Iowa 50021  
515-964-6200 or, toll-free in Iowa 800-362-2127, FAX: 515-964-6391

## Boone Campus

1125 Hancock Drive  
Boone, Iowa 50036  
515-432-7203, FAX: 515-432-6311

## Carroll Campus

906 N. Grant Road  
Carroll, Iowa 51401  
712-792-1755 or, toll-free in Iowa 800-622-3334, FAX: 712-792-6358

## Newton Polytechnic

600 N. 2nd Avenue W.  
Newton, Iowa 50208  
515-791-3622, FAX: 515-791-1728

## Urban Campus

1100 7th Street  
Des Moines, Iowa 50314  
515-244-4226, FAX: 515-248-7253

## Board of Directors

- Harold Belken
- Dale Froehlich
- Richard Johnson
- Anita Micich
- Naomi Neu
- Jerry Pecinovsky
- Dr. Wayne Rouse
- Doug Shull, President
- Madelyn Tursi

Des Moines Area Community College is a publicly supported community college serving the Iowa counties of Merged Area XI. The College is accredited by North Central Association of Colleges and Secondary Schools and is approved by the Iowa Department of Education.

The Des Moines Area Community College Catalog is a general catalog of information regarding fees, curricula, and related policies and procedures. Every effort has been made to make the catalog accurate as of the date of publication, however, the catalog is not intended to be a complete statement of all procedures, policies, rules, and regulations. The college reserves the right to change without notice, at any time, by appropriate action, any academic or other requirement, course offerings, content, program, procedures, rules, regulations, and fees.



Joseph A. Borgen, President  
Des Moines Area Community College

Des Moines Area Community College does not discriminate on the basis of sex, race, age, handicap, religion, or national origin in its educational programs, activities, employment practices, or admission procedures. Individuals who believe they have been discriminated against may file a complaint through the College Discrimination Complaint Procedure. Complaint forms may be obtained from the Human Resources Department, the campus Dean's office, or the EEO/AA Coordinator. Persons who wish additional information or assistance may contact the EEO/AA Coordinator, Dr. Fred D. Gilbert, Jr., Vice President, Research and Development, Commons, (Bldg. 22, 964-6431.)

## History

Des Moines Area Community College is a publicly supported two year institution serving the Des Moines metropolitan area and surrounding counties. The College District includes all or major portions of Audubon, Boone, Carroll, Dallas, Guthrie, Jasper, Madison, Marion, Polk, Story and Warren counties and minor parts of 11 adjacent counties. It encompasses 6,560 square miles or about 11 percent of the land area of the state. Approximately 20 percent of the state's population resides within the district.

Des Moines Area Community College was officially created March 18, 1966, and was designated as Merged Area XI. A nine member Board of Directors was elected and formally installed that same year.

The College was established after extensive studies had indicated the need for such an institution. Leading figures throughout the College's District combined their talents and resources to assure proper planning for the College.

In 1968, the Board of Directors adopted Des Moines Area Community College as the official name of the institution. The first classes were held at the new Ankeny Campus location in

## Welcome

Des Moines Area Community College has become an integral part of our State's business and industry community. We have done so as a result of the important role we play in preparing Iowans for meaningful employment through providing comprehensive liberal arts curricula and career education.

We believe, however, that our job goes beyond the simple offering of good classroom instruction and learning experiences. We urge you to actively participate in the clubs, student activities, the Student Action Board, and other worthwhile college organizations at DMACC. In so doing, you are truly exercising your prerogatives as a student to get as much from your college experience as possible.

We want you to have an enjoyable learning experience and urge you to let us help you build toward your own success.

1968. Administrative and operational control of Boone Junior College was assumed in 1969 and Carroll Campus in Carroll, Iowa was initiated in 1979. The Urban Campus began operation in metropolitan Des Moines in 1972, and a new facility was constructed at Seventh and Laurel in 1980. The first classes were held in the fall of 1993 at Newton Polytechnic as a result of the cooperative effort of the Maytag Corporation, Iowa State University, the City of Newton, and the DMACC Foundation.

Paul Lowery was the first superintendent/president of the College, and was succeeded by Dr. Joseph A. Borgen in 1981.

## Philosophy and Purpose

It is the mission of Des Moines Area Community College to offer quality programs and courses to meet the different community interests, student abilities and personal objectives of citizens of all ages and levels of education, for the purpose of improving the quality of life, the economic conditions, and the public welfare of our state.

Therefore, the Board of Directors, faculty and staff are committed to provide, on a non-discriminatory, open-door basis, a variety of educational options.

### DMACC exists to:

- prepare or retrain students for employment and advancement in their chosen occupation through career education.
- prepare or retrain students for employment and advancement through occupationally-oriented associate degree programs.
- assist students to become active, responsible citizens in our democratic society through a program of practical education.
- provide effective assistance to students in exploring their interests, identifying their aptitudes, and selecting the programs of study which best meet their needs and interests.



# Profile of DMACC

- provide counseling and other support services which improve a student's chances for success in their educational endeavors.
- provide learning experiences and cocurricular activities which promote personal, social, academic, and vocational development of students.
- prepare students for transfer, typically as juniors, to four-year colleges and universities.
- provide placement services for all students seeking full time or part-time employment.
- provide opportunities for adults to complete their high school education.
- provide off campus adult and continuing education programs as needs and interests are expressed.

## Accreditation

Des Moines Area Community College is accredited by the North Central Association of Colleges and Schools, 30 N LaSalle St., Suite 2400, Chicago, IL 60602-2504. The College is also approved by the Iowa State Department of Education and the Iowa Board of Regents. College transfer curricula meet the requirements of four-year colleges and universities. Both career option and college transfer curricula carry the approval of the United States Department of Education and are approved for veterans.

The College also holds membership in the American Association of Community and Colleges.

## The Campuses

Ankeny Campus is located on a 304 acre site six miles north of Des Moines within the city limits of Ankeny. The campus is easily accessible from both interstates 35 and 80. A directory of campus facilities is located at each entrance.

Boone Campus is located on a 37-acre site at the southeast edge of the city of Boone. Constructed in 1968, the campus is comprised of two buildings, the academic building which includes a 250 seat auditorium, and the physical education building.

The Carroll Campus facility is located on a nine-acre site at 906 North Grant Road in the city of Carroll. The Carroll Campus was started in 1979.

Urban Campus is located on a six-acre site north of I-235 at 7th and Laurel in Des Moines.

Newton Polytechnic is located at 600 N. 2nd Ave., West in Newton and began operation in the fall of 1993.

Credit classes have been offered on the basis of need in other locations throughout the area. Community services and continuing education classes are offered in many additional communities within the College District.

Evening/Weekend College provides support services for the evening and Saturday classes at Ankeny Campus. The mission of this unit is to assist the adjunct faculty and students.

## Academic Calendar 1996-1997 (tentative)

### Fall Semester - September, 1996

August 28, 1996.....	Fall Semester Begins (first day of classes)
September 2, 1996 .....	Labor Day Holiday - No Classes - Offices Closed
October 1, 1996.....	Application Deadline for Fall Graduates
October 22, 1996.....	MIDTERM
November 6, 1996.....	Last Day to Withdraw From Classes
November 28-29, 1996.....	Thanksgiving Holiday - No Classes - Offices Closed
December 17, 1996.....	Last Day of Fall Semester
December 23, 1996 to January 1, 1997	Christmas and New Year's Holidays - Offices Closed

### Spring Semester - January, 1997

January 13, 1997 .....	Spring Semester Begins (first day of classes)
January 20, 1997 .....	Martin Luther King Holiday - Offices Closed
February 1, 1997 .....	Application deadline for Spring and Summer Graduates
March 7, 1997 .....	President's Day - No Classes - Offices Closed
March 10, 1997 .....	MIDTERM
March 24-28, 1997 .....	Spring Break - No Classes - Offices Open
April 1, 1997 .....	Last Day to Withdraw From Classes
May 8, 1997 .....	Last Day of Spring Semester
May 8, 1997 (tentative) .....	7:00 p.m. Ankeny/Urban/Newton Graduation
May 9, 1997 (tentative) .....	10:00 a.m. Boone Graduation

### Summer Semester - June, 1997

May 26, 1997 .....	Memorial Day Holiday - Offices Closed
June 2, 1997 .....	Summer Semester Begins (first day of classes)
July 4, 1997 .....	Independence Day Holiday - No Classes - Offices Closed
July 7, 1997 .....	MIDTERM
July 9, 1997 .....	Last Day to Withdraw From Classes
August 12, 1997 .....	Last Day of Summer Semester

## Important Phone Numbers

**General College Information** ..... 515-964-1000

Admissions .....	515-964-6495
Alumni .....	515-964-6376
Bookstore (Ankeny) .....	515-964-6302

### College Information Centers

Ankeny .....	515-964-6241
Boone .....	515-432-7203
Carroll .....	712-792-1755
Newton .....	515-791-3622
Urban .....	515-244-4226

Continuing Education .....	515-964-6404
Advising & Placement .....	515-964-6246
Credentials/Evaluation .....	515-964-6647
Day Care Services .....	515-964-6238
Economic Development .....	515-964-6397
Evening/Weekend College .....	515-964-6286
Financial Aid .....	515-964-6282
GED .....	515-964-6384
Disabled Student Services .....	515-964-6268
Security .....	515-964-6259
Security Cellular Phone .....	515-964-6500

### Housing

Ankeny .....	515-964-6347
Boone .....	515-432-7203

Iowa College Aid Commission 515-281-3501  
Job Placement .....

515-964-6215

### Academic Achievement Centers

Ankeny .....	515-964-6255
Boone .....	515-432-7203
Carroll .....	712-792-1755
Urban .....	515-248-7204

Library (Ankeny) .....	515-964-6317
Nurse (Ankeny) .....	515-964-6352
Student Accounts .....	515-964-6446
Student Records .....	515-964-6224
Veterans' Services .....	515-964-6284
Vocational Rehabilitation .....	515-964-6366

### Toll-Free

Ankeny & Boone .....	1-800-362-2127
Carroll .....	1-800-622-3334

# Admissions Policies

This section contains information on ...

## Admissions Requirements & Procedures

- New Students
- Assessment
- Readmission
- International Students
- High School Students
- Post Secondary Enrollment Options Act
- Tech Prep
- Proficiency Examinations
- Guest Students
- Residency Requirement
- Tuition and Fees

Des Moines Area Community College is dedicated to assisting individuals in reaching their educational and vocational goals. Admission is based upon an open door policy. The college accepts any high school graduate (or equivalent) who seeks general admission. Enrollment in programs and selected courses, however, may depend upon basic skill levels and/or available space.

With the "rolling admissions process," acceptance of an applicant is granted as soon as all admissions procedures and requirements have been completed. If a program is at capacity enrollment, eligible applicants will be placed on standby status until an enrollment opportunity exists.

Each program establishes the minimum entrance requirements for applicants. Proficiency in reading, writing and/or mathematics may be required for enrollment in selected courses within a program.

Prospective students may apply at any time after the completion of their junior year in high school. Consideration will be given to admitting high school age individuals with their school's cooperation. Credit for work completed at other colleges will be accepted to the extent that it is compatible with DMACC curricula and grade point policies.

## Admissions Requirements and Procedures

### New Students

Admissions materials are to be submitted to:  
DMACC Admissions Office  
2006 South Ankeny Boulevard  
Ankeny, Iowa 50021

#### Application steps:

1. Submission of a completed DMACC "Application for Admission."
2. Submission of high school transcript or GED scores.

3. Completion of required assessment. (As per notification after completing steps #1 and #2.)
4. Completion of any other program or course prerequisites for the specific program for which application has been made.

An applicant is to declare his/her program/major on the "Application for Admission." Undecided applicants are to contact the Counseling and Advising Office.

After completion of steps 1-4 (above), applicants are notified of their status. DMACC accepts students for most programs on a first come, first serve basis. If a program is filled at the time of completion of steps 1-4 (above), the applicant is notified that he/she has been placed on a stand-by status.

### Guidelines for Required Assessment

DMACC requires assessment of all new students registering for seven (7) credit hours or more per semester. This assessment provides information about students' academic skills in reading, writing and mathematics. Assessment information is then used in course selection and schedule planning.

Options (only one option is required) for completing the assessment requirement:

1. **Attend a SUCCESS Seminar.** During the SUCCESS seminar, the ASSET test in math, reading and writing is given to students who do not qualify under options 2 or 3.
2. **Submit ACT Scores.** ACT scores of 19 or above in reading, math and English can be used to meet DMACC's assessment requirement. ACT scores must be mailed to the Admissions Processing office. If the ACT scores are more than three (3) years old, it is recommended that students complete Option 1—attend a SUCCESS Seminar.
3. **Provide Evidence of Successful College Experience.** An official college transcript, from each prior college attended, must be mailed to the Admissions Processing office. The following criteria are used to grant assessment waivers:

Writing - grade of C or higher in a college-level writing course.

Reading - grade of C or higher in 6 hours of college-level academic course work such as psychology, sociology, economics, etc., and/or vocational technical course work requiring comparable reading skills.

Math - grade of C or higher in a college-level mathematics course.

If college experience is older than five (5) years, students are strongly encouraged to take the ASSET test.

Students planning to enroll for less than seven credits are encouraged to:

- complete a mathematics assessment before enrolling for a math class or a class with a math prerequisite.
- complete a writing assessment before enrolling for a writing class.
- complete a reading assessment before enrolling for a third credit class.

#### Ankeny

515-964-6574 or 1-800-362-2127, ext 6574

#### Boone

515-432-7203 or 1-800-362-2127, ext 6304

#### Carroll

712-792-1755 or 1-800-622-3334

#### Newton

515-791-3622 or 1-800-362-2127

#### Urban

515-248-7201 or 1-800-362-2127, ext. 7201

If you need to attend a SUCCESS Seminar, call now to make a reservation. If you need to take the ASSET tests with an accommodation because of a disability, you will need to provide documentation of the disability and make arrangements with the testing center on the campus you plan to attend.

### Readmission

Students who have withdrawn and who wish to be readmitted should apply to the Student Records and Enrollment Services Office.

### International Students

International applicants requesting admission must:

1. Submit a completed application for admission to the college.
2. Submit a completed and notarized statement of Financial Support to show evidence of ability to meet educational and living expenses while attending the college.
3. Provide official evidence of the English proficiency required by the college by sending one of the following:
  - A. OFFICIAL TOEFL score (Test of English as a Foreign Language/offered worldwide). A score of 500 is required to enroll in credit classes. The DMACC code is #6177.
  - B. MICHIGAN Test score (administered at American institutions worldwide, and at the Academic Achievement Center at DMACC). A score of 80 is required to enroll in credit classes.
  - C. Official transcript showing completion of Freshman level English at an accredited U.S. college or university.
4. Submit an International Student Data sheet.
5. Make a deposit of \$2,000 (U.S. dollars) for the first semester, to cover admission and educational costs while attending the college.

# Admissions Policies

- International students desiring to transfer credit from another institution and submitting an official transcript from that institution in a language other than English must also submit an English translation of this transcript.

Other conditions are similar to those of American students. Upon acceptance and payment of the Processing fees, the College will issue an I-20 (Certificate of Eligibility for Non-Immigrant "F-1" student status) which must be submitted for approval to the U.S. Immigration and Naturalization Service.

Tuition for International Students is assessed at the non-resident rate. Information and forms can be obtained by contacting the International Student Office on the Ankeny Campus.

## High School Students

The College offers the opportunity for high school age students to enroll in credit classes. Students interested in enrolling in credit classes should note the following guidelines:

- High school age students may enroll in college credit classes if the approval, testing, and other requirements outlined below have been met.
- High school age student enrollees will be required to meet the same academic standards as any other students and will be awarded the same credit for courses successfully completed.
- High school age students who are "home schooled" will be required to meet the same academic standards as any other students and will be awarded the same credit for courses successfully completed.
- This procedure does not apply to high school age students enrolling under the Post Secondary Enrollment Options Act, Tech-Prep or any special contractual agreements.

High school applicants requesting admissions must:

- Submit a completed "Application for Admissions"
- Submit written approval from:
  - a high school principal or counselor (except home schooled) and
  - a parent or legal guardian
- If the high school student is less than junior status, the following must also occur:
  - ASSET or ACT testing (score of 19 or above in Reading, Math and English). Course placement will be mandatory. Students not meeting minimum standards will not be allowed to enroll.
  - A DMACC Counselor/Advisor must approve the course selection/registration.

- The student is limited to no more than two credit courses per term.

## Post Secondary Enrollment Options Act

Eligible high school students may be accepted for admission to DMACC under Iowa's Postsecondary Enrollment Options Act. Approval by the high school is mandatory before any high school student may be accepted under this program. If approved and accepted, the high school pays up to \$250 per course of the cost of tuition, fees, books, materials and supplies. Students enrolled under this program take DMACC classes and credit is earned as DMACC credit.

## Tech Prep (high school articulated courses)

DMACC has entered into specific course joint enrollment agreements with some of the high schools in the merged area. These courses are offered in the high schools under curriculum guidelines jointly approved by DMACC and the high school. Credit earned throughout these joint agreements is recorded as articulated credit.

Articulated credit is recorded on the student's permanent record after the student has applied for admission, paid the processing fee, earned 12 credits at DMACC.

## Proficiency Examinations

Under certain conditions high school age students may earn college credit through the College Level Examination Program (CLEP), through the Advanced Placement (AP) program, or DMACC's Challenge Testing program.

Information concerning any of the above programs is available at Ankeny Campus Student Records Office or the Student Services Offices on the Boone, Carroll, Newton and Urban campuses.

## Guest Students

Students who have been accepted for admission to another college/university or whose primary enrollment is at another college may enroll as a "guest student" at DMACC. "Guest student" status can not be claimed for two consecutive terms. Students must submit proof of acceptance at their primary college at the time of registration.

## Residency Requirements

A student shall be considered a resident of Iowa for tuition and fee purposes if he/she is permanently domiciled in Iowa and has resided in the state for a period of not less than ninety (90) days prior to the start of the term in which the student will be attending. When residency is in question, the burden of proof of domicile is the responsibility of the student.

To apply for reclassification from nonresident to resident status, the student shall com-

plete the "Request for Residency Status" form along with supplying a copy of their voter registration card or permanent resident alien registration card. These documents must be submitted to the Student Records and Enrollment Services Office prior to the beginning of the term in which the student is seeking approval. Two additional documents that are dated 90 days prior to the start of the term that include the student's name and Iowa address are also required. Examples are as follows:

- rent receipts
- tax receipts
- ownership of property
- Iowa income tax return
- Iowa vehicle registration
- Iowa drivers license
- other similar documents

Reclassification of residency status is not retroactive. International students cannot establish residency while studying in this country on a temporary visa.

If a student has a question regarding the requirements for residency status or their specific classification, they are encouraged to contact the Student Records/Services office at (515)-964-6320.

**Des Moines Area Community College shall not illegally discriminate on the basis of race, color, national origin, creed, religion, sex, age, disability veteran or Vietnam era veteran status.**

**Persons with disabilities are encouraged to attend and participate in all classes, activities and events sponsored by or held at Des Moines Area Community College. If you are a person with a disability who requires reasonable accommodation, please contact the DMACC Information Center at (515)964-6241 as soon as possible but no later than one full business day in advance.**

# Admissions Policies

## Tuition and Fees

### Resident Student Tuition Rate for Credit Offerings

Full or part-time enrollment (per credit) .....	\$ 49.00
Audit (per credit) .....	\$ 49.00
Career Supplemental non-credit courses (per contact hour) .....	\$ 3.20
Continuing and General Adult Ed - Local schools (per contact hour) .....	\$ 2.00

### English as a Second Language

Level 1 (per course) .....	\$ 0.00
Level 2-4 (per course) .....	\$ 65.00
Level 5-6 (per course) .....	\$ 75.00
High School - Diploma (per course) .....	\$ 75.00
- Correspondence fee .....	\$ 75.00

*Non-resident tuition is 200% of resident rate*

## Fees

Service fee (per credit) .....	\$ 6.40
Service fee - non credit courses (per contact hour) .....	\$ .20
Music fee (piano/instrumental per course) .....	\$100.00
Correspondence course fee .....	\$ 15.00

## Transcript Fee

Overnight request .....	\$ 1.00
On demand request .....	\$ 3.00
FAX requests .....	\$ 5.00
Convenience fee (TV classes - per course) .....	\$ 30.00
Lab fees for Advanced Technology Center and computer application courses (per course) .....	\$ 10.00 to \$100.00
Deferred payment fee .....	\$ 25.00
International student processing fee .....	\$100.00
GED - Testing/Diploma fee .....	\$ 30.00
- Instruction fee .....	\$ 50.00

*All fees are non-refundable. Des Moines Area Community College reserves the right to change tuition and fees.*

This section contains information on . . .

## Registration Procedures

- New Students
- Returning Students
- Part-time Students

## Cross-enrollment

## Student Accounts

- Indebtedness Policy
- Tuition Refund Policies
- Refund Schedule
- Tuition and Tuition Related Fees
- Refund/Repayment Example
- Financial Aid Recipients
- Payment of Charges

## Registration Procedures

### New Students

Registration for all new full time students (12 credits or more) is scheduled by the Student Development Office. New students who have been accepted for admission **will be notified** when to report for registration. Counselors and advisors will be available to assist in the registration process.

### Returning Students

Registration for returning full time Career Education students (12 credits or more) is scheduled by the Registrar's Office. Counselors and advisors will assist with the registration process on scheduled days. If a student does not attend his/her assigned registration date, he/she should contact the program counselor or advisor to schedule another time.

Returning full time Arts and Science students (12 credits or more) are assigned registration dates according to the number of DMACC credits earned plus accepted transfer credits. Dates are posted in the registration schedule, or contact the Student Development Office. Returning students who do not register on their assigned day can register any day thereafter.

### Part-time Students

Part-time students may register in person, via telephone, mail in or FAX. Dates for registration services are listed in the registration schedules or contact the Student Development Office.

### Cross-enrollment

Under a special agreement through the Des Moines Higher Education Consortium, a limited number of students may enroll in one class at Drake University or Grand View College fall or spring semester at no additional charge provided they are taking at least 12 semester hours at DMACC. Upon completion of the course earned credit will be added to the DMACC transcript as a Transfer Credit (TRF). Students interested in cross-enrollment should contact the Student Records office.

## Student Accounts

### Indebtedness Policy

A student who has tuition and fees owed to the college may not register while the indebtedness remains. During this period the student's transcript will not be released and graduation awards will not be conferred.

### Tuition Refund Policies

#### Tuition Refund Policy for Credit Classes

Students that complete formal withdrawal/drop procedures may be eligible for a percentage refund of tuition/fees. See individual term Credit Class Schedules for refund percentages.

The amount of refund will be determined by the number of credits dropped and the number of term weeks that have elapsed at the date of withdrawal or drop.

Refunds for other than the normal term length classes will be pro-rated accordingly.

Full refunds will be made on withdrawals prior to the start of classes and in cases where classes are cancelled due to insufficient enrollment. Students are not required to complete class drop forms when classes are cancelled by the College.

### Refund Schedule

Returning Students (previously registered at DMACC for one or more classes):

#### Tuition and Tuition Related Fees

Week 1 .....	90%
Week 2 .....	75%
Week 3 .....	50%
Week 4 - 8 .....	25%

First Time Students (not previously registered at DMACC for one or more credit classes):

#### Tuition and Tuition Related Fees

Week 1 .....	90%
Week 2 & 3 .....	80%
Week 4 .....	70%
Week 5 & 6 .....	60%
Week 7 & 8 .....	50%
Week 9 .....	40%
Week 10 .....	30%

*Note: Student with classes other than the normal 15 week term will receive refunds pro-rated accordingly.*

### Financial Aid Recipients

If any amount of tuition is paid by a Title IV Program and the student withdraws during the established refund period, the Title IV programs will be refunded in the following order: Unsubsidized Federal Direct Loan, Subsidized Federal Direct Loan Federal Perkins Loan, Federal Pell Grant Federal, SEOG, other federal, state, private or institutional, student. Pro-rata refunds must be given to all first time students who have not completed 60% of an enrollment period for which they have been charged.

## Refund /Repayment Examples

### Example 1.

#### New Student - Pro-Rata Refund

Carol is a first year student at DMACC (not previously registered for one or more credit classes). She enrolls full-time in the Fall term. Due to health problems, she withdraws from classes during the second week of the term. At this time the following aid has been credited to her account and the remaining balance issued to her.

Federal Pell Grant .....	\$1,170.00
DMACC Grant .....	\$ 150.00
Total .....	\$1,320.00

Carol's tuition for the term was \$664.80. She received \$655.20 cash back. If a student withdraws the second week of classes, the school retains 20% of the tuition and fees or \$132.96: 80% (\$531.84) is credited back to the Pell Program.

All non-institutional living expenses are prorated based on the number of weeks the student completed during the semester.

Carol's room, board, books, transportation, and personal expenses for two weeks total \$490.00. (Total term \$3,676/15 weeks in term X2). She received \$655.20 cash back for these expenses for the term, therefore, the difference of \$165.00 must be repaid to the Federal Pell Program.

### Example 2.

#### Returning Student

James has previously attended DMACC. He enrolls full-time in the Fall. Due to family problems, he withdraws from classes during the second week of the term. At this time the following aid has been credited to his account and the remaining balance issued to him:

Federal Pell Grant .....	\$1,170.00
DMACC Grant .....	\$ 150.00
Direct Loan .....	\$1,260.00
Total .....	\$2,580.00

James's tuition for the term was \$664.80. He receives \$1,915.20 cash back. If a student withdraws the second week of class, the school retains 25% of the tuition and fees or \$166.00: 75% (\$498.60) is credited back to the Direct Loan Program.

All non-institutional living expenses are pro-rated based on the number of weeks the student completed during the semester.

James's room, board, books, transportation, and personal expenses for two weeks total \$490.00. (Total term \$3,676/15 weeks in term X 2). He received \$1,915.20 cash back for these expenses for the term. \$1,260 of the proceeds were from the Direct Loan, which must be repaid after the 6 month

# Registration

grace period expires and is not counted in the repayment calculation. This leaves a difference therefore, of \$165.20 which must be repaid to the Federal Pell Program.

## Payment of Charges

Students are responsible for complete payment of tuition and fees by the published due date. In the event that the entire amount cannot be paid, installment payments for credit classes are available in the Student Accounts Office. An additional fee of \$25.00 is payable at the time an installment plan is approved. **Failure to make complete payment or installment payment arrangements will result in cancellation of registration.** Payments are **not** deferred pending processing of V.A. records and/or checks.

Payment may be made by cash, check (for amount of charges only), MasterCard, or VISA. Two-party checks will not be accepted.

*This section contains information on . . .  
Free Application for Federal Student Aid  
Grants & Scholarships  
Loans  
Employment  
Satisfactory Academic Progress*

All financial assistance available to DMACC students is administered by the Ankeny Campus Financial Aid Office. Students may receive assistance in the form of scholarships, grants, loans, and/or part-time employment. Some Specialist Certificates are not eligible for Federal or State Financial Aid.

## Free Application for Federal Student Aid

**How to Apply:** One application is all it takes. Applications are available at all campuses.

**When to Apply:** Priority consideration will be given students who apply by March 1 prior to the fall term. It is necessary to reapply each year.

## Grants & Scholarships

**Federal Pell Grants** are based on financial need and are available if you have applied, show financial need and are an undergraduate enrolled at least half time. Contact the Financial Aid Office regarding your eligibility.

**Federal Supplemental Education Opportunity Grants (SEOG):** SEOG is available if you have completed an application, show financial need and are an undergraduate enrolled at least half time. The maximum amount is \$500 for a full-time student.

**Iowa Vocational-Technical Grant (IVT):** IVT is available for students enrolled full-time in a vocational-technical program. IVT awards are made by the Iowa College Student Aid Commission through notification to DMACC. The maximum amount is \$600.

**Iowa Grant:** is available to students enrolled at least half time, that have applied for financial aid and show exceptional need. The maximum amount offered is \$1,000.

**State of Iowa Scholarship Program:** To be considered a state scholar recipient, a student must: (1) be a designated State of Iowa Scholar, (2) be entering as a freshman at DMACC, and (3) plan to enroll full-time. See your high school counselor for assistance. The maximum amount is \$400.

**DMACC Foundation Scholarships and Grants:** The DMACC Foundation provides scholarship and financial grant assistance to DMACC students through contributions from various agencies, businesses, corporations, organizations and individuals. Awards may have specific criteria for eligibility. For information and application forms, contact the

Financial Aid Office, Building 1, Ankeny Campus, or the Business Offices at the Boone, Carroll, Newton, and Urban Campuses.

**DMACC Alumni Association Scholarships and Grants:** DMACC's Alumni Association annually awards scholarships to outstanding DMACC students and financial grants to students with financial need. These awards are made possible through special alumni fund-raising activities and gifts to the Association for this purpose. Contact the Alumni Office for more information.

**Miscellaneous Scholarships:** Scholarships available from off-campus sources are posted on the Financial Aid bulletin board and notices are advertised in the student newspaper.

## Loans

**Federal Perkins Student Loans (formerly NDSL):** To be eligible you need to attend DMACC half time and show financial need. These loans are made through DMACC's Financial Aid Office. Repayment and interest (5 percent) begin after a student is no longer enrolled half time. The maximum award is \$1,500 yearly for a full-time student. Entrance and exit interviews are required.

**Federal Direct Student Loan - Subsidized and Unsubsidized (formerly Stafford Student Loan):** These are need based, variable interest rate loans available to assist students with educational costs. Students must complete a financial aid application and be enrolled at least half time to apply for a loan. The government pays the interest on the subsidized loan during enrollment and 6 month grace period. The student pays all interest after receiving the unsubsidized loan. Repayment for both loans begins six months after terminating enrollment or dropping to less than half time. For dependent students, the subsidized/unsubsidized Direct Loan amounts are \$2625 for freshmen and \$3500 for sophomores. For independent students, the subsidized/unsubsidized Direct Loan amounts are \$6625 for freshmen and \$7500 for sophomores. Loan funds cannot be released until 30 days after term starts if the student is a first-time borrower. Entrance and exit interviews are required.

**Federal Direct Parent Loans for Undergraduate Students (PLUS):** A PLUS loan is a variable interest rate loan available to parents of dependent students. Students must be enrolled at least half time. The parent can borrow the cost of the dependent student's education minus any financial aid the student receives. Parents apply through the Financial Aid Office.

**Emergency Student Loan Fund:** Seventy-five dollars is available to a student enrolled half time or more, has earned a cumulative grade point average of 2.0 or greater. These loans are interest free. Payment in full is due within four weeks from the date of the loan.

**Budget Allowances:** In addition to tuition and fees, allowances are made for room and board, personal expenses, books and supplies, child care and transportation in determining financial need. Transportation costs are based on current Department of Transportation mileage rates.

## Employment

**College Work Study Program (CWSP):** The College Work Study Program is for students who show financial need. To be eligible a student must be an undergraduate enrolled at least half time and show financial need. College work study program is a part-time job at DMACC.

## Satisfactory Academic Progress

Federal regulations require that students maintain satisfactory academic progress in the course study they are pursuing in order to receive financial aid. At DMACC, a student must earn and maintain a minimum cumulative grade point average of 2.00. The student must also earn a minimum number of credits a year to continue receiving aid. A more detailed brochure is available at the Financial Aid Office.

# Student Services

*This section contains information on...*

*Academic Achievement Centers  
Developmental Studies Program  
Tutoring Program  
Assessment Centers  
Services for Students with Disabilities  
Counseling Services  
Academic Advising  
Placement Services  
College Tours  
Libraries  
Food Services  
College Bookstores  
Student Housing  
Parking & Traffic Regulations  
Veterans Educational Benefits  
Health Service (Campus Nurse)  
Student Activities  
Student Centers  
Student Action Board  
Alumni Association  
Student Clubs & Organizations  
Student Publications  
Recreation and Wellness*

- *Intramural*
- *Intercollegiate*
- *Recreational/Wellness Program*
- *Student Records-Confidentiality*
- *College Policies & Procedures*
- *Student Rights & Responsibilities*
- *Student Conduct, Discipline & Appeals*
- *Student Academic Appeals*
- *Child Care*

## Academic Achievement Centers

The Academic Achievement Centers located on each campus are available to all students in the following categories:

1. Full-time and part-time students seeking assistance with college course work, especially in the areas of math, science, English, reading, and study skills.
2. Adults working toward high school completion (GED or adult high school diploma) or completing a program of basic literacy skills (ABE).
3. Students pursuing studies for academic upgrading, prerequisites or enrichment.

Instructors will diagnose academic skill levels, establish individual programs of study, and assist in the learning process. Student progress is set at a pace based on student ability, student interest, needs and time available for learning.

Computer services are also available in the Academic Achievement Centers. These services include various educational and support programs in many areas, and a computer-based educational system (PLATO).

Contact the Academic Achievement Centers at each campus for additional information.

## Developmental Studies Program

Developmental Studies offers a variety of academic and personal support services to help students succeed in reaching their educational and career goals. These services are particularly designed for students who need to strengthen their academic skills before enrolling in college level courses.

Staff is available to counsel and advise these students prior to registration and during their enrollment. Instructional services provided by the program include a career planning course and adaptor courses in reading, writing, mathematics, study skills, and thinking skills. Although credits from the adaptor courses do not count toward a degree or diploma, they do help students fill in any gaps in the skills needed for success in college level courses. Support services in the developmental studies program include tutoring, individualized instruction and homework help offered by the Academic Achievement Centers, assessment of basic skills, vocational interest and academic planning.

## Tutoring Program

The Tutoring Program is offered for all credit students. One-on-one or group tutoring is available free of charge for students having difficulty in course materials. Tutors are required to complete a training program that emphasizes active learning and academic independence. Contact the Tutoring Services Department at the Ankeny Campus or the Student Services Offices at the Boone, Carroll, Newton and Urban Campuses.

## Assessment Centers

Ankeny Campus provides assessment services for current and prospective students. Some of the assessment services available are ASSET testing, diagnostic testing for placement and CLEP testing. Assessment services are also available on the Boone, Carroll, Newton, and Urban Campuses.

## Services for Students with Disabilities

A wide array of services are available for students who have visual, hearing, mobility or learning disabilities. Students who need accommodations in the classroom, assistance in obtaining adaptive equipment, alternative testing arrangements or other support services should contact the Special Needs Counselor, Ankeny Campus or the Counseling and Advising Offices on the Boone, Carroll, Newton and Urban Campuses. A request for accommodation form must be completed and forwarded to the Vice President of Student Services Office on the Ankeny Campus.

Sign language and oral interpreting services for deaf and hearing impaired students are available from career planning through

graduation. For further information or a complete list of services available contact the interpreting office in building 6 room 10 on the Ankeny Campus.

Through a special agreement with the Iowa Division of Vocational Rehabilitation Services, a rehabilitation counselor is assigned to the College on the Ankeny Campus to provide rehabilitation services to eligible disabled students. These services include assistance in obtaining medical evaluations, vocational evaluations, physical restoration, job training, financial aid and job placement.

Facilities constructed by the College have been designed to be accessible for students with mobility impairments.

## Counseling Services

The College provides professional counselors to assist students in career and educational planning and in solving problems of a personal nature. Counselors help students make decisions and plan for a successful future. Counselors are available to help students choose an educational program or career direction, recommend and interpret career tests and inventories, examine mid-career options, discuss anticipated academic difficulties, and develop an appropriate course of study.

Students who experience difficulty or dissatisfaction with their curriculum are encouraged to make use of the counseling services to explore options or an alternative course of action with a counselor. Counselors can also provide assistance with study skills, developing satisfying personal and social relationships, solving financial problems, and getting through a crisis.

Counselor services are available to assist all students including those in evening classes and at off-campus sites. Contact the most convenient campus for further information.

## Academic Advising

Academic advising services are designed to assist students in planning their educational programs, meeting graduation requirements, further developing their academic skills, and using resources of the college to meet their educational needs. Assistance is given in selecting a transfer institution and the articulation of credits. The value of the degree, diploma and certificate programs is explained.

## Placement Services

Placement Services include job listings and referrals for full-time and part-time jobs available in the area; referrals to College workstudy on campus; information concerning summer employment; on campus recruitment and interviews by employers; information about companies and mailing lists of prospective employers; help with resume writing, application letters, interviewing, and job seeking skills.



# Student Services

Individualized placement services are offered to persons identified as special needs students. For specific information contact the Placement Office, Ankeny Campus or the Student Services Offices on the Boone, Carroll, Newton, and Urban Campuses.

## College Tours

College tours are scheduled for groups and/or individuals. Prior arrangements must be made by calling the appropriate campus.

## Libraries

Access to the DMACC library collection is available through the Innovative on-line system. Several periodical indexes are also included with this district-wide service.

### Ankeny Campus

The library at the Ankeny Campus provides print and non-print resource material to students and staff. The library collection of 55,000 volumes relates to the humanities, social sciences, natural and health sciences, business and technology. In addition, the library maintains subscriptions to approximately 600 current periodicals and houses collections of audiovisual materials including videotapes of TV courses. Interlibrary loan service is available at no charge for materials not owned by DMACC students.

### Boone Campus

The Boone Campus Library/Media Center has a collection of approximately 19,000 circulating and reference books, 175 periodical subscriptions, and a variety of audiovisual materials. These include videotapes, records, cassette tapes, slides, and compact discs.

In addition to these resources, the library produces subject searching on a variety of databases included on the EPIC Online Searching Systems and also periodical searching on the InfoTrac CD-ROM workstation.

The Boone Campus Library has been a full subscriber to the Bibliographic Center for Research and OCLC (OnLine Computer Library Center) since May 1989. Membership is also supported in the Polk County Biomedical Consortium and the Iowa Higher Education Instructional Resources Consortium.

### Carroll Campus

The library at Carroll Campus is located in Room 156. A basic reference collection and audiovisual equipment are available for student and faculty use. The library currently subscribes to 65 periodicals. Printed and audiovisual materials can be borrowed on interlibrary loan from other libraries.

### Newton Polytechnic

The Newton Public Library provides supplemental library services to DMACC Newton Polytechnic.

### Urban Campus

The library at Urban Campus is housed in a recently-completed addition to the campus.

The facility provides additional space for the collection of more than 13,000 volumes. In addition, there are rooms housing back-up issues of the 60 periodicals to which the library subscribes; a room containing typewriters and computers for student use; a conference room for small-group study; and a room containing the law library collection. The library also houses the audiovisual equipment for the campus. One-day service on materials provided in the Ankeny Campus library and audiovisual centers is available at the Urban Campus library.

## Food Services

Food services are available at each campus. Each campus provides a variety of sandwiches, salads, beverages, and snack items. For more formal dining, the Culinary Arts students on the Ankeny Campus operate the Bistro.

## College Bookstores

The College bookstores are located at the five DMACC campuses to serve students, faculty and staff.

In addition to course requirements, the bookstores stock supplemental study aids, paper products, office supplies, magazines, calculators, cassette recorders, computer supplies, seasonal and everyday greeting cards, imprinted gift items and up-to-date college fashions.

Hours of operation vary at each campus. Check with each bookstore for more information. During the first two weeks of each semester, hours will be extended to accommodate evening and weekend students. During student breaks all bookstores will close early. Hours will be posted.

A cash register or financial aid receipt is required for a full refund of any textbook within thirty days from the beginning of each semester, as long as the textbook is in the same condition as when purchased. New books that are returned damaged or with markings are eligible for a refund of sixty percent of new book price. Materials purchased with a check require five working days for a cash refund.

Students whose books do not qualify for a refund are encouraged to use our book buyback at the end of each semester. Representatives from wholesale companies may be present at the beginning of the semester and mid-term. Notices will be posted at least four weeks before the end of the semester with all necessary information.

Textbook purchases should be made at the campus location of your class. Students with classes in Des Moines, Urbandale, Indianola, and West Des Moines should purchase their books at the Urban Campus bookstore. Mail order from the Ankeny Campus bookstore is available for other off-campus courses. MasterCard and VISA charge cards are ac-

cepted. A picture I.D. is required when writing a check in the bookstore. Students with prewritten checks from parents must also present a picture I.D. Checks must be written for the amount of purchase only and payable to DMACC or Knowledge Knook Bookstore.

Students receiving financial aid, loans, or grants must pick up voucher in Student Accounts office before purchasing books and supplies.

## Student Housing

Student Housing Apartments are located on the Ankeny Campus. This housing is owned and operated by a private firm. For information about this housing contact Randall Corporation, 303 Welch Ave., Ames, Iowa 50014, (515) 292-5767. Information is also available for this facility as well as other locations near the Ankeny and Urban Campuses from the College Information Center, Building 1, Ankeny Campus.

Information about housing near the Boone and Carroll Campuses is available from the Student Services Offices at the respective campuses.

## Parking and Traffic Regulations

Parking permits are required for all vehicles driven by daytime students on the Ankeny, Boone, Newton and Carroll Campuses. Stickers and Parking Regulations will be provided by the Security Office in Building 12 and the Ankeny Campus Information Desk in Building 1 and the Business Offices on the Boone, Newton, and Carroll Campuses. Evening and Saturday students are not required to register their vehicles unless parked on the campus during daytime hours, Monday through Friday.

Parking permits are required for all vehicles driven on the Urban Campus by students and staff, including evening and Saturday students and staff. Stickers will be provided by the Business Office.

Parking regulations will vary at the Campuses. The registered holder of the parking permit, regardless of who drives or parks the vehicle, is responsible for that motor vehicle.

Parking lots are marked with signs designating areas for students, visitors, disabled, and staff/faculty parking.

## Veterans Educational Benefits

DMACC is an institutional member of Service Members Opportunity Colleges (SOC). The primary function of the Veterans Services Office is to assist students in applying for Veterans Educational Benefits, act as a liaison between the student and the Veterans Administration, and serve as a resource to other DMACC departments and services.

Application for veterans benefits should be completed when applying for admission to the college. It generally takes six to eight weeks for the Veterans Administration to process

# Student Services

claims for benefits so appropriate paperwork should be submitted as early as possible.

At DMACC, career and degree programs are approved for VA benefits. The amount of monthly payment will depend on the number of hours enrolled. Details may be obtained at the Office of Veterans Services, Ankeny Campus, 964-6284 or 1-800-362-2127 extension 6284.

## Health Services

### (Campus Nurse)

The Student Health Services is located on the Ankeny Campus in Building 5 with some services extending to the Boone and Urban Campuses.

The Health Services offers emergency treatment for students and staff who may become ill or injured while on campus. A registered nurse is on duty during student contact days. A physician is available twice weekly on the Ankeny Campus during the fall and spring semesters.

Student Health Insurance is available for both full time and part time students.

Students and staff members are encouraged to stay healthy through preventative measures including blood pressure monitoring, weight control, and wellness activities sponsored by the health services.

Confidential counseling and referral for health related problems is available from the campus nurse.

## Student Activities

Much of a student's growth is the result of participation in activities, clubs and organizations. It is the philosophy of the College that co-curricular activities complement the academic program. The activities are financed by a portion of the service fee which is charged each term in addition to regular tuition. Student representatives elected to the Student Action Boards are responsible for assessment and disbursement of these funds.

## Student Centers

Student lounge and recreation areas are provided for your use during nonclassroom hours. Various types of game equipment are available, and food and beverage facilities are located in or near each of these areas.

## Student Action Board

The Student Action Board, as the primary student representative body, is an integral part of the College. Through its work, you are provided an opportunity to participate in the democratic process. Meetings are held regularly. The Board serves as a liaison between the administration/faculty/staff and the student body in areas of mutual interest. The purposes of the organization are to promote college spirit, provide a focal point for discussions between students and the College staff, and to give you a representative voice

in college affairs. Any student, administrator, or faculty member may attend meetings of the Student Action Board and take part in discussion, but only members may vote. The Board offers to students activities and services in three areas: campus life, professional development and programming.

## Alumni Association

Des Moines Area Community College has an active Alumni Association. Headed by a volunteer Alumni Board of Directors, the Association strives to remain in contact and provide service and benefits to alumni. Through annual fundraising activities, the Association provides scholarships and grants to deserving DMACC students. For more information, contact the Alumni Office.

## Student Clubs and Organizations

You are encouraged to participate in campus clubs and organizations which appeal to your own interests. Students may form a new club by contacting the Student Activities Office for information. Most recognized organizations fall into one of the following classifications:

1. Pre-professional and departmental clubs are joined by students wishing to pursue interests which contribute to the development of career fields.
2. Service organizations have as their primary purpose activities which will contribute positively to the College and the community.
3. Scholastic honorary organizations offer membership on the basis of academic excellence and performance.
4. Special interest organizations are planned by students who desire to develop or broaden their interest in some particular aspect of their lives.

## Student Publications

Students may produce a variety of publications when they enroll in JNAD123 - Publications Production on the Ankeny Campus, including a newspaper and/or semester magazine. On the Boone Campus students publish the "Bear Fact." Publications emphasize news features, entertainment, sports and college events. For additional information, contact the publications advisors at the Ankeny or Boone Campus.

## Recreation and Wellness

Des Moines Area Community College offers well-rounded athletic, intramural and campus recreation programs plus physical education classes at the Boone Campus. Complete details can be obtained from the Recreation Services office on each campus.

## Intramural

Intramural activities provide an opportunity

for students to participate in a wide variety of sports activities on a recreational basis. A variety of sports and recreation equipment is available for check-out. A year-round program of tournaments and team sports provides for participation on an individual or team basis.

## Intercollegiate

Des Moines Area Community College is a member of the National Junior College Conference. Currently, the College offers intercollegiate athletics in basketball, baseball, and softball on the Boone Campus.

## Recreation/Wellness Program

Des Moines Area Community College employees are encouraged to participate in the employee fitness/wellness program. The program promotes employee participation in physical fitness activities and the pursuit of healthy lifestyles. For detailed information contact the Recreation/Wellness office on the Ankeny Campus.

## Student Records-Confidentiality

Des Moines Area Community College complies with the laws of the United States and the State of Iowa in the maintenance of, access to, and release of student records.

No third party access to non-directory information is allowed without the student's written consent, except as allowed by law. At its discretion, the institution may provide Directory Information which is defined as: student name, address, telephone number, date and place of birth, major field of study, dates of attendance, degrees and awards received, most recent previous educational agency or institution attended, participation by the student in officially recognized activities and sports, and weight and height of members of athletic teams.

More detailed information concerning the confidentiality of student information can be obtained by contacting the Enrollment Services Office on the Ankeny Campus.

## College Policies and Procedures

### Student Rights and Responsibilities

#### *Student Responsibility for Catalog Information:*

Each student is responsible for knowledge of the information in this catalog and any published addenda. The official catalog of the College is understood to include this catalog, plus any published addenda. The College reserves the right to change regulations and policies or to revise curricula as may be deemed necessary and desirable. The official College curriculum is that contained in the master curriculum file.

Des Moines Area Community College reserves the right to make changes in the master catalog.

## **Student Conduct, Discipline and Appeals**

Any student, or group of students, failing to observe either the general standards of conduct or any specific regulation adopted by the College, or who acts in a manner not in the best interest of other students or the College, shall be subject to disciplinary action.

If a student wishes to challenge a disciplinary action, he or she may appeal, following the steps outlined in the Student Conduct, Discipline and Appeals Procedure. Separate steps are outlined in the procedure for complaints based upon discrimination.

## **Student Academic Appeals**

Students have the right to appeal any action brought or taken by the College against them which can reasonably be expected to affect their academic status within the college.

If a student wishes to challenge an academic action, he or she may appeal, following the steps outlined in the Student Academic Appeals Procedure. Separate steps are outlined in that procedure for complaints based upon discrimination.

Copies of the procedures are available in the Student Services Offices at the Ankeny, Boone, Carroll, Newton, and Urban Campuses.

## **Child Care**

Child care is available for the children of staff and students on student contact days all three semesters. Children ages 2 - 5 are eligible for child care between 7:00 a.m. and 5:00 p.m. fall and spring terms, 7:30 a.m. to 4:30 p.m. summer term. The Child Care Center is located in Bldg. 9 on the Ankeny Campus. Children must attend on a regularly scheduled basis and there is generally a waiting list. To make application or for more information call 964-6588.

The Zack Hamlett Children's Center, located at 1101 Ninth Street in Des Moines, provides child care for the children of Urban Campus students and staff. The Center is equipped and staffed to meet the diverse needs of the children enrolled. The Center's eligibility requirements are the same as the Ankeny Campus. For enrollment information call 515-242-2022.

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This section contains information on . . .

## *Advanced Standing Credit*

- *Advanced Placement (AP)*
- *College Level Examination Program*
- *Challenge Tests*

## *Independent Study*

## *Retake, Incomplete & Failing Mark Policies*

## *Class Schedule Changes*

- *Adding Courses*
- *Dropping Courses*
- *Withdrawal from College*
- *Auditing Courses*

## *Evaluation of Previous Training and Education*

- *Transfer to DMACC*
- *Credit for Educational Experience in the Armed Forces*

## *Grading System*

## *Grade Reporting*

## *Requests for Transcripts*

## *New Start on Academic Record*

## *Scholastic Standards Policy*

## Advanced Standing Credit

A maximum of 30 semester hours of credit may be earned through proficiency examinations, military credit, national standardized tests, and employment experience. Advanced Standing credit with the exception of transfer credit will be included on the student's permanent record after 12 semester hours of credit have been successfully completed at the college. Credit will not be granted if a student has successfully completed college courses representing the same content.

## Advanced Placement (AP)

This program allows students while still in high school to take examinations for credit at the college level. DMACC awards credit for advanced placement through the Advanced Placement Program in art, computer science, English, foreign languages, history, mathematics, music and sciences. AP credit will be applied to the student's permanent record as transfer (TRF) credit after a minimum of 12 semester hours of credit has been successfully completed at DMACC.

## College Level

## Examination Program (CLEP)

Des Moines Area Community College will award credit based on scores obtained on the General examinations and Subject examinations. Up to 30 semester hours of credit may be granted. CLEP credit will not be granted if it duplicates credit for a course already taken. A minimum of 12 semester credit hours must be successfully completed at DMACC before the CLEP credit will be applied to the student's permanent record.

CLEP tests will be administered in September, November, March, April, July and August. A fee is charged for each examination administered.

For detailed information contact the Student Records Office.

## Challenge Tests

### (Local Department Examinations)

Students who have met the entrance requirements of the college and who are matriculating in a program of study leading to a degree, diploma or certificate and to staff needing credit for certification and approval may take locally constructed departmental examinations for credit in certain specified areas for which they and the department feel they have the necessary preparation. A course cannot be challenged that is a prerequisite to a course that has been successfully completed. Challenge tests also cannot be used as a course retake.

Credit earned by Challenge testing is entered on a student's permanent record only when that student has earned 12 credit hours at DMACC. A "T" grade is earned and is not included when computing grade point average.

Students interested in taking a Challenge exam should contact the appropriate department for specific information on tests available and fees for testing.

## Independent Study

Independent study provides an opportunity for the above-average student to do independent research in areas not covered in the regular curriculum or to explore in greater depth a topic covered in a class. Each independent study project must be arranged in advance through a supervising faculty member. The standard tuition charge will be made. Independent study may not be used to earn credit for any courses listed in the College catalog or substitute for any required or option courses in a program. A maximum of four hours of elective credit in any one term and eight hours in total, may be earned through independent study. Students may register for course work in independent study at any time during the term.

## Retake, Incomplete and Failing Mark Policies

Students unable to complete some portion of assigned course work during the regular term, may sign a contract with instructor approval for an "I" (Incomplete) grade. In such cases the student must complete the course by the mid-term date of the following term. Should there be an extenuating circumstance, such as serious injury or illness, an extension of this period may be approved by the instructor. "Incomplete" grades automatically change to "F" grades if the work is not satisfactorily completed within the time period specified.

Should a student fail a required course, he/

she must repeat and pass that course at Des Moines Area Community College in order to fulfill graduation requirements. Whenever a course is repeated, only the latter grade is included in the computation of the grade point average. This privilege does not pertain to courses failed while in attendance at other colleges and universities. Des Moines Area Community College cannot make changes in the grades issued by other institutions. Withdrawing from a course that is being repeated and receiving a grade of "W" does not constitute a course retake.

## Class Schedule Changes

Class schedule changes are accepted after the initial registration through the first five days of the term. Class schedule changes must be made in person, by mail or by FAX. NO changes will be made by telephone.

## Adding Courses

A student may change his/her schedule by completing an official ADD FORM through the 5th day of classes.

## Dropping Courses

A student may change his/her schedule by completing an official DROP FORM. "Drops" are not effective or valid until a drop notice or written notification is received in the Student Records Office. NO drop will be accepted by telephone. The last official day to drop classes varies depending on the Part of Term that the class falls in. A list of Parts of Term and the last day to drop for each Part of Term will be published in each class schedule.

## Withdrawal from College

Students may withdraw from college at any time prior to the close of the 50th class day of the fall and spring terms and the 30th class day of the summer term and receive a grade of "W" for all courses.

## Auditing Courses

A student may enroll in any course on an audit basis if space is available. Each audited course will appear on the student's transcript with no credit and a grade of audit (N). Students auditing courses are not required to complete regular assignments or examinations.

A student may change a course from "credit" to "audit" status through the 50th class day of the fall and spring terms and the 30th class day of the summer term. The completion of a Drop-Add form is required. For timelines on short term courses contact the Student Records Office.

## Evaluation of Previous Training and Education

### Transfer to DMACC

Students must request that a transcript bearing the official seal and signature of the official in charge of the records be sent directly to

the DMACC Admissions Office by each college or university previously attended. Transcripts which have been in the student's possession will not be considered official documents. Students submitting an official transcript in a language other than English must also submit an English translation of this transcript. Upon receipt, the Admissions Office will forward official transcripts to the Credentials Office for evaluation.

Transcripts must be sent from each previously attended institution even though all previous records may be summarized on one transcript. DMACC will accept credit only when submitted by the institution where the credit was earned.

A maximum of 43 semester credit hours of transfer credit is applicable towards degree requirements. The total grade point average of credits transferred to DMACC must equal 2.00 or higher. Since the student's grade point average is calculated from coursework taken at DMACC only, grades earned at other colleges or universities will not be used in the computation of the student's GPA at DMACC.

Upon completion of the transfer credit evaluation, students will receive a report illustrating how the accepted transfer credit applies to their chosen program of study.

The acceptance and use of transfer credit is subject to limitations in accordance with the educational procedures of the college.

## Credit for Educational Experience in the Armed Forces

Credit earned through educational experiences in the armed forces can be validated and accepted by the college. Credit is accepted based on state-wide policies at Iowa colleges and universities and based on its applicability toward meeting the requirements in the student's program of study. An American Council on Education (ACE) publication, "Guide to the Evaluations of Educational Experiences in the Armed Services," is generally used in making these determinations.

Credit is awarded only for significant learning experiences as recommended by the ACE guide. No credit will be awarded based on the Military Occupational Specialties evaluation program.

Credit may be awarded for coursework completed via correspondence, classroom study and/or examination through the United States Armed Forces Institute. Credit may also be granted on the basis of scores earned on the Subject Standardized Test of the Defense Activity for Non-Traditional Educational Support. Copies of transcripts showing such work will be evaluated by the Office of Credentials.

## Grading System

The grading scale is as follows:

Letter Grade	Numerical Value
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	0.00 (Failing)

**Marks** (not used in the calculation of the G.P.A.)

- W - Dropped or Withdrew
- I - Incomplete
- N - Audit, No Credit
- X - Course Repeated
- T - Credit by Testing
- P - Pass
- L - Credit for prior educational or occupational experience
- S - Satisfactory (CEU non-credit courses)
- U - Unsatisfactory (CEU non-credit courses)

## Grade Reporting

Final grade reports are issued from the Office of Academic Records approximately one working week after the end of each term.

Progress D and F grade reports are issued from the Office of Academic Records approximately the seventh week of fall and spring terms and at midterm during summer term.

## Requests for Transcripts

Transcripts of work taken at Des Moines Area Community College are issued upon written request by the student or former student to the Office of Academic Records. Transcript request forms are available at each DMACC campus in the Student Services/Records Office. While currently enrolled, students may request transcripts free of charge. Former students will be assessed a nominal fee for each transcript requested. Records are confidential and transcripts will be issued only upon written request by the student or former student. See tuition and fee rates for transcript fees.

## New Start on Academic Record

A student who has changed their program of study and is either on or in danger of probation due to unsatisfactory grades earned in their previous program may request a "New Start" on their academic record. No grades are removed from the transcript record with a "New Start". Grades earned prior to the "New Start" are not however included in the computation of the student's new cumulative grade point average.

The "New Start" is a one time option only and the student may not apply for a "New Start" until they have successfully completed at least 6 semester hours of program require-

ments in their new program. If interested in the "New Start", students should contact the Counseling/Advising office on their campus.

## Scholastic Standards Policy

DMACC has implemented a Scholastic Standards Policy to identify students who have difficulty successfully completing courses and to prescribe practices that may help students succeed.

The following applies only to credit enrollment at DMACC.

Passing grades are required in all courses outlined in the program of study. The cumulative grade point average of 2.000 in all course work applicable to the degree, diploma or certificate of specialization is required for satisfactory completion or progress.

Students who have attempted 12 or more credits with grades of A through F or P at Des Moines Area Community College are subject to the following academic progress standards:

1. Satisfactory academic progress is indicated by a cumulative grade point average (G.P.A.) of 2.000 or higher.
2. Guidelines for placing a student on "ACADEMIC PROBATION":
  - a. A student whose cumulative G.P.A. falls below 2.000 at the end of any term will be placed on ACADEMIC PROBATION for the next term of enrollment.
  - b. A student on ACADEMIC PROBATION who is assigned more than one D or F grade at progress report time will be restricted from registering for future credit coursework until s/he have developed an Educational Achievement Plan with a counselor/advisor and/or program chairperson and obtained the appropriate signatures for approval.
  - c. A student on ACADEMIC PROBATION will return to a status of "good academic standing" when his/her cumulative G.P.A. is raised to 2.000 or higher.
  - d. A student on ACADEMIC PROBATION will continue on probationary status if his/her term G.P.A. for the term following his/her placement on probation is 2.000 or higher but the cumulative G.P.A. remains below 2.000. This same rule will apply for the next term of enrollment.
  - e. The college will not award a Certificate of Specialization, Diploma or Degree to a student who has a G.P.A. below 2.000 in his/her chosen program of study. Only grades for coursework applicable to the chosen program of study will be calculated in the program G.P.A.

## Academic Information

### 3. Guidelines for placing a student on "CONDITIONAL ENROLLMENT":

- a. A student on probation who earns a term G.P.A. of less than 2.000 will be placed on CONDITIONAL ENROLLMENT for the next term of enrollment.
- b. If the student placed on CONDITIONAL ENROLLMENT is registered for the next term, he or she will be required to meet with a counselor/advisor no later than the fifth day (last day to add classes) of the CONDITIONAL ENROLLMENT term to review their course selections. Failure to comply will result in cancelled classes.
- c. If the student placed on CONDITIONAL ENROLLMENT is not registered for the next term, he or she must meet with a counselor/advisor prior to re-enrolling in credit coursework.
- d. A student on CONDITIONAL ENROLLMENT who is assigned more than one D or F grade at progress report time will not be allowed to register for the following term until his/her conditional enrollment term final grades are recorded.
- e. A student on CONDITIONAL ENROLLMENT who earns a term G.P.A. of 2.000 or higher but the cumulative G.P.A. remains below a 2.000 will be placed on ACADEMIC PROBATION.
- f. A student on CONDITIONAL ENROLLMENT who earns a term G.P.A. and a cumulative G.P.A. of 2.000 or higher will be placed in good standing.

### 4. Guidelines for placing a student on "ACADEMIC SUSPENSION": A student on CONDITIONAL ENROLLMENT who earns a term G.P.A. of less than 2.000 will be placed on ACADEMIC SUSPENSION and will not be allowed to enroll in credit coursework for a period of one term.

### 5. Guidelines for RE-ENROLLMENT OF SUSPENDED students:

- a. After non-enrollment for minimum of one term, a student on ACADEMIC SUSPENSION may apply for re-enrollment.
- b. In all instances, a readmitted student will be placed on CONDITIONAL ENROLLMENT.
- c. A student seeking re-enrollment must develop an Educational Achievement Plan with a counse-

lor/advisor and/or program chairperson and obtain the appropriate signatures for approval.

- d. Individual programs may impose additional re-enrollment requirements.

### 6. A student placed on ACADEMIC SUSPENSION may appeal that placement to the College's Judicial Board by following the procedures outlined in the Student Academic Appeals Procedure. Copies of this procedure are available in the Student Development Offices at Ankeny, Boone, Carroll, Newton and Urban Campuses.

This section contains information on . . .  
*Advanced Technology Center  
Economic Development Group*

## Advanced Technology Center

The Advanced Technology Center accelerates the transfer of management and process technologies to the workplace. Its core mission is the improvement of the competitiveness of Iowa Enterprise.

### ATC Threefold Mission

**Academic programs** - To enhance academic clients' skills, knowledge, and abilities.

**Manufacturing outreach** - To provide quick and effective response to clients' productivity, quality, and management improvement needs.

**Manufacturing consortia** - To develop forums that encourage manufacturing firm groups to cooperate to share knowledge and resources for their individual and collective good.

### Academic Programs

ATC Associate of Applied Science Degree Programs (AAS)

- Electronic Technologies
- High Tech Biomedical Technology
- High Tech Computers
- High Tech Robotics/Automation
- Computer-Aided Design Technology
- Tool & Die ATC Specialist Certificates
- CIM-Manufacturing Resource Planning
- CIM-Product Engineering
- CIM-Shop Floor Control

### Manufacturing Outreach

The ATC provides customized training courses developed and delivered for specific client objectives. Through its customized training, the ATC has the expertise and resources to train business and industry clients in technologies such as:

*CADD-Computer Aided Drafting/Design*

*CAM-Computer Aided Manufacturing*

*CIM-Computer Integrated Manufacturing*

*CMM-Coordinate Measuring Machine*

*CNC-Computer Numerical Control*

*ISO 9000-International Quality Assurance Standard*

*JIT-Just-In-Time Strategies*

*Leadership Training*

*Microcomputer Training*

*MRP-Material Requirements Planning*

*TQM-Total Quality Management*

*SPC-Statistical Process Control*

The ATC is designed to promote, operate and apply state-of-the-market technology.

## Economic Development Group

The Economic Development Group provides contract training and consulting to assist in the growth and development of central Iowa businesses and governmental agencies. This college-based partnership brings together the full resources of DMACC to develop and customize training to assist each organization to increase quality and productivity by developing employee skills.

EDG also administers two Iowa Workforce Training Programs to businesses in central Iowa. The New Jobs Training Program provides an incentive to new or expanding businesses that are adding new positions to their Iowa payroll. The Retraining Program offers forgivable loans to businesses that must upgrade employee skills to stay competitive in the marketplace. EDG works with businesses to obtain these funds, plan the program, and manage training delivery. Training ranges from adult basic education to highly technical training.

# Continuing Education & Specialized Programs

This section contains information on...

Continuing Education  
Advanced Technology Center  
Community Education  
Evening/Weekend College  
Off Campus Credit  
Distance Learning  
Transportation Institute  
Software Center  
Conference Center  
Adult Basic Education

## Continuing Education

The Continuing Education division provides a wide range of educational experiences. Activities for courses may begin at any time and do not necessarily coincide with the college's academic calendar. A variety of non-credit vocational and avocational classes, seminars, conferences and workshops are offered at various locations to assist individuals in continued professional and personal development. Topic areas may include: business/management, health occupations and personal growth. Specific classes are also designed to meet the continuing education requirements for licensing and re-certification of professionals in areas such as child care, insurance, nursing, emergency medical services, cosmetology, real estate, long term care and social work.

The Conference Center on the Ankeny and Newton Polytechnic Campuses provide settings for many conferences and events offered in cooperation with DMACC. The Continuing Education division works with local businesses, service agencies, institutions, organizations and associations to tailor courses or conferences specifically for employees or members.

## Advanced Technology Center

In addition to credit offerings, the Advanced Technology Center (ATC) Continuing Education program offers evening and weekend programs in high tech areas - microstation, autocad, networking, UNIX, Fanuc CNC and other related tool and die programs. The ATC Continuing Education program also offers a full line of courses related to C language programming. ATC programming is designed to promote, operate and apply state-of-the-market technology.

## Community Education

Within the local communities of the eleven county district, DMACC works cooperatively with the local community schools to foster lifelong learning opportunities through adult education programs for the residents. Other community service activities include cooperative programming with local organization, judicial districts, business and associations.

## Evening/Weekend College

Courses offered evenings and weekends provide opportunities for degree completion, career development/enhancement and cultural enrichment, in both and continuing education format, for students who are unable to take classes during the day.

The Evening/Weekend College provides support to the full range of services offered for students, faculty and staff during evening and weekend hours. Support is also provided for the Television, Iowa Communications Network (ICN), Off-Campus credit, and Continuing Education courses. For further information on the Ankeny Campus call (515) 964-6286 or 1-800-362-2127, ext. 6286. For services available at the Boone, Carroll, Newton Polytechnic, and Des Moines Urban campuses, call their main campus numbers.

## Off-Campus Credit

Off-Campus Credit is an extension of the five DMACC campuses and offers liberal arts and business courses throughout the district, including Ames, Indianola, Urbandale and West Des Moines high schools. The courses are normally scheduled in the evenings on Monday through Thursday, starting at 6:00 p.m. Many of the courses are "starter courses" and require students to take additional courses on campus, if they desire to complete a degree.

## Distance Learning

Distance learning provides alternative delivery of credit classes throughout the district with state wide capability as well. College credit classes are provided via the Iowa Communications Network (ICN), through television courses aired on TCI Cable, College Channel 10 and Iowa Public Television, Channel 11, in Central Iowa. Through a combination of alternative delivery courses a student may be able to complete a two-year degree. Non-credit and continuing education opportunities are also available through distance delivery.

## Transportation Institute

To meet the increasing needs of transportation companies, the Transportation Institute provides training for people entering the industry as a commercial vehicle operator. Students train for ten weeks (320 hour non-credit program) using the U.S. Department of Transportation Model Curriculum. This program is one of only 35 in the U.S. which has been certified by the Professional Truck Drivers Institute of America. The Institute also conducts customized programs and services to individuals and companies such as: remediation, evaluation, and advanced driver programs.

## Software Center

To assist business and industry with computer application training, the DMACC Software Center services are available to provide training customized to the needs of the busi-

ness. Training can be provided at the work site, or at one of the five DMACC campuses.

Services of the Center include consultation, needs assessment, development and training. Customized training combines the basic computer application parameters with the specific needs of a business or industry. For further information, call 515-964-6214.

## Conference Center - Ankeny

Conference Center facilities on the Ankeny campus are available for use on a rental or co-sponsorship basis. The facilities can accommodate groups from 10 to 300, with classroom facilities, dining areas and an auditorium for the largest groups. Ample parking is provided just outside the facility with access to food services, audio visual equipment and other necessary services.

DMACC staff will assist you with your plans for a conference or a meeting. Call 515-964-6477 for further information.

## Adult Basic Education

### ABE/GED/ESL

The Adult Basic Education Program provides opportunities for adults in need of literacy skills and refresher basics in reading, writing, and math. ABE classes are offered at various locations in and around Des Moines and in cooperation with local schools and organizations.

Individualized instruction allows students to focus on their immediate needs. ABE classes are provided free of charge.

GED classes, or High School Equivalency preparation provides instruction to prepare adults for the General Education Development Test (GED) and earn the High School Equivalency Diploma. Individual and small group instruction allow the student to progress through the five subject areas evaluated on the GED exam. These include: Test 1, Writing Skills; Test 2, Social Studies; Test 3, Science; Test 4, Literature & the Arts; and Test 5, Math. Instruction is free of charge.

### GED Testing Centers

DMACC Ankeny Campus  
DMACC Boone Campus  
DMACC Urban Campus  
Newton Polytechnic  
Indianola Learning Center

There is a \$30 testing and diploma fee.

English as a Second Language is a program for people who speak, read, and write best in a language other than English and desire to improve their use of the English language. Entry-level English through college-prep English is available. Basic beginning ESL classes are provided free of charge.

For more information: 964-6384 or 800-362-2127, ext. 6384.



# Graduation Requirements

This section contains information on . . .

## Programs of Study

- College Transfer
- Vocational Education
- Transfer Information
- Articulation Agreements - Transfer Plans

## Graduation Requirements

- Graduation Analysis Report (GAR)
- Graduation Application
- Commencement

## Academic and Graduation Honors

- Phi Theta Kappa (Boone, Newton)
- Dean's List
- President's List
- Graduation with Honors

## General Education

### Degrees Awarded

- Degrees
- Associate in Arts Degree (AA)
- Associate in Science Degree (AS)
- Associate in Applied Science Degree (AAS)
- Associate in General Studies Degree (AGS)
- Diploma
- Certificate of Specialization

## Programs of Study

Instruction is offered in a variety of courses and programs to meet the diverse needs of DMACC students. Students may engage in areas of study which emphasize:

### College Transfer

- **General Education** courses are designed for students intending to transfer to a four year institution. Students may take these courses for enrichment or may terminate after two years of study.
- **Para-professional** programs prepare students for employment in a variety of public service fields. Students may also transfer to a four-year institution.
- **Pre-professional** curriculum provides the recommended courses for the first two years of study in various professions.

### Vocational Education

- **Vocational/Technical** courses are designed to teach the essential skills and operational theory needed to ensure occupational competency. Vocational/Technical programs and certificates are designed to fulfill the employment needs of the community.

**Skill Building/Adaptor** courses are designed to aid the student whose educational background requires additional strengthening to achieve success in regular college level courses.

**Continuing Education** is designed for voca-

tional training, professional advancement, personal enrichment, physical fitness or just the pleasure of learning. Classes, workshops, and seminars are designed for those to whom academic credit is not a priority and involves no tests, grades or homework.

**Adult Basic Education** is designed to provide individualized instruction to adults who need development or review of basic reading, language or mathematic skills. ABE services are provided to adults who are seeking high school completion, vocational advancement, further training, English as a Second Language, and general improvement of everyday living skills. Classes are offered in many locations throughout the College District.

**Adult High School Diploma** program is designed for adult students seeking a diploma. Courses required of all students enrolled in the program are:

- Two credits in American History
- One credit in American Government
- Two credits in Mathematics
- Two credits in Science
- Four credits in English

Elective courses shall be completed to meet minimum requirement of 32 semester credit hours.

**Iowa High School Equivalency Diploma** is awarded by the State of Iowa through the Iowa Department of Education. Eligible adults may earn the Diploma by achieving passing scores on the General Education Development (G.E.D.) test administered by the College.

### Transfer Information

DMACC offers the first two years of most baccalaureate degree programs. Students can attend DMACC for their first two years and earn an Associate in Arts (AA) or Associate in Science (AS) degree.

The advisors and counselors are available to work with students in planning their program and assisting them in making decisions for a successful transfer. The following information is available for students.

- Transfer Plans for different majors at various colleges/universities
- General articulation agreements between DMACC and colleges/universities
- College/university catalogs
- Admission applications to some colleges/universities
- Dates of visits from college/university admission representatives
- Transfer scholarship information

### College/University Articulation Agreements - Major Transfer Plans

Articulation agreements and major transfer plans have been developed to assist students in transferring. Four year colleges/universities vary in the required number and nature of pre-professional and general education courses

which should be completed at DMACC.

Following is a list of colleges and majors:

- Buena Vista
- Clarke University
- University of Osteopathic Medicine & Health Sciences
- Creighton University
- Drake University
- Grand View College
- Iowa State University
- Iowa Wesleyan University
- Marycrest College
- Missouri Western State College
- Morningside College
- Northeast Missouri State University
- Northwest Missouri State University
- Palmer College of Chiropractic
- Simpson College
- University of Northern Iowa
- University of Iowa
- Upper Iowa University
- Weber State College University

Transfer plans available are:

- Business
- Chiropractic
- Computer Programming
- Computer Science
- Dentistry
- Education
- Engineering
- Hotel & Restaurant Management
- Journalism
- Law
- Medicine
- Mortuary Science
- Nursing
- Pharmacy
- Physicians Assistant
- Social Work
- Veterinary Medicine

Transfer plans are also available for some vocational programs to selected colleges.

Copies of the articulation agreements and transfer plans may be obtained from an advisor/counselor at each campus.

The information provided will change as four-year colleges/universities change their degree requirements. Students should contact the admissions office at the four-year institution they expect to attend as soon as possible after beginning at DMACC.

This information cannot be considered an agreement between or contract between the individual students and DMACC or its staff.

*Don't rely on "Hearsay". Visit with an advisor or counselor and get the facts.*

## Graduation Requirements

Students must satisfy the requirements in effect at time of enrollment in their program, or the requirements in effect at the time of graduation.

If program requirements are not satisfied within five years of the first term of enrollment in their program of study, students can no longer use those requirements effective at the time they initially enrolled in their program and must complete the program requirements effective at the time of their graduation.

# Graduation Requirements

All requirements of the chosen program must be satisfied; adjustments may be made where program curriculum has changed and courses are no longer available. It is the responsibility of the student to know and to observe the requirements of his/her curriculum and the rules governing academic work.

## Graduation Analysis Report

A student may visit the Graduation Office or mail a request to receive a report of his or her progress toward completion of requirements for a program of study.

## Graduation Application

Candidates for graduation must submit an Application for Graduation to the Graduation Office during the first month of the semester of graduation.

## Commencement

The annual commencement ceremony is held at the end of spring term for Ankeny, Newton and Urban Campus graduates. The Boone Campus ceremony is held at the end of each spring term and the Carroll Campus ceremony at the end of summer term.

## Academic and Graduation Honors

### Phi Theta Kappa

(Boone, Newton Campus) is a national scholastic honor society for students of two-year colleges. Membership is conferred upon students who have completed at least 30 semester hours (15 at Boone or Newton Campus) of college work with a 3.25 grade point average and who are judged to have high moral character and desirable qualities of citizenship and leadership. Provisional membership may be conferred upon students who have completed at least 12 semester hours of work at Boone or Newton Campus with a 3.50 grade point average. To be eligible for either provisional or full membership the student must be enrolled in a two-year associate degree program that requires 64 semester hours of work.

### Dean's List

Full-time students who earn a 3.50 to 3.99 grade point average in any term are honored by being named to the Dean's List.

### President's List

Full-time students who earn a 4.0 grade point average in any term are honored by being named to the President's List.

## Graduation With Honors

Candidates for graduation who earn a cumulative grade point average of at least 3.50 in course work applicable to their program of study will graduate with program honors.

## General Education

General education at Des Moines Area Community College is found in all degree and

diploma programs and is defined as that body of knowledge which contains skills relevant to the understanding and effective application of many fields. This includes written and oral communications; pure and applied science; mathematics; social and behavioral sciences; and humanities. This philosophy regarding the essential importance of general education remains a central principle in curriculum development at Des Moines Area Community College.

## Degrees Awarded

DMACC awards the Associate in Arts (AA), Associate in Science (AS), Associate in Applied Science (AAS), and Associate in General Science (AGS) degrees; Diploma and Certificate of Specialization.

## Degrees

The requirements for the AA, AS, AAS, AGS degrees and the Diploma and the Certificate in this document represent the minimum content required in any program offering these degrees at Des Moines Area Community College. It is intended only for the use of staff designing educational programs for DMACC. Specific programs may, and often do, make additional requirements. Therefore, this document is NOT appropriate for use by students in planning their academic activities. Students must refer to the programs of study which are approved by the State Department of Education and published in the college catalog.

## Associate in Arts Degree (AA)

### Core Requirements - 48 Credits

#### A. Communications - 9 credits

*NOTE: Student who intends to transfer to a four-year institution is advised to take ENGL 117 and 118.*

ENGL 117 and ENGL 118 or ENGL 119 and  
SPCH 110 or SPCH 111 or SPCH 117

#### B. Social & Behavioral Sciences - 9 credits

*Student must complete at least 3 courses. Each course must be from a distinct discipline (reflected by a distinct acronym).*

ANTH 120, 121  
ECON 101, 102  
GEOG 141, 147, 148  
HIST 121, 122, 124, 125  
PLSC 111, 112, 121, 122, 126  
PSCH 101, 103, 104, 105, 108  
SOCY 101, 102, 103, 105

#### C. Mathematics and Sciences - 9 credits

1. Student must take one laboratory science course from BIOL, CHEM, OR PHYL listed below.

2. Student must take one MATH or BSAD course listed below:

BIOL 118 & 119, 126, 127, 141, 142, 144, 147, 149, 154

BSAD 152

CHEM 120, 131, 132, 151, 152, 161, 162  
MATH 115, 118, 121, 122, 123, 124, 129, 130, 132

PHYL 106, 111, 112, 121, 122

#### D. Humanities - 9 credits

Select from the following:

ARTS 101

DRAM 110

FREN 101, 102, 103, 104

HIST 121, 122

HUMN 115, 131, 133

LITR 120, 121, 122, 123, 125, 130, 131, 132, 133, 134

MUSI 130, 131

PHIL 110, 111, 112, 113

SPAN 101, 102, 103, 104

#### E. Distributed Requirement - 12 credits

Select the remainder from any of the courses in the above categories A, B, C, D.

#### F. Electives - 16 credits

1. Student may include no more than 16 semester credit hours of vocational courses.

2. Student may include no more than 8 semester credit hours of Independent Study courses; no more than 4 semester credit hours of Independent Study may be earned in any single semester.

To receive an AA degree a student must:

A. Maintain a 2.0 grade point average on all work applicable for the AA degree.

B. A minimum of 1/3 of the semester credit hours applicable to the degree being pursued must be completed at DMACC.

C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for, and receive, an exception).

D. Complete a minimum of 64 semester credit hours.

E. Include at least 48 semester credit hours of core courses.

F. Include at least 16 semester credit hours of elective credit.

Total AA Degree Requirements - 64 credits

## Associate in Science Degree (AS)

### Core Requirements - 24 Credits

#### A. Communications - 9 credits

*NOTE: Student who intends to transfer to a four-year institution is advised to take ENGL 117 and 118.*

ENGL 117 and ENGL 118 or ENGL 119 and

SPCH 110 or SPCH 111 or SPCH 117

#### B. Social and Behavioral Sciences - 6 credits

ANTH 120, 121

ECON 101, 102

GEOG 141, 147, 148

# Graduation Requirements

HIST 121, 122, 124, 125  
PLSC 111, 112, 121, 122, 126  
PSCH 101, 103, 104, 105, 108  
SOCY 101, 102, 103, 105

**C. Mathematics and Sciences - 6 credits**  
*Student must take one MATH or BSAD course and one science BIOL, CHEM, or PHYL listed below:*

BIOL: 118, 119, 126, 127, 141, 142, 144, 147, 149, 154  
BSAD: 152  
CHEM: 120, 131, 132, 151, 152, 161, 162  
MATH: 115, 118, 121, 122, 123, 124, 129, 130, 132  
PHYL: 106, 111, 112, 121, 122

**D. Humanities - 3 credits**

Select from the following:

ARTS: 101  
LITR: 120, 121, 122, 123, 125, 130, 131, 132, 133, 134  
DRAM: 110  
FREN: 101, 102, 103, 104  
MUSI: 130, 131  
HIST: 121, 122  
PHIL: 110, 111, 112, 113  
HUMN: 115, 131, 133  
SPAN: 101, 102, 103, 104

**E. Electives - 40 Credits**

1. Student may include no more than 16 semester credit hours of vocational courses.
2. Student may include no more than 8 semester credit hours of Independent Study courses; no more than 4 semester credits of Independent Study may be earned in any single semester.

**Total AS Degree Requirements - 64 credits**

*To receive an AS degree a student must:*

- A. Maintain a 2.0 grade point average on all work applicable for the AS degree.
- B. A minimum of 1/3 of the semester credit hours applicable to the degree being pursued must be completed at DMACC.
- C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for, and receive, an exception).
- D. Complete a minimum of 64 semester credit hours.
- E. Include at least 24 semester credit hours of core courses.
- F. Include at least 40 semester credit hours of elective credit.

## Associate in Applied Science Degree (AAS)

*To receive an AAS degree a student must:*

- A. Maintain a 2.0 grade point average on all work applicable for the AAS degree.

B. A minimum of 1/3 of the semester credit hours applicable to the degree being pursued must be completed at DMACC.

C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for, and receive, an exception).

D. Complete all required courses in a particular program of study. (Minimum of 64 semester credit hours)

E. Students must satisfy the following core:

**1. Communications - 3 credits**

ENGL 117, ENGL 118, ENGL 119, ENGL 410, OFFC 205

**2. Social & Behavioral Sciences/Humanities - 3 credits**

ARTS 101  
ANTH 120, 121  
DRAM 110  
ECON 101, 102  
FREN 101, 102, 103, 104,  
GEOG 141, 147, 148  
HIST 121, 122, 124, 125  
HUMN 115, 131, 133,  
LITR 120, 121, 122, 123, 125,  
MGMT 203  
MUSI 130, 131  
PHIL 110, 111, 112, 113  
PHOT 105  
PLSC 111, 112, 121, 122, 126  
PSCH 101, 103, 104, 105, 106, 108  
SOCY 101, 102, 103, 105  
SPAN 101, 102, 103, 104

**3. Mathematics or Sciences - 3 credits**

BIOL 118, 119, 126, 127, 132, 133, 134, 141, 142, 144, 147, 149, 154  
BSAD 152, 223  
CHEM 120, 131, 132, 151, 152, 161, 162  
ELEM 450  
ELHT 313, 323  
MATH 115, 118, 121, 122, 123, 124, 129, 130, 132, 410, 411,  
PHYL 106, 111, 112, 121, 122, 401

**4. Distributed Requirement - 3 credits**

*Choose one course from 1, 2, or 3 above or SPCH 110 or SPCH 111 or SPCH 117 or ELEM 451.*

F. All programs granting an AAS degree must meet at least an average of 20 contact hours per week.

G. Programs may not exceed 18 credit hours, Fall and Spring terms, and 12 credit hours Summer term.

## Associate in General Studies Degree (AGS)

*To receive an AGS degree a student must:*

- A. Maintain a 2.0 grade point average on all work applicable for the AGS degree.
- B. A minimum of 1/3 of the semester credit

hours applicable to the degree being pursued must be completed at DMACC.

C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for, and receive, an exception).

D. Students must complete a minimum of 12 semester credit hours at DMACC after the effective date of the AGS degree. (January 1, 1992)

E. Complete a minimum of 64 semester credit hours.

F. Students must satisfy the following core:

**Core Requirements - 12 credits**

**1. Communications - 3 credits**

ENGL 410, 117, 118, 119  
OFFC 205

**2. Social & Behavioral Sciences/Humanities - 3 credits**

ARTS 101  
ANTH 120, 121  
DRAM 110  
ECON 101, 102  
FREN 101, 102, 103, 104,  
GEOG 141, 147, 148  
HIST 121, 122, 124, 125  
HUMN 115, 131, 133,  
LITR 120, 121, 122, 123, 125,  
MGMT 203  
MUSI 130, 131  
PHIL 110, 111, 112, 113  
PHOT 105  
PLSC 111, 112, 121, 122, 126  
PSCH 101, 103, 104, 105, 106, 108  
SOCY 101, 102, 103, 105  
SPAN 101, 102, 103, 104

**3. Mathematics or Sciences - 3 credits**

BIOL 118, 119, 126, 127, 128, 132, 133, 134, 141, 142, 144, 147, 149, 154  
BSAD 152  
CHEM 120, 131, 132, 151, 152, 161, 162  
ELEM 450  
ELHT 313, 323  
MATH 115, 118, 121, 122, 123, 124, 129, 130, 132, 410, 411,  
PHYL 106, 111, 112, 121, 122, 401

**4. Distributed Requirement - 3 credits**

*Choose one course from 1, 2, or 3 above or SPCH 110 or SPCH 111 or SPCH 117 or ELEM 451*

**G. Electives - 52 credits**

1. Student may include no more than 8 semester credit hours of Independent Study courses; no more than 4 semester credits of Independent Study may be earned in any single semester.

**Total AGS Degree Requirements - 64 credits**

## Diploma

*To receive a diploma a student must:*

- A. Maintain a 2.0 grade point average on all work applicable for the diploma.

# Graduation Requirements

- B. A minimum of 1/3 of the semester credit hours applicable to the degree being pursued must be completed at DMACC.
- C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for, and receive, an exception).
- D. Complete all required courses in a particular program of study. (Minimum of 30 semester credit hours)
- E. Student must satisfy the following core:
  - 1 Communications course: ENGL 410, 117, 119 or OFFC 205 and
  - 1 Social & Behavioral Science course: SOCY 101, PSCH 101, 106 or MGMT 203 or
  - 1 Math course: any MATH (100 or above) or BSAD223, ELEM450, ELHT 313, ELHT 323
- F. All programs granting a diploma must meet at least an average of 20 contact hours per week.
- G. Programs may not exceed more than 18 credit hours Fall and Spring terms and 12 credit hours Summer term.

## Certificate of Specialization

*To receive a certificate a student must:*

- A. Maintain a 2.0 grade point average on all work applicable for the certificate.
- B. A minimum of 1/3 of the semester credit hours applicable to the certificate being pursued must be completed at DMACC.
- C. Complete the number of semester credit hours required in a particular program of study.
- D. Complete all required courses in a particular program of study.

## Certificate of Completion

A certificate of completion is issued to signify that a student has satisfactorily completed a program of instruction other than those listed above. Certificates are normally issued to students at the completion of a specific short term course of study.

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# Liberal Arts

This is a program of general education courses that is designed for students intending to transfer to a four-year college or university. Students can attend DMACC for their freshmen and sophomore years, and earn either an Associate in Arts or an Associate in Science degree.

DMACC also offers a pre-professional curriculum that provides the recommended courses for the first two years of study in various professions.

## Degrees

Associate in Arts  
Associate in Sciences

## Pre-Professional Programs

Accounting  
Agricultural/Natural Resources  
Architecture  
Business Administration  
Chiropractic  
Computer Science  
Dentistry  
Education  
Engineering  
Journalism  
Law  
Medicine  
Mortuary Science  
Nursing  
Optometry  
Pharmacy  
Physician's Assistant  
Restaurant Management  
Social Work  
Veterinary Medicine

## Career Option Programs

## Developmental/Adaptor Courses





# Educational Programs

## Liberal Arts

Students may complete their freshman and sophomore course work at Des Moines Area Community College for transfer to a four-year college or university. DMACC graduates are awarded the Associate of Arts (AA) or Associate of Science (AS) degree. College transfer work is offered in the following disciplines.

Anthropology .....	ANTH
Art .....	ARTS
Biology .....	BIOL
Career Development .....	CDEV
Chemistry .....	CHEM
Drama .....	DRAM
Education .....	EDCR
Engineering .....	ENGR
English .....	ENGL
French .....	FREN
Geography .....	GEOG
History .....	HIST
Humanities .....	HUMN
Journalism .....	JNAD
Literature .....	LITR
Mathematics .....	MATH
Music .....	MUSI
Philosophy .....	PHIL
Physics .....	PHYL
Political Science .....	PLSC
Psychology .....	PSCH
Reading .....	READ
Sociology .....	SOCY
Spanish .....	SPAN
Speech .....	SPCH

## Pre-professional

Students may begin their professional programs at Des Moines Area Community College. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institution to which they plan to transfer. The Student Development Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Contact a counselor or advisor for course planning assistance. Listed below are some of the professional programs for which students may begin their first two years at DMACC.

Accounting
Agriculture/Natural Resources
Architecture
Business Administration
Chiropractic
Computer Science
Dentistry
Education
Engineering
Journalism
Law
Medicine
Mortuary Science
Nursing
Optometry
Pharmacy
Physician's Assistant
Restaurant Management
Social Work
Veterinary Medicine

## Career Option Programs

Career Option Programs are designed to prepare students for college transfer and for beginning paraprofessional employment in those careers where a bachelor's degree is usually required. Students earn an AS degree by completing liberal arts courses as well as courses designed to teach the beginning skills needed for employment in the field. Upon completing the AS degree some students transfer directly into a bachelor's degree program at a four-year college or university. Other students begin work as a paraprofessional to gain experience and income to assist them in continuing for bachelor's degree. A bachelor's degree is usually required for advancement in the field.

Accounting Paraprofessional .....	ACCT
Biotechnology .....	BIOL
Business & Computers .....	COMS
Business Administration .....	BSAD
Child Development .....	CHLD
Criminal Justice .....	CRIM
Fire Science .....	FIRE
Human Services .....	HUMN
Legal Assistant .....	LEGA
Leisure Studies .....	LRST

## Developmental/Adaptor Courses

The adaptor classes in the Developmental Studies program are designed for students who want to strengthen their academic skills before enrolling in college-level courses. These classes build a foundation that can help make the difference between a frustrating struggle to keep up with college course work and the ability to meet new academic challenges with confidence. Although adaptor credits do not count toward a degree or diploma, they are used to determine credit load and grade point average.

Developmental Studies	DEVS	072 Thinking Skills 080 Study Skills
English	ENGL	070 Basic Writing 071 Writing Skills Review
English as a Second Language	ENGL	081 Acculturation Seminar 082 Listening & Conversation Skills I 083 Listening & Conversation Skills II 084 Communicative Grammar 085 Reading English as a Second Language 089 Introduction to ESL Writing Skills
Math	MATH	091 Arithmetic 092 Introductory Algebra 094 Intermediate Algebra
Reading	READ	087 Developmental Reading I 088 Developmental Reading II





# *Agricultural/Natural Resources*

These programs are designed for students interested in careers in the rapidly expanding fields of agri-business, biotechnology, and commercial horticulture.

The agri-business program prepares students for careers as farm management specialists, technical representatives for the chemical, fertilizer, feed and supply industry, and account specialists with commodity brokers. The new biotechnology program prepares students for various careers from developing improved seed corn to using DNA testing technology in crime labs. Graduates of the horticulture program are capable of filling jobs in fields such as greenhouse operation, turf management, and nursery operation.

## **Degrees**

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Agri-Business  
Biotechnology  
Commercial Horticulture





# Educational Programs

## Degrees

### Agri - Business

The Agri-Business program is designed to prepare students for the rapidly expanding fields of agricultural supply, distribution and service; as well as production agriculture. Students are given an option of emphasizing agricultural supply and service or farm management.

This program provides the student with training in the latest developments in technical agriculture in both the classroom and industry settings. The program also includes on-the-job employment experience in agricultural business.

Those graduates electing the agricultural supply and service option will be capable of filling entry-level jobs including assistant manager or manager of agricultural supply centers handling feed, seed, grain, fertilizer, chemicals and petroleum products. Other job opportunities may include technical representatives for the chemical, fertilizer, feed and supply industry and account specialists with commodity brokers.

Graduates electing the farm management option enter production agriculture or find employment as farm management specialists.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

#### Graduation Requirements

To earn an Agri-Business AAS degree, students must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

AGRI201	Feeding & Animal Nutrition I		3
AGRI206	Crop Management		3
AGRI209*	Soils Laboratory		1
AGRI219	Soils and Fertilizers		2
COOP220	Career-Seeking Skills		3
SPCH110	Fundamentals of Speech		3

#### Term 2

AGRI204*	Animal Science I		3
AGRI205	Commodities I		3
AGRI421	Chemical Technology		3
AGRI430	Employment Experience I		4
COMS181	Intro to Computer Literacy		3

#### Term 3... Select Option 1 Or Option 2

AGRI202	Crop Scouting		3
AGRI215	Commodities II		3
AGRI333	Petroleum Products in Agriculture	Opt1	3
BUSL101	Business Law I	Opt1	3
AGRI304	Swine Production and Management	Opt2	3
AGRI305	Beef Production and Management	Opt2	3

#### Term 4... Select 1 Course From Each Option

AGRI207	Livestock Disease Prevention		3
AGRI411	Agricultural Economics		3
AGRI436	Grain Management		2
MATH115	Finite Mathematics	Opt3	4
MATH410*	Mathematics for Technicians I	Opt3	3
ACCT101	Principles of Accounting I	Opt4	4
ACCT301*	Accounting Fundamentals	Opt4	3
ENGL117	Composition I	Opt5	3
ENGL410*	Communication Skills	Opt5	3

#### Term 5... Select Option 6 Or Option 7

AGRI203	Feeding & Animal Nutrition II		3
AGRI455	Employment Experience II		4
MGMT203	Human Relations in Business		3
AGRI322	Agri-Business Management	Opt6	3
MKTG103*	Principles of Selling	Opt6	3
AGRI306	Advanced Crop Management	Opt7	3
AGRI323	Farm Management	Opt7	3

## Biotechnology

The Biotechnology program is designed to prepare students to work as Biotechnology technicians in this rapidly expanding field which includes research and development, quality control, manufacturing, or related areas. Biotechnology is a broad term spanning several different disciplines and specific career opportunities could require skills related to genetic engineering of plants or microorganisms, gene therapy to correct human health problems, DNA fingerprinting, vaccine development, or production of food, drugs and other consumer products.

The program is structured to allow students to develop marketable job skills while incorporating the requirements for a two-year liberal arts degree. Most of the credits will transfer to four-year institutions. The program includes many lab-based courses, which enables students to apply what they learn in chemistry, math and statistics, biology, microbiology, genetics and molecular biology. Specific skills such as written and oral communications, critical thinking, problem-solving, computer skills and small group collaboration are an integral part of the program. Students participate in internships in cooperation with potential employers.

Location: Ankeny

#### Program Entry Requirements

One year each of high school biology and chemistry, two years of high school algebra or equivalent and satisfactory writing skills. Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall or spring term.

#### Graduation Requirements

To earn a Biotechnology AS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

BIOL141	Biology I	4
BIOL142	Biology II	4
BIOL149	General Microbiology	4
BIOL161	Cell and Molecular Biology I	5
BIOL162	Cell and Molecular Biology II	5
BIOL165	Genetics	3
BIOL167	Internship	3
CHEM131	General Chemistry I	4
CHEM132	General Chemistry II	4
ENGL117	Composition I	3
ENGL118	Composition II	3
ENGL119	Technical and Business Writing	3
MATH121	Elementary Statistics	4
MATH123	Trigonometry	3
SPCH110	Fundamentals of Speech	3

#### Option Courses

##### Select 3 Credits From Option 1 and 6 Credits From Option 2

Core Humanities	Opt1	3
Core Social and Behavioral Sciences	Opt2	6

## Commercial Horticulture

The Commercial Horticulture program provides students with technical training in the broad horticultural field through classroom, greenhouse, turf lab, tree nursery and practical on-the-job employment experiences.

Graduates of the program will be capable of filling jobs in fields such as greenhouse operator and management involving greenhouse production, scheduling and marketing, landscaping involving design, planting and maintaining trees, shrubs, turf and foliage plants for the beautification of home grounds, commercial, public and recreation. Other jobs may include turf management involving establishing, managing and maintaining grassed areas for ornamental and/or recreational purposes; nursery operation and management concerned with the production of trees, shrubs and turf for the purpose of transplanting or propagating them. Employment may also be found in garden center merchandising and management, merchandising of flowers and foliage plants and their design.

# Educational Programs

In addition to the required and option courses listed in terms 1-5 there are three elective courses that may be taken for additional credit. Those courses are COMH483 Plant Propagation II, COMH 497 Floral Design I and COMH 485 Floral Design II.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

## Graduation Requirements

To earn a Commercial Horticulture AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

AGRI209*	Soils Laboratory		1
AGRI219	Soils and Fertilizers		3
COMH450	Botany		3
COMH486	Horticulture Equip Safety/Maintenance		1
COMH488	Plant Materials/Landscape Drafting		3
COMS181	Intro to Computer Literacy		3

### Term 2

COMH410*	Greenhouse Production I		3
COMH437	Turf I		2
COMH440	Landscape Design I		2
COMH454	Supervised Employment Experience		3
COMH478	Plant Propagation I		3
MATH410*	Mathematics for Technicians I		3

### Term 3 . . . Select 1 Course From Option 1

COMH453	Landscape Design/Plant Materials II		2
COMH457	Fruit and Vegetable Science		3
COMH458	Insects and Diseases		2
COMH496	Landscape Construction		1
COMH499	Supervised Employment Experience II		1
COMH455	Turf II	Opt1	3
COMH490	Greenhouse Production II	Opt1	3

### Term 4

BIOL118	Environmental Conservation		3
COMH411	Horticulture Chemical Techniques		2
COMH459	Interior Landscaping		1
COMH479*	Nursery Production I		3
COMH494	Horticulture Production Alternatives		1
COOP220	Career-Seeking Skills		2
ENGL410*	Communication Skills		3

### Term 5 . . . Select 1 Course From Option 2

COMH452	Arboriculture		3
COMH469	Garden Center Management		3
COMH498	Supervised Employment Exp III		3
MGMT203	Human Relations in Business		3
ACCT301*	Accounting Fundamentals	Opt2	3
MKTG103*	Principles of Selling	Opt2	3

These programs provide students with the opportunity to gain experience in several media or to concentrate on a special area of interest. Instruction is offered in desktop publishing, design, typography and illustration, photography, printing, airbrush, lettering and copy preparation.

The development of portfolio quality work is stressed. When the program is completed, students may find employment in art studios, advertising agencies, in-house art departments, printing companies, publishing firms, and other businesses in need of creative communications.

## Degrees

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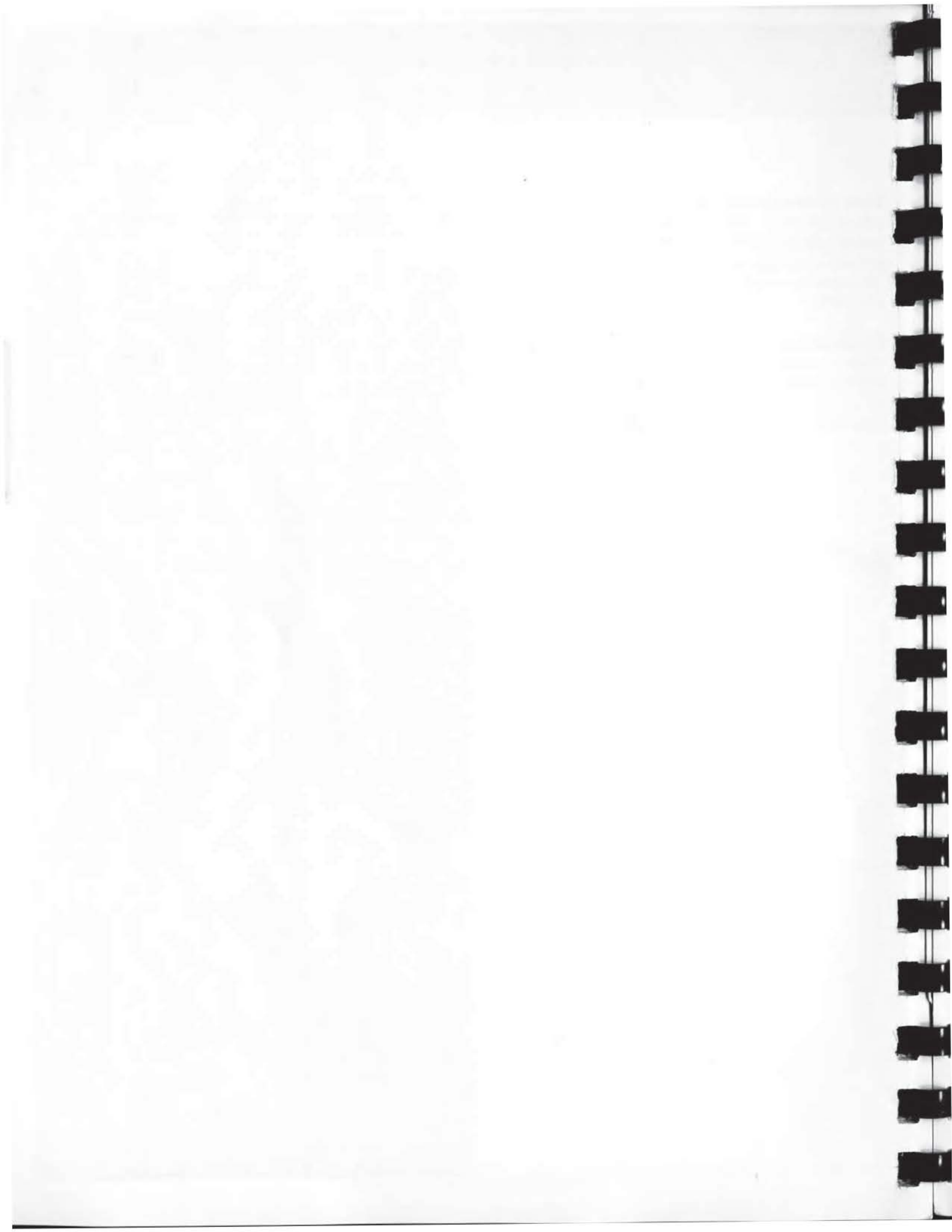
Commercial Art  
Graphic Arts

## Certificates of Specialization

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Airbrush Art  
Graphic Arts  
Production Art





# Educational Programs

## Degrees

### Commercial Art

The Commercial Art program prepares students for a career in graphic communications. Skills emphasized stress the ability to successfully design and produce a wide variety of materials for use in this challenging field. The development of "portfolio quality" work is stressed throughout the training program.

Technical courses utilizing electronic production and desktop publishing prepare students for entry level positions. Other required courses such as design, typography, and illustration allow students to seek advanced opportunities. Electives in photography, printing, airbrush and computer graphics will allow students to specialize.

Internship preparation and portfolio preparation courses focus on the placement of students in the "real world". Instructors have all been employed in the career field and are teaching courses directly related to their expertise.

When the program is completed, students may find employment in art studios, advertising agencies, in-house art departments, printing companies, publishing firms, and other establishments in need of creative communications.

Location: Ankeny

#### Program Entry Requirements

Complete an application and attend a Commercial Art Realities Exploration Day, obtaining a satisfactory score on an art portfolio. Students start fall term.

#### Graduation Requirements

To earn a Commercial Art AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

CART401	Commercial Art Orientation	3
CART403	Communication Design I	3
CART404	Typography II	3
CART405	Typography I	2
CART407	Production Art I	3
CART410*	Illustration I	4
CART411	Communication Design II	3
CART414	Illustration II	4
CART415	Production Art II	3
CART421	Internship Preparation	2
CART424	Commercial Art Internship I	3
CART426	Communication Design III	3
CART430	Production Art III	3
CART436	Portfolio Preparation I	3
CART437	Communication Design IV	3
CART440	Production Art IV	3
CART444	Portfolio Preparation II	3
DKTP401*	Intro To Desktop Publishing	3
PHOT105*	Principles of Photography	3

#### Option Courses . . . Select 3 Courses From Option 1, 2 Courses From Option 2 And 1 Course From Options 3 & 4

CART419	Lettering and Sign Art	Opt1	2
CART425	Commercial Art Internship II	Opt1	3
CART428	Illustration III	Opt1	3
CART442	Illustration IV	Opt1	3
CART449	Airbrush I	Opt1	4
CART451	Airbrush II	Opt1	4
CART459	Computer Graphics I	Opt1	3
CART462	Computer Graphics II	Opt1	3
CART463	Electronic Photo Editing	Opt1	3
MKTG104	Advertising/Sales Promotion	Opt1	3
PHOT106	Advanced Photography	Opt1	3
GRPH400*	Graphic Arts Orientation	Opt1	4
ARTS101	Art Appreciation	Opt2	3
DRAM110	Introduction to Theatre	Opt2	3
HUMN133	America in the Movies	Opt2	3
MUSI130	Music Appreciation	Opt2	3
PSCH101	General Psychology	Opt2	3

SOCY101	Introduction to Sociology	Opt2	3
ENGL410*	Communication Skills	Opt3	3
ENGL117	Composition I	Opt3	3
BSAD223	Business/Financial Math	Opt4	3
MATH410*	Mathematics for Technicians I	Opt4	3

### Graphic Arts

Graphic Arts is the study of producing printed material. This means students learn the basics of design and layout, with a focus on what steps it takes to have the artwork printed. The curriculum and instruction are geared to provide both lecture and hands-on settings which will introduce and develop the student's knowledge and skill in the fast paced and high tech field of Graphic Arts.

The DMACC Graphic Arts program is designed to provide graduates with the knowledge needed to enter any number of career options in the graphic arts industry. The program will provide students with hands-on training in the following areas: press operations, film assembly, basic design concepts and desktop publishing.

Graduates of the Graphic Arts program will find employment in an industry that is needing more qualified individuals. Graphics Arts/Printing is the third largest industry in the United States and the second largest in Iowa. It offers a wide variety of exciting career options and opportunities for advancement.

Upon successful completion of Terms 1, 2, and 3 of the Graphic Arts curriculum a student may receive a diploma. By completing the diploma program and Term 4, a student may receive an AAS Degree.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Obtain a satisfactory score on an English aptitude test or equivalent. Students start fall term.

#### Graduation Requirements

To earn a Graphic Arts diploma or AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1 . . . Select 1 Course From Option 1

DKTP401*	Intro To Desktop Publishing		3
OFFC329*	Keyboarding I		1
GRPH400*	Graphic Arts Orientation		4
GRPH401	Methods and Processes of Graphic Arts		3
GRPH406	Graphic Arts Design I		4
ENGL117	Composition I	Opt1	3
ENGL410*	Communication Skills	Opt1	3

#### Term 2

PHOT105*	Principles of Photography		3
GRPH410	Press I		4
GRPH412	Graphic Prepress I		4
GRPH413	Graphic Prepress II		4
GRPH416	Desktop Publishing II		3

#### Term 3 . . . Select Option 2 or Option 3

MATH410*	Mathematics for Technicians I		3
GRPH420	Press II	Opt2	4
GRPH421	Electronic Prepress I	Opt2	4
GRPH426	Graphic Arts Design II	Opt3	4
GRPH425	Electronic Image Control	Opt3	4

#### Term 4

MGMT101	Personnel Supervision		3
GRPH431	Electronic Prepress II		4
GRPH454	Graphic Arts Production Methods		4
GRPH456	Cost Estimating		3
PSCH106	Psychology of Human Relations & Adj		3



## Certificates of Specialization

### Airbrush Art

The purpose of the Airbrush Art certificate is to provide design theory and practice in the techniques of airbrush regardless of the specialized application.

Airbrush is used in practically every phase of the commercial art field; in illustration, such as figure, mechanical, advertising, architectural, and technical illustration, and in design such as textile, plastic products, greeting cards and posters.

#### Required Courses

CART449	Airbrush I	4
CART451	Airbrush II	4

### Graphic Arts

The Graphic Arts certificate is designed for individuals with prior graphic arts experience who are looking to update their skills or are seeking advancement in the graphic arts/printing industry. The program will provide up-to-date technical information regarding tools, equipment and processes.

The curriculum and instruction are geared to provide both lecture and laboratory settings that will build upon the individual's prior knowledge and experience. Instruction and practical experience will be provided in offset duplicators, process camera techniques, film assembly and carrier preparation, as well as offset press, advanced camera, contacting and four-color stripping.

#### Required Courses

GRPH410	Press I	4
GRPH412	Graphic Prepress I	4
GRPH413	Graphic Prepress II	4
GRPH420	Press II	4
GRPH421	Electronic Prepress I	4
GRPH426	Graphic Arts Design II	4

### Production Art

The purpose of the Production Art certificate is to provide training for entry-level positions as production artists in large printing and publishing companies and companies with small publications departments.

#### Required Courses

CART407	Production Art I	3
CART415	Production Art II	3

# Business/Management

The business curriculum is designed to help students develop critical thinking skills, communication skills, and technical and professional skills with an emphasis toward problem-solving and decision making.

Programs offer two-year degrees leading to direct employment as well as degrees designed to transfer to a four-year college or university.

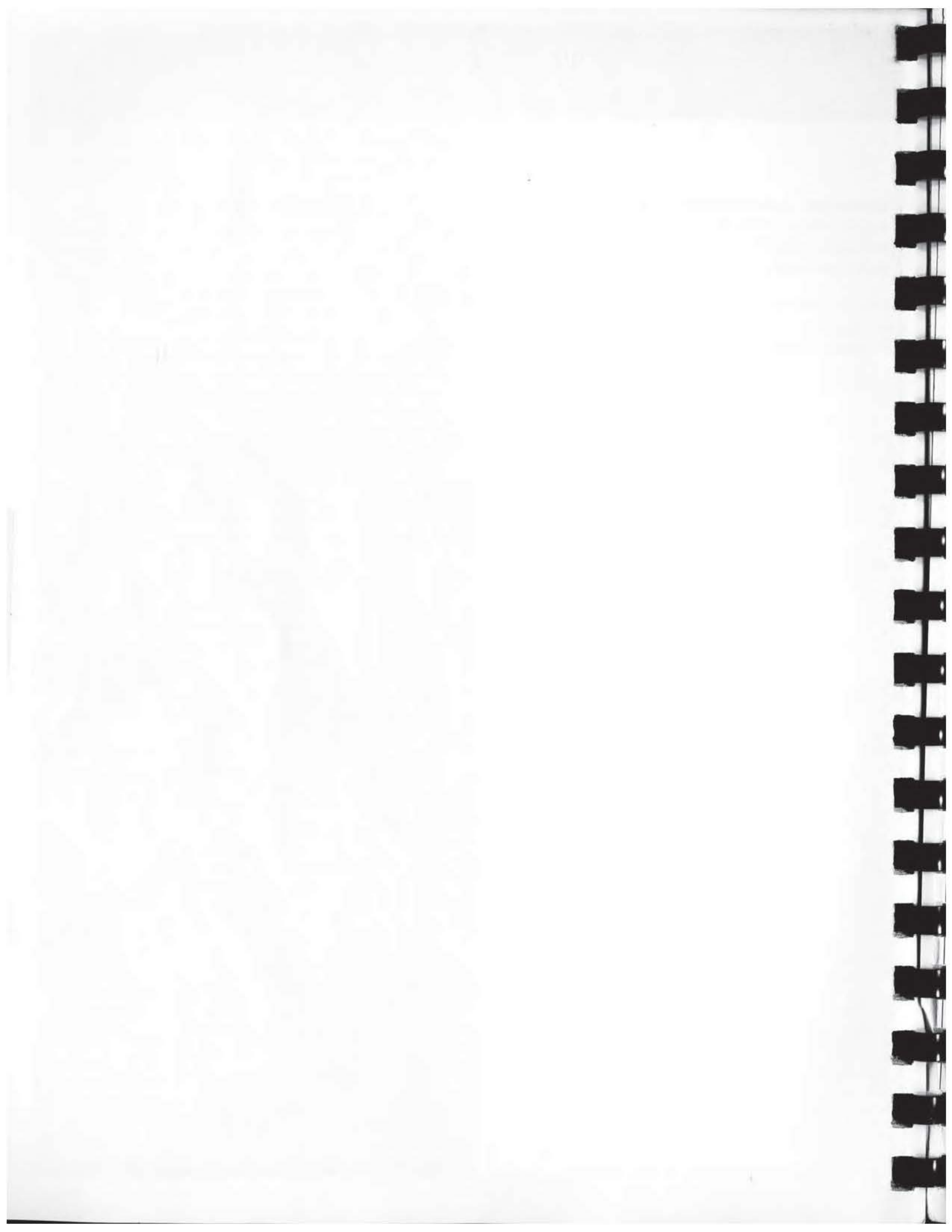
## Diplomas and Degrees

Accounting and Bookkeeping  
Accounting Paraprofessional  
Accounting Specialist  
Accounting Technician  
Business and Computers  
Business Administration  
Computer Programming  
Fashion Merchandising and Design  
Legal Administrative Assistant  
Management  
Marketing  
Medical Office Technology  
Office Technology  
Retail Merchandising  
Sales and Management  
Small Business Management

## Certificates of Specialization

Accounting, Advanced  
Accounting, Basic  
Administrative Support  
Advanced Purchasing Operations  
Clerical Specialist  
Computer Languages  
Data Entry I & II  
Fashion  
Insurance Sales  
Management  
Medical Transcriptionist  
Microcomputer Application  
Microcomputers  
Purchasing Management  
Real Estate Sales  
Retailing  
Sales  
Small Business  
Supervision  
Technical Management  
Travel Personnel  
Word Processing





# Educational Programs

## Diplomas and Degrees

### Accounting & Bookkeeping

The Accounting and Bookkeeping program prepares students for a career in the field of bookkeeping and recordkeeping. Upon graduation, the student will be able to distinguish, analyze, summarize, communicate, and record economic events for a profit oriented entity as an entry-level bookkeeper.

Technical courses in taxes, payroll, computers, and accounting allow students to seek advanced level placement. The internship part of the program provides on-the-job training under the combined guidance of a faculty member and a cooperating employer. Actual job experience is obtained where many of the skills and procedures studied in the classroom are observed and practiced.

Employment opportunities are currently found in commercial businesses, government offices, public accounting firms, and similar establishments.

Locations: Boone, Urban

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall term.

#### Graduation Requirements

To earn an Accounting and Bookkeeping diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

ACCT101	Principles of Accounting I	4
ACCT351	Financial Accounting/Microcomputers	3
ACCT403	Accounting Internship	3
ACCT404	Accounting Career Seminar	1
ACCT407	Accounting Professional Development	1
BKKA403	Accounting Procedures/Management	4
BKKA411	Payroll Accounting	2
BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2
DATA332	Lotus 1-2-3 Introduction	1
OFFC324	Office Calculators	1

#### Option Courses . . . Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
OFFC301*	Typing Skill Development I	Opt2	2
OFFC329*	Keyboarding I	Opt2	1
COMS181	Intro to Computer Literacy	Opt3	3
OFFC340	Intro to Office Computer Applications	Opt3	3
OFFC341	Advanced Office Computer Applications	Opt3	3
ENGL118	Composition II	Opt4	3
ENGL119	Technical and Business Writing	Opt4	3
ENGL410*	Communication Skills	Opt4	3
MGMT203	Human Relations in Business	Opt5	3
PSCH101	General Psychology	Opt5	3

#### Elective Courses

Electives	3
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### Accounting Paraprofessional

The Accounting Paraprofessional program prepares the student for a career in the field of accounting. It is a pre CPA track that will be articulated with designated 4-year institutions to facilitate the student obtaining a Bachelor's degree. Upon graduation, the student will be able to distinguish, analyze, summarize, communicate and record economic events for a profit-oriented entity. It is designed for the student who for financial or personal reasons is not able to obtain a 4-year degree in the traditional manner. The student will be able to acquire enough career specific knowledge and general education at a community college to obtain a position in the accounting field and then continue pursuit, either full or part-time, of a bachelor's degree.

Students in the program complete general education core requirements and accounting speciality courses. Fluency in oral and written communication is stressed in all courses. Professional and ethical behavioral case studies for business are integrated throughout the program. The program offers technical courses in computerized accounting allowing students to seek advanced level placement as paraprofessionals in accounting firms or other businesses in the community.

A program chairperson, a program counselor and experienced faculty are available to assist students with educational and career planning and the articulation with the 4-year institution.

Graduates of the Accounting Paraprofessional program are employed in commercial businesses, government and public accounting firms.

Locations: Ankeny, Boone, Carroll, Urban

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

#### Graduation Requirements

To earn an Accounting Paraprofessional AS degree, a student must complete the standard core requirements for the degree plus the Accounting Paraprofessional required courses and maintain a 2.0 grade point average. A grade of "C" or better is required in all ACCT and BKKA course work.

#### Required Courses

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
ACCT103	Intermediate Accounting I	4
ACCT203	Cost Accounting	4
ACCT206	Income Tax	3
ACCT351	Financial Accounting/Microcomputers	3
ACCT352	Managerial Acct/Microcomputers	3
BKKA411	Payroll Accounting	2
BUSL101	Business Law I	3
COMS181	Intro to Computer Literacy	3
ECON101	Principles of Macro-Economics	3
ECON102	Principles of Micro-Economics	3
ENGL117	Composition I	3
ENGL118	Composition II	3
MATH115	Finite Mathematics	4
MATH121	Elementary Statistics	4
MATH122	Calculus for Business/Social Science	4
OFFC324	Office Calculators	1
SPCH110	Fundamentals of Speech	3

#### Option Courses . . . Select 1 Course From Each Option

BIOL118	Environmental Conservation	Opt1	3
BIOL126	Field Biology	Opt1	3
BIOL127	Human Biology	Opt1	3
CHEM120	Survey of Chemistry	Opt1	3
CHEM131	General Chemistry I	Opt1	4
PHYL106	Survey of Physical Science	Opt1	4
PHYL111	College Physics I	Opt1	4
ARTS101	Art Appreciation	Opt2	3
HIST121	Western Civ Beg to 1715	Opt2	4
HIST122	Western Civ 1715 to Present	Opt2	4
LITR120	Intro to Literature	Opt2	3
PHIL110	Introduction to Philosophy	Opt2	3
PHIL112	Ethical Problems	Opt2	3

### Accounting Specialist

The Accounting Specialist program prepares the student for a career in the field of accounting. Upon graduation, the student will be able to distinguish, analyze, summarize, communicate and record economic events for a profit-oriented entity at the entry level. The program offers technical courses in intermediate accounting and computers, allowing students to seek advanced level placement.

Fluency in oral and written communications is stressed throughout. The internship part of the program provides "real-world" experience under the combined guidance of a faculty member and a cooperating employer. Actual job experience is obtained whereby many of the skills

# Educational Programs

and procedures studied in the classroom are observed and practiced.

Employment opportunities are found in commercial businesses, government offices, public accounting firms and similar establishments.

Locations: Boone, Urban

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration sessions. Students start any term.

## Graduation Requirements

To earn an Accounting Specialist AAS degree, a student must complete the requirements for the degree, maintain a 2.0 grade point average, and receive a grade of "C" or above in all ACCT and BKKA course work.

### Required Courses

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
ACCT103	Intermediate Accounting I	4
ACCT104	Intermediate Accounting II	4
ACCT203	Cost Accounting	4
ACCT206	Income Tax	3
ACCT351	Financial Accounting/Microcomputers	3
ACCT352	Managerial Accounting/Microcomputers	3
ACCT403	Accounting Internship	3
ACCT404	Accounting Career Seminar	1
ACCT407	Accounting Professional Development	1
BKKA411	Payroll Accounting	2
BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
COOP220	Career-Seeking Skills	2
MATH115	Finite Mathematics	4
OFFC324	Office Calculators	1
SPCH110	Fundamentals of Speech	3

### Option Courses . . . Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
OFFC301*	Typing Skill Development I	Opt2	2
OFFC329*	Keyboarding I	Opt2	1
COMS181	Intro to Computer Literacy	Opt3	3
OFFC340	Intro to Office Computer Applications	Opt3	3
OFFC341	Advanced Office Computer Applications	Opt3	3
ENGL118	Composition II	Opt4	3
ENGL119	Technical and Business Writing	Opt4	3
ENGL410*	Communication Skills	Opt4	3
MGMT203	Human Relations in Business	Opt5	3
PSCH101	General Psychology	Opt5	3
BSAD243	Quantitative Methods	Opt6	4
MATH121	Elementary Statistics	Opt6	4

### Elective Courses

Electives 3

## Accounting Technician

The Accounting Technician prepares students for careers as accounting technicians/general bookkeepers. The program is built on a solid base of accounting and bookkeeping theory and includes specialized courses in computer operations along with electives in nonprofit accounting, small business administration and marketing.

Locations: Boone, Urban

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

## Graduation Requirements

To earn an Accounting Technician AAS degree, a student must complete the requirements for the degree, maintain a 2.0 grade point average, and receive a grade of "C" or above in all ACCT and BKKA course work.

### Required Courses

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
ACCT351	Financial Acct/Microcomputers	3
ACCT403	Accounting Internship	3
ACCT404	Accounting Career Seminar	1
ACCT407	Accounting Professional Development	1
BKKA411	Payroll Accounting	2
BSAD150	Intro to Business	3
BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
COOP220	Career-Seeking Skills	2
MATH115	Finite Mathematics	4
MGMT101	Personnel Supervision	3
MGMT102	Introduction to Management	3
OFFC324	Office Calculators	1
SPCH110	Fundamentals of Speech	3

### Option Courses . . . Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
OFFC301*	Typing Skill Development I	Opt2	2
OFFC329*	Keyboarding I	Opt2	1
COMS181	Intro to Computer Literacy	Opt3	3
OFFC340	Intro to Office Computer Applications	Opt3	3
OFFC341	Adv Office Computer Applications	Opt3	3
ENGL118	Composition II	Opt4	3
ENGL119	Technical and Business Writing	Opt4	3
ENGL410*	Communication Skills	Opt4	3
MGMT203	Human Relations in Business	Opt5	3
PSCH101	General Psychology	Opt5	3

### Elective Courses

Electives 15

## Business & Computers

The Business and Computers program is designed to allow students to transfer to a four-year program and additionally qualifies the students for positions as programmers and programmer analysts. The program emphasizes business applications programming. The student studies several programming languages, various levels of operating systems, various types of computer systems, and the peripheral equipment available in the field.

Location: Boone

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration sessions. Submit evidence of grade "C" or better in one year of high school Algebra or equivalent (Academic Achievement Center Algebra I & II or Math 092). Students start any term.

## Graduation Requirements

To earn a Business and Computers AS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
ACCT101	Principles of Accounting I	4
ACCT351	Financial Accounting/Microcomputers	3
BSAD150	Intro to Business	3
BSAD152	Business Statistics	4
COMS125	Business Programming COBOL I	3
COMS126	Business Programming COBOL II	4
COMS174	Applied Programming I Pascal	3
COMS176	Applied Programming II	4
COMS181	Intro to Computer Literacy	3
MATH115	Finite Mathematics	4

### Option Courses . . . Select 1 Course From Option 1

COMS172	Computer Programming-FORTRAN	Opt1	2
DATA231	RPG/II	Opt1	3

### Elective Courses

Electives 15

# Educational Programs

## Business Administration

The Business Administration program offers the student a number of career & educational opportunities. The curriculum is designed for career oriented students who desire career positions in business; college transfer students who wish to complete a four-year degree; working adults who want to complete their associate degree, gain advancement opportunities, or who are considering a career change.

Unique features of the Business Administration curriculum include: introductory business studies in business administration areas, a complement of arts and science transfer courses, and an Associate in Science degree.

This program helps prepare the student for a career, or should the student decide to transfer to a four-year college, this program provides a curriculum that will satisfy most freshman and sophomore Business Administration requirements of four-year colleges. The Student Development Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for college transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Locations: Ankeny, Boone, Carroll, Urban

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Business Administration AS degree, a student must complete the standard core requirements for the degree, plus the Business Administration required courses and options and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
BSAD150	Intro to Business	3
BUSL101	Business Law I	3
COMS181	Intro to Computer Literacy	3
ECON101	Principles of Macro-Economics	3
ECON102	Principles of Micro-Economics	3

### Option Courses . . . Select 4 Courses From Option 1

BSAD151	Personal Finance	Opt1	3
BSAD201	Principles of Banking	Opt1	3
BSAD224	Introduction To Investments	Opt1	3
BSAD225	Principles of Insurance	Opt1	3
BSAD226	Principles of Real Estate	Opt1	3
BSAD243	Quantitative Methods	Opt1	4
BUSL102	Business Law II	Opt1	3
DATA103	BASIC	Opt1	3
MGMT102	Introduction to Management	Opt1	3
MGMT229	Small Business Management	Opt1	3
MKTG102	Principles of Marketing	Opt1	3
MKTG103*	Principles of Selling	Opt1	3

### Elective Courses

Electives	5
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## Computer Programming

The Computer Programming curriculum prepares students for a position as a computer programmer or programmer analyst. With additional experience, graduates can advance to positions as systems analysts and programming managers.

The major curriculum focus is on technical courses which lead to proficiency in designing, writing and testing computer programs. The program also emphasizes the understanding of business and accounting principles since the majority of programming applications relate to specific business problems.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Computer Programming AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

ACCT101	Principles of Accounting I	4
BSAD150	Intro to Business	3
COMS181	Intro to Computer Literacy	3
COOP220	Career-Seeking Skills	2
DATA301	DOS Job Control	4
DATA304	COBOL/Beginning	4
DATA306	COBOL/Intermediate	4
DATA308	COBOL/Advanced	3
DATA310	Program Logic Design	4
DATA319	Assembler/Beginning	4
DATA321	Assembler/Intermediate	4
DATA334	Applications Programming	6
DATA341	Database Programming	3
DATA352	Telecommunications/CICS Programming	4
DATA382	Systems Analysis	4
ENGL117	Composition I	3
MATH	Any MATH 100 level or higher	
OFFC329*	Keyboarding I	1
SPCH110	Fundamentals of Speech	3

### Select 1 Course From Option 1 And 2 Courses From Option 2

MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
SOCY101	Introduction to Sociology	Opt1	3
DATA103	BASIC	Opt2	3
DATA221	PL/I	Opt2	3
DATA231	RPG/II	Opt2	3
DATA318	Intro "C++" Programming	Opt2	3
DATA327	Assembler/Advanced	Opt2	4

## Fashion Merchandising & Design

Challenges and rapid advancement opportunities set in an exciting atmosphere of change, fast paced business decisions and competition are offered to you in a fashion career. Take part in the action in management, designing, buying, marketing or promotion, sales, customer service and visual merchandising positions.

The curriculum has been designed with the help of employers in the fashion industry. Many students achieve management positions upon graduation or shortly thereafter because of the specialized course work and individual effort. Graduates interested in design usually transfer to a four year program for more specialization.

Instruction is based upon lectures, labs, internships, speakers and a variety of conferences and field studies in fashion centers such as New York City.

Two majors are offered in the Fashion program. Upon successful completion of the Fashion Merchandising and Design program students will receive an AAS degree. Students with a shorter term educational goal may receive a diploma.

Fashion Merchandising and Design emphasizes career development along with transfer options for students planning on attending a four year college. Contact a DMACC counselor or advisor for transfer planning assistance.

A fashion career offers variety and flexibility. Jobs for career oriented individuals are plentiful. Pay is based on salary plus bonuses with high potential as a reward for effort.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

# Educational Programs

## Graduation Requirements

To earn a Fashion diploma or AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses-Fashion Merchandising & Design AAS Degree

MKTG231*	Fashion Analysis & Design	3
MKTG321	Retail Management I	3
MKTG323	Visual Merchandising/Design	2
MKTG324	Fashion Buying	3
MKTG332*	Textiles	3
MKTG331	Fashion Coordination/Promotion	3
MKTG102	Principles of Marketing	3
MKTG103*	Principles of Selling	3
MKTG104	Advertising/Sales Promotion	3
MGMT101	Personnel Supervision	3
MGMT341*	Business Internship I	6
MGMT342	Internship Seminar I	2
MGMT353	Business Internship II	4
MGMT358	Internship Seminar II	1
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
BSAD150	Intro to Business	3
COOP220	Career-Seeking Skills	2

### Option Courses . . . Select 1 Course From Each Option

MKTG233	Design Concepts	Opt1	3
MKTG322	Retail Management II	Opt1	3
MGMT229	Small Business Management	Opt1	3
DKTP401*	Intro To Desktop Publishing	Opt2	3
COMS181	Intro to Computer Literacy	Opt2	3
OFFC340	Intro to Office Computer Application	Opt2	3
ENGL117	Composition I	Opt3	3
ENGL410*	Communication Skills	Opt3	3
MGMT203	Human Relations in Business	Opt4	3
PSCH101	General Psychology	Opt4	3
BSAD223	Business/Financial Math	Opt5	3
MATH115	Finite Mathematics	Opt5	4
SPCH110	Fundamentals of Speech	Opt6	3
SPCH111	Public Communication	Opt6	3
SPCH117	Interpersonal & Small Group Comm	Opt6	3

### Elective Courses

Electives 5-6

### Required Courses - Fashion Merchandising Diploma

MKTG231	Fashion Analysis & Design	3
MKTG321	Retail Management I	3
MKTG323	Visual Merchandising/Design	2
MKTG332	Textiles	3
MKTG102	Principles of Marketing	3
MKTG103*	Principles of Selling	3
MGMT341	Business Internship I	6
MGMT342	Internship Seminar I	2
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
BSAD150	Intro to Business	3
COOP220	Career-Seeking Skills	2

### Option Courses-Select 1 Course From Each Option

MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
BSAD223	Business/Financial Math	Opt2	3
MATH115	Finite Mathematics	Opt2	4
ENGL117	Composition I	Opt3	3
ENGL410*	Communication Skills	Opt3	3

## Legal Administrative Assistant

The Legal Administrative Assistant program is designed to prepare students to assist the attorney with the day-to-day operations of the law office.

The students will study the basic skills needed. They will also gain an understanding of the various areas of the law and learn to produce documents that are unique to each area.

Location: Urban

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration sessions. Students must

demonstrate typing skill of 40 WPM or successful completion of OFFC 301 Typing Skill Development I before enrolling in the Legal Administrative Assistant program.

## Graduation Requirements

To earn a Legal Administrative Assistant AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

OFFC205	Business English	3
OFFC302*	Typing Skill Development II	2
OFFC331	Legal Terminology	3
OFFC337	Word Processing I	3
OFFC340	Intro to Office Computer Application	3
OFFC403	Professionalism I	1

### Term 2

BSAD223	Business/Financial Math	3
OFFC206	Correspondence Techniques	3
OFFC304	Legal Typing	3
OFFC338	Word Processing II	3
OFFC341	Advanced Office Computer Application	3
OFFC404	Professionalism II	1

### Term 3

COOP220	Career-Seeking Skills	2
MGMT203	Human Relations in Business	3
OFFC204	Office Procedures	3
OFFC332	Legal Office Transcription	3
OFFC333	Citations and Legal Procedure	3
OFFC334	Legal Office Overview	3

### Term 4 . . . Select 1 Course From Option 1

BUSL101	Business Law I	3
MGMT153	Office Management	3
OFFC409	Internship/Seminar	4
SPCH117	Interpersonal & Small Group Communication	3
ACCT301*	Accounting Fundamentals	Opt1 3
OFFC221	Medical Terminology I	Opt1 3

## Management

The Management program will prepare you with people skills and organizational systems knowledge to succeed and earn promotions in the company or institutional environment of your choice. Experience and leadership skills are gained through on-the-job training and participation in a local, state and national management development association.

Course work in the management program includes: communications and human relations, management and supervision, information processing, problem solving and computer applications, team building and leadership development, and organizational and human resource development.

Graduates of the program have found positions as general managers, supervisors, assistant personnel managers, office managers, manufacturing and distribution managers, production supervisors, parts and inventory managers, business owners, customer service representatives, training coordinators, sales managers, buyers, and purchasing agents. Advanced management positions are available to those who enter the work force and demonstrate strong, individual skills and knowledge.

The Management program emphasizes career development along with transfer options for students planning on attending a four year college. Contact a DMACC counselor or advisor for transfer planning assistance.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

\*Course approved for High School Articulation

# Educational Programs

## Graduation Requirements

To earn a Management AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

MGMT101	Personnel Supervision	3
MGMT102	Introduction to Management	3
MGMT103	Sales Management	3
MGMT104	Organizational Behavior	3
MGMT241	Production Management	3
MGMT242	Human Resource Management	3
MGMT243	Management of Information	3
MGMT344	Field Experience I Seminar	2
MGMT345	Field Experience I	6
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
MKTG102	Principles of Marketing	3
MKTG103*	Principles of Selling	3
BSAD150	Intro to Business	3
BPQ1400	Total Quality Management	3
COOP220	Career-Seeking Skills	2

### Option Courses . . . Select 1 Course From Each Option

COMS181	Intro to Computer Literacy	Opt1	3
DKTP401*	Intro to Desktop Publishing	Opt1	3
OFFC340	Intro to Office Computer Applications	Opt1	3
ENGL117	Composition I	Opt2	3
ENGL410*	Communication Skills	Opt2	3
ACCT101	Principles of Accounting I	Opt3	4
ACCT301*	Accounting Fundamentals	Opt3	3
MGMT250	Fundamentals of Purchasing Mgmt.	Opt4	3
MKTG324	Fashion Buying	Opt4	3
MGMT203	Human Relations in Business	Opt5	3
PSCH101	General Psychology	Opt5	3
BSAD223	Business/Financial Math	Opt6	3
MATH115	Finite Mathematics	Opt6	4
SPCH110	Fundamentals of Speech	Opt7	3
SPCH111	Public Communication	Opt7	3
SPCH117	Interpersonal & Small Group Communication	Opt7	3

### Elective Courses

Electives 5-6

## Marketing

Looking for a growth-oriented career...something fast paced, ever changing and challenging, with opportunities for advancement and pay to match? Today a career in Marketing offers all this and more. You could be working for some of the fastest growing companies and brightest leaders in business today. By using your skills and creativity you will become part of the future in American business.

Coursework is designed with the help of successful marketers who know what it takes to succeed. Classroom instruction is based on lectures, labs, speakers, internships, and study tours. Major areas of study include marketing, sales, advertising, promotion, and understanding buyer behavior in small business, retail and business to business marketing environments. The Marketing Program also offers many opportunities to develop and demonstrate leadership skills.

Many graduates of the Marketing Program have gone on to become marketing managers, regional marketing supervisors, professional sales and customer service representatives. Some have gone on to own their own businesses and others have found careers as managers, merchandisers and buyers in the retail community. Graduates from the Marketing Program are responsible for creating and/or executing marketing strategies, hiring, training, and supervising employees. They are also responsible for buying and selling product offerings, and planning promotions and advertising campaigns. Careers in marketing are listed as one of the fastest growing areas for the 1990's. Research indicates that about one-third of the labor force is now employed in marketing. Marketing careers offer flexibility, mobility, and pay to match your ability.

The Marketing Program emphasizes career development along with transfer options for students planning on attending a four-year college.

Contact a DMACC counselor or advisor for transfer planning assistance.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Marketing AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

MKTG102	Principles of Marketing	3
MKTG103*	Principles of Selling	3
MKTG104	Advertising/Sales Promotion	3
MKTG211	Industrial Marketing	3
MKTG232	Selling Strategies	3
MKTG321	Retail Management I	3
MKTG323	Visual Merchandising/Design	2
COOP220	Career-Seeking Skills	2
MGMT101	Personnel Supervision	3
MGMT203	Human Relations in Business	3
MGMT229	Small Business Management	3
MGMT341*	Business Internship I	6
MGMT342	Internship Seminar I	2
MGMT353	Business Internship II	4
MGMT358	Internship Seminar II	1
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
BSAD150	Intro to Business	3
SPCH110	Fundamentals of Speech	3

### Option Courses . . . Select 1 Course From Each Option

COMS181	Intro to Computer Literacy	Opt1	3
DKTP401*	Intro to Desktop Publishing	Opt1	3
OFFC340	Intro to Office Computer Applications	Opt1	3
BSAD223	Business/Financial Math	Opt2	3
MATH115	Finite Mathematics	Opt2	4
ENGL117	Composition I	Opt3	3
ENGL410*	Communication Skills	Opt3	3
ACCT101	Principles of Accounting I	Opt4	4
ACCT301*	Accounting Fundamentals	Opt4	3

### Elective Courses

Electives 5-6

## Medical Office Technology

The Medical Office Technology program is designed to prepare the student to work in a variety of medical settings, including hospitals/medical centers, clinics, physician offices, health insurance companies, and other health-related businesses.

In addition to detailed office duties, the medical office technician acts as a liaison between the physician and the patient and is an important person in building and maintaining good relations with those people who are seeking medical assistance.

The medical office technician has a variety of responsibilities such as receptionist, transcriptionist, insurance claims specialist, and/or book-keeper.

Upon successful completion of Terms 1, 2, and 3 of the Medical Office Technology curriculum, a student may receive a diploma. Upon completion of the diploma program and Term 4, a student may receive an AAS Degree.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Submit evidence of typing skill of 40 WPM with no errors or enroll in Typing Skill Development I (OFFC 301) first term. Students start fall term.



# Educational Programs

## Graduation Requirements

To earn a Medical Office Technology diploma or AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

OFFC205	Business English	3
OFFC221	Medical Terminology I	3
OFFC325	Medical Word Processing	3
OFFC340	Intro to Office Computer Applications	3
OFFC403	Professionalism I	1
OFFC430	Medical Transcription I	3

### Term 2

COOP220	Career-Seeking Skills	2
MGMT203	Human Relations in Business	3
OFFC222	Medical Terminology II	3
OFFC302*	Typing Skill Development II	2
OFFC324	Office Calculators	1
OFFC326	Medical Insurance	3
OFFC404	Professionalism II	1
OFFC431	Medical Transcription II	3

### Term 3

BSAD223	Business/Financial Math	3
OFFC223	Medical Transcription III	3
OFFC320	Human Body-Health and Disease	3
OFFC433	Medical Techniques	3

### Term 4... Select 1 Course From Option 1 And 2 Credits From Option 2

ACCT301*	Accounting Fundamentals	3
OFFC206	Correspondence Techniques	3
OFFC328	Internship for Medical Secretaries	4
OFFC341	Advanced Office Computer Applications	3
SPCH110	Fundamentals of Speech	Opt1 3
SPCH117	Interpersonal & Small Group Communication	Opt1 3
ACCT	any Accounting	Opt2
BSAD	any Business Administration	Opt2
BUSL	any Business Law	Opt2
COMS	any Computer Science	Opt2
DATA	any Data Processing	Opt2
MGMT**	any Management	Opt2
MKTG**	any Marketing	Opt2
OFFC**	any Office	Opt2

\*\* The following courses are approved for high school articulation for these categories:

MGMT341	Business Internship I	6
MKTG103	Principles of Selling	3
MKTG231	Fashion Analysis & Design	3
MKTG332	Textiles	3
OFFC301	Typing Skill Development I	2
OFFC302	Typing Skill Development II	2
OFFC329	Keyboarding I	1

## Office Technology

Office technology workers are employed by every size and type of public and private business organization. The Office Technology programs focus on developing skills in typing, records management, data and information processing, accounting and word processing. Students will have the opportunity to learn on a wide range of automated business machines using the latest in equipment, software and procedures.

Upon successful completion of Terms 1 and 2 of the Office Technology curriculum students may receive a diploma. By completing the diploma program and Terms 3 and 4, a student may receive an AAS Degree.

Locations: Ankeny, Boone, Carroll, Urban

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

## Graduation Requirements

To earn an Office Technology diploma or AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

BSAD223	Business/Financial Math	3
OFFC205	Business English	3
OFFC301*	Typing Skill Development I	2
OFFC324	Office Calculators	1
OFFC337	Word Processing I	3
OFFC340	Intro to Office Computer Applications	3
OFFC403	Professionalism I	1

### Term 2

COOP220	Career-Seeking Skills	2
MGMT203	Human Relations in Business	3
OFFC204	Office Procedures	3
OFFC302*	Typing Skill Development II	2
OFFC338	Word Processing II	3
OFFC344	Machine Transcription	3
OFFC404	Professionalism II	3

### Term 3... Select 1 Course From Option 1

ACCT301*	Accounting Fundamentals	3
MGMT153	Office Management	3
OFFC206	Correspondence Techniques	3
OFFC341	Advanced Office Computer Applications	3
SPCH110	Fundamentals of Speech	Opt1 3
SPCH117	Interpersonal & Small Group Comm	Opt1 3

### Term 4... Select 9 Credits From Option 2

OFFC345	Advanced Word Processing Applications	3
OFFC409	Internship/Seminar	4
ACCT	any Accounting	Opt2
BSAD	any Business Administration	Opt2
BUSL	any Business Law	Opt2
COMS	any Computer Science	Opt2
DATA	any Data Processing	Opt2
MGMT**	any Management	Opt2
MKTG**	any Marketing	Opt2
OFFC**	any Office	Opt2

\*\* The following courses are approved for high school articulation for these categories:

MGMT341	Business Internship I	6
MKTG103	Principles of Selling	3
MKTG231	Fashion Analysis & Design	3
MKTG332	Textiles	3
OFFC301	Typing Skill Development I	2
OFFC302	Typing Skill Development II	2
OFFC329	Keyboarding I	1

## Retail Merchandising

Retail organizations are constantly recruiting individuals with training in the areas of retailing, sales, store management, and customer relations. Retailing provides a dynamic and exciting work environment that rewards high performance with rapid job promotions and pay increases to match.

Retailing is a growth industry with almost an endless number of career opportunities available to graduates of the program. Past graduates are now in careers that include: store managers, department managers, visual merchandisers, chain store supervisors, professional sales of automotive, home improvement and computer products, and owners of their own businesses.

Personal, professional and leadership development is provided through lectures, study tours, labs, and speakers. Practical experience is gained through paid internships with leading retail companies.

Students completing the retail program can transfer all their credits into any of DMACC's two-year Marketing or Management programs.

Location: Ankeny

# Educational Programs

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

## Graduation Requirements

To earn a Retail Merchandising diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

## Required Courses

MKTG102	Principles of Marketing	3
MKTG103*	Principles of Selling	3
MKTG104	Advertising/Sales Promotion	3
MKTG321	Retail Management I	3
MKTG322	Retail Management II	3
MKTG323	Visual Merchandising/Design	2
BSAD150	Intro to Business	3
BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2
MGMT203	Human Relations in Business	3
MGMT342	Internship Seminar I	2
MGMT361	Retail Merchandise Internship I	6
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1

## Option Courses . . . Select 1 Course From Option 1

ENGL117	Composition I	Opt1	3
ENGL410*	Communication Skills	Opt1	3

## Sales and Management

The Sales and Management program offers sales and management skill development. Many opportunities exist for the highly-motivated, people-oriented, goal-setting individual who wants to quickly move into a sales or management industry-sponsored training program.

Specific benefits of the program include rapid development of sales and management skills, total transferability into any of DMACC's two-year Marketing and Management AAS degree programs, and the satisfaction of gaining self-confidence as marketing skills are acquired.

The student will have the opportunity to enroll in the program during either days or evenings at the beginning of each term. In addition, the program offers: opportunities to earn as you learn through on-the-job training, opportunities to gain advanced standing with prior occupational experience (after evaluation by the program chairperson), and leadership training at local, state and national levels through involvement in the Sales and Management Club.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

## Graduation Requirements

To earn a Sales and Management diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

## Required Courses

MGMT101	Personnel Supervision	3
MGMT203	Human Relations in Business	3
MGMT344	Field Experience I Seminar	2
MGMT345	Field Experience I	6
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
MKTG103*	Principles of Selling	3
MKTG232	Selling Strategies	3
BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2

## Option Courses . . . Select 1 Course From Each Option

COMS181	Intro to Computer Literacy	Opt1	3
DKTP401*	Intro To Desktop Publishing	Opt1	3
OFFC340	Intro to Office Computer Applications	Opt1	3
MGMT102	Introduction to Management	Opt2	3
MGMT103	Sales Management	Opt2	3
ENGL117	Composition I	Opt3	3
ENGL410*	Communication Skills	Opt3	3
BSAD150	Intro to Business	Opt4	3
MKTG102	Principles of Marketing	Opt4	3

## Small Business Management

The many rewards and challenges of owning your own business are being realized by increasing numbers of people. The Small Business Management program will help you put together or improve your plans for being successful in owning or operating a small business. In addition to innovative marketing strategies, creative financing methods and employee development skills, the program emphasizes personal development in accounting, supervision, communication and relationship management. Both day and evening courses are offered.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

## Graduation Requirements

To earn a Small Business Management diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

## Required Courses

MGMT101	Personnel Supervision	3
MGMT229	Small Business Management	3
MGMT301	Small Business Finance and Law	3
MGMT302	Small Business Management Development	3
MGMT303	Small Business Marketing	3
MKTG103*	Principles of Selling	3
COOP212	Coop Career Seminar	1
COOP225	Coop Career Experience	5

## Option Courses . . . Select 1 Course From Each Option

ACCT101	Principles of Accounting I	Opt1	4
ACCT301*	Accounting Fundamentals	Opt1	3
BSAD223	Business/Financial Math	Opt2	3
MATH115	Finite Mathematics	Opt2	4
ENGL410*	Communication Skills	Opt3	3
ENGL117	Composition I	Opt3	3
MGMT203	Human Relations in Business	Opt4	3
PSCH101	General Psychology	Opt4	3

## Certificates of Specialization

### Accounting Basic

The Accounting Basic certificate prepares the student for an entry level position in the field of bookkeeping and recordkeeping. Upon completion, the successful candidate will be able to distinguish, analyze, summarize, communicate, and record economic events for a profit oriented entity at the trainee level.

Employment opportunities are currently found in commercial businesses, government offices, public accounting firms and similar enterprises.

## Required Courses

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
ACCT351	Financial Accounting/Microcomputers	3
BSAD223	Business/Financial Math	3

## Option Courses...Select 1 Course From Each Option

ACCT103	Intermediate Accounting I	Opt1	4
ACCT105	Nonprofit Accounting	Opt1	3
ACCT203	Cost Accounting	Opt1	4
COMS181	Intro to Computer Literacy	Opt2	3
MGMT229	Small Business Management	Opt2	3

# Educational Programs

## Accounting Advanced

The Accounting Advanced certificate prepares the student for an entry-level position in the field of accounting and bookkeeping. Upon completion, the successful candidate will be able to distinguish, analyze, summarize, communicate, and record economic events for a profit oriented entity at the entry level.

Technical courses in intermediate accounting, computers, and cost accounting allow students to seek advanced level placement in some cases.

Employment opportunities are currently found in commercial businesses, government offices, and public accounting firms.

### Required Courses

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
ACCT103	Intermediate Accounting I	4
ACCT203	Cost Accounting	4
ACCT351	Financial Accounting/Microcomputers	3
BSAD223	Business/Financial Math	3
COMS181	Intro to Computer Literacy	3
OFFC324	Office Calculators	1

### Option Courses...Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
ENGL118	Composition II	Opt2	3
ENGL119	Technical and Business Writing	Opt2	3
ENGL410	Communication Skills	Opt2	3
ACCT104	Intermediate Accounting II	Opt3	4
ACCT105	Nonprofit Accounting	Opt3	3
ACCT352	Managerial Acct/Microcomputers	Opt4	3
MGMT229	Small Business Management	Opt4	3

## Administrative Support

The purpose of the Administrative Support certificate is to provide office workers with training to assume a variety of administrative functions in today's office. Skills taught to previously trained office workers include communication, record keeping, and decision making to enhance their advancement.

### Required Courses

OFFC204	Office Procedures	3
OFFC205	Business English	3
OFFC206	Correspondence Techniques	3
OFFC302	Typing Skill Development II	2
OFFC337	Word Processing I	3
OFFC338	Word Processing II	3
OFFC340	Intro to Office Computer Applications	3
OFFC344	Machine Transcription	3

## Advanced Purchasing Operations

This purchasing certificate is designed to increase the skills and knowledge of professionals who are currently engaged in the purchasing profession. It will provide the student with more detailed information on the business areas of accounting, business law, inventory control and quality control as they relate to the purchasing function. It will also assist the student in preparing for the N.A.P.M. certification exam modules 3 and 4. Computer skills for this certificate are recommended, but not required. This certificate was developed with the assistance of members of the Central Iowa Purchasing Management Association.

### Required Courses

ACCT308	Managerial Accounting for Non-Accountants	3
BPQI401	Introduction to Statistical Process Control	3
BUSL112	Law of Purchasing and Sales	3
CIM-409	Inventory Management and Planning	3
CIM-417	Advanced Purchasing Operations	3
ECON102	Principles of Micro-Economics	3

## Clerical Specialist

The purpose of the Clerical Specialist certificate is to provide students with basic entry-level skills for this occupation. These skills include typing, proofreading, business English, human relations, office calculator skills, microcomputer operations and office etiquette. Graduates of the certificate will qualify for a variety of entry-level clerical positions.

### Required Courses

BSAD223	Business/Financial Math	3
MGMT203	Human Relations in Business	3
OFFC205	Business English	3
OFFC302	Typing Skill Development II	2
OFFC324	Office Calculators	1
OFFC340	Intro to Office Computer Applications	3
OFFC403	Professionalism I	1

## Computer Languages

The purpose of the Computer Languages certificate is to provide the student who is presently employed in computer operations or who has strong business computer applications experience in word processing, spreadsheets and databases with the knowledge of how to design, write and execute computer programs to solve specific business problems.

### Required Courses

ACCT101	Principles of Accounting I	4
COMS181	Intro to Computer Literacy	3
DATA304	COBOL/Beginning	4
DATA306	COBOL/Intermediate	4
DATA319	Assembler/Beginning	4
DATA382	Systems Analysis	4

### Option Courses...Select 6 Credits From Option 1

DATA103	BASIC	Opt1	3
DATA104	BASIC/Advanced	Opt1	3
DATA110	Microcomputer Systems Design	Opt1	3
DATA221	PL/I	Opt1	3
DATA231	RPG/II	Opt1	3
DATA301	DOS Job Control	Opt1	4
DATA308	COBOL/Advanced	Opt1	3
DATA310	Program Logic Design	Opt1	4
DATA321	Assembler/Intermediate	Opt1	4
DATA327	Assembler/Advanced	Opt1	4
DATA330	dBase An Introduction	Opt1	1
DATA331	dBase An Advanced Course	Opt1	2
DATA333	Lotus 1-2-3 Advanced	Opt1	2
DATA338	OS/JCL	Opt1	2
DATA342	Wordstar	Opt1	1
OFFC346	WordPerfect	Opt1	1

## Data Entry I

The purpose of the Data Entry I certificate is to provide classroom and simulated office experience in preparation for entry-level employment for data entry operators.

Graduates of the Data Entry I program locate employment in public and private organizations and agencies of all sizes and missions. Beyond entry-level positions as operators, one may advance to department supervisor.

### Required Courses

COOP220	Career-Seeking Skills	2
MGMT203	Human Relations in Business	3
OFFC312	Data Entry	3

# Educational Programs

## Data Entry II

The Data Entry II certificate is a short-term credit program designed to provide students with a basic understanding of computer applications performed in an office. Courses also apply toward one or two-year programs in Office Technology. Students must demonstrate a typing speed of 40 WPM on a five-minute timed writing before enrolling in this certificate.

### Required Courses

COOP220	Career-Seeking Skills	2
MGMT203	Human Relations in Business	3
OFFC205	Business English	3
OFFC312	Data Entry	3

### Option Courses...Select 1 Course from Each Option

OFFC346	WordPerfect	Opt 1	1
OFFC348	WordPerfect for Windows	Opt 1	1
OFFC349	WORD	Opt 1	1
DATA332	Lotus 1-2-3 Introduction	Opt 2	1
DATA345	Spreadsheets	Opt 2	1

## Fashion

The purpose of the Fashion certificate is to provide an individual either currently employed in or wanting to enter the apparel and accessories field with specialized skills to enhance his/her knowledge of retailing and selling as well as develop fashion awareness.

Courses also apply toward one or two-year programs in Fashion Merchandising and Design.

### Required Courses

MKTG231	Fashion Analysis & Design	3
MKTG323	Visual Merchandising/Design	2
MKTG332	Textiles	3
MKTG321	Retail Management I	3
MKTG103	Principles of Selling	3

## Insurance Sales

The purpose of the Insurance Sales certificate is to provide minimal knowledge necessary to become licensed and to learn human relations and marketing elements essential in prospecting and selling insurance coverage. The certificate is also beneficial to current insurance employees who wish to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

BSAD225	Principles of Insurance	3
MGMT203	Human Relations in Business	3
MKTG103	Principles of Selling	3

### Option Courses...Select 2 Courses From Option 1 And 1 Course From Option 2

BSAD150	Intro to Business	Opt1	3
BSAD223	Business/Financial Math	Opt1	3
BUSL101	Business Law I	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT341	Business Internship I	Opt1	6
MKTG102	Principles of Marketing	Opt1	3
MKTG104	Advertising/Sales Promotion	Opt1	3
ENGL117	Composition I	Opt2	3
SPCH110	Fundamentals of Speech	Opt2	3

## Management

The purpose of the Management certificate is to provide the currently employed person in business with broad knowledge of the principles of management and business functions. Human relations and communication skills necessary for recognition and appointment to successive levels of management are also provided. This certificate is also beneficial to people currently employed in management who wish to upgrade and improve chances for further promotion.

Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

MGMT101	Personnel Supervision	3
MGMT102	Introduction to Management	3
MGMT203	Human Relations in Business	3
BSAD150	Intro to Business	3
BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
COMS181	Intro to Computer Literacy	3

### Option Courses...Select 1 Course From Each Option

MGMT103	Sales Management	Opt1	3
MGMT153	Office Management	Opt1	3
MGMT229	Small Business Management	Opt1	3
MGMT241	Production Management	Opt1	3
MGMT250	Fundamentals of Purchasing Mgmt.	Opt1	3
MKTG211	Industrial Marketing	Opt1	3
MKTG321	Retail Management I	Opt1	3
ACCT101	Principles of Accounting I	Opt2	4
ACCT301	Accounting Fundamentals	Opt2	3
ENGL117	Composition I	Opt3	3
ENGL410	Communication Skills	Opt3	3

## Medical Transcriptionist

The purpose of the Medical Transcriptionist certificate is to provide a course of study for medical office technology students to specialize in the area of medical transcription. Employment opportunities are numerous in a variety of settings: hospitals and medical centers, clinic and group practices, radiology and pathology offices, government facilities, private and temporary agencies, and in home offices. In addition to a choice of work settings, the medical transcriptionist can usually choose part-time or full-time employment and frequently flexible scheduling.

### Required Courses

OFFC346	WordPerfect	1
OFFC221	Medical Terminology I	3
OFFC222	Medical Terminology II	3
OFFC223	Medical Transcription III	3
OFFC320	Human Body-Health and Disease	3
OFFC430	Medical Transcription I	3
OFFC431	Medical Transcription II	3

## Microcomputer Application

The purpose of the Microcomputer Application certificate is to provide students with a basic understanding of the computer applications that may be performed in an office. At the completion of the program a student will be able to complete the following software applications: word processing, data base, desktop publishing, graphics, calendar, spreadsheet, electronic mail, Windows, and DOS commands.

### Required Courses

OFFC337	Word Processing I	3
OFFC338	Word Processing II	3
OFFC340	Intro to Office Computer Applications	3
OFFC341	Advanced Office Computer Applications	3

## Microcomputers

This certificate is designed for people who desire to learn about operating and networking systems and who have strong business computer applications skills in word processing, spreadsheets and databases. It is most appropriate for people employed in small businesses where the employer wants their employee/s to upgrade their business computer applications skills and assume responsibility for a network.

### Required Courses

BSAD150	Intro to Business	3
COMS181	Intro to Computer Literacy	3
DATA106	Microcomputers in Business	3
DATA110	Microcomputer Systems Design	3

# Educational Programs

## Option Courses...Select 3 Courses From Opt 1

ACCT101	Principles of Accounting I	Opt1	4
ACCT102	Principles of Accounting II	Opt1	4
ACCT351	Financial Acct/Microcomputers	Opt1	3
ACCT352	Managerial Acct/Microcomputers	Opt1	3
COMS174	Applied Programming I Pascal	Opt1	3
DATA103	BASIC	Opt1	3

## Purchasing Management

The Purchasing Management certificate is designed to provide those students interested in working in the purchasing profession with the basic knowledge and skills needed to perform entry-level job responsibilities. Courses in this certificate will provide students with a background in the basics of general business law, economics, purchasing, quality and communication skills. This certificate also assists students who are preparing to take the examination for modules 1 and 2 to earn their Certified Purchasing Manager designation. This certificate was developed with the assistance of members of the Central Iowa Purchasing Management Association.

### Required Courses

MGMT250	Fundamentals of Purchasing Mgmt.	3
BUSL101	Business Law I	3
ECON101	Principles of Macro-Economics	3
BPQI400	Total Quality Management	3
ENGL410	Communication Skills	3

### Option Courses...Select 1 Course From Option 1

CIM-411	Production & Capacity Management	Opt1	3
MGMT153	Office Management	Opt1	3
MKTG102	Principles of Marketing	Opt1	3
MKTG324	Fashion Buying	Opt1	3
AGRI322	Agri Business Management	Opt1	3

## Real Estate Sales

The purpose of the Real Estate Sales certificate is to provide knowledge necessary to become licensed and to study human relations and marketing elements essential in prospecting and selling real estate property. The certificate is also beneficial to currently employed real estate people wishing to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

BSAD226	Principles of Real Estate	3
BUSL101	Business Law I	3
MGMT203	Human Relations in Business	3
MKTG103	Principles of Selling	3

### Option Courses...Select 2 Courses From Option 1 And 1 Course From Option 2

BSAD150	Intro to Business	Opt1	3
BSAD223	Business/Financial Math	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT341	Business Internship I	Opt1	6
MKTG104	Advertising/Sales Promotions	Opt1	3
ENGL117	Composition I	Opt2	3
SPCH110	Fundamentals of Speech	Opt2	3

## Retailing

The Retailing certificate offers skills for entering the world of retail marketing and merchandising and for those already employed who wish to move to higher levels of responsibility.

A growing number of job openings exist for those who want a career that is both challenging and rewarding. All courses are transferable into the one year diploma and the two year degree Retail Merchandising, Management, and Marketing programs.

### Required Courses

MKTG321	Retail Management I	3
MKTG103	Principles of Selling	3
MKTG323	Visual Merchandising/Design	2
MGMT407	Professional Development Seminar	1

## Sales

The purpose of the Sales certificate is to provide persons with knowledge of the basic principles of selling and marketing and the elements of human relations and communication required to enter the field of selling. Courses also apply toward one and two-year programs in marketing and management. This program is offered both during the evening and the day.

### Required Courses

MKTG103	Principles of Selling	3
MKTG102	Principles of Marketing	3
MGMT203	Human Relations in Business	3
MGMT407	Professional Development Seminar	1
MGMT406	Human Potential	2

### Option Courses...Select 1 Course From Option 1

ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3

## Small Business

The Small Business certificate introduces the student to creative and tested ways to start and operate a small business. Innovative marketing strategies, creative financing methods and employee development skills are emphasized in the program. Both day and evening courses are offered and all course work transfers into the one year Small Business Management program.

### Required Courses

MGMT229	Small Business Management	3
MGMT301	Small Business Finance and Law	3
MGMT302	Small Business Mgmt Development	3
MGMT303	Small Business Marketing	3

## Supervision

The purpose of the Supervision certificate is to provide the person currently employed in business with knowledge of the principles of supervising others and the elements of human relations and communication needed for promotion and success in first line supervision. The certificate is also beneficial to people currently working as supervisors who wish to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

### Required Courses

MGMT101	Personnel Supervision	3
MGMT102	Introduction to Management	3
MGMT203	Human Relations in Business	3

### Option Courses...Select 6 Credits From Option 1 And 1 Course From Option 2

BSAD150	Intro to Business	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT153	Office Management	Opt1	3
MGMT229	Small Business Management	Opt1	3
MGMT341	Business Internship I	Opt1	6
MKTG103	Principles of Selling	Opt1	3
MKTG211	Industrial Marketing	Opt1	3
MGMT250	Fundamentals of Purchasing Mgmt.	Opt1	3
MKTG321	Retail Management I	Opt1	3
ENGL117	Composition I	Opt2	3
ENGL410	Communication Skills	Opt2	3

# Educational Programs

## Technical Management

The Technical Management certificate is designed for employed workers who seek skills in a manufacturing environment.

The emphasis in the program is on course work which is directly related to the supervisory, financial, quantitative and marketing functions which impact on the manufacturing supervisor. The program is responsive to requests from industrial training directors.

### Required Courses

ACCT101	Principles of Accounting I	4
ACCT102	Principles of Accounting II	4
BSAD152	Business Statistics	4
BSAD243	Quantitative Methods	4
COM5181	Intro to Computer Literacy	3
MGMT102	Introduction to Management	3
MGMT240	Principles of Managerial Finance	3
MGMT241	Production Management	3
MGMT101	Personnel Supervision	3
MKTG102	Principles of Marketing	3

## Travel Personnel

The purpose of the Travel Personnel certificate is to provide students with a basic understanding of the terminology, procedures, and communication skills needed in the travel industry. Certificate holders are trained to qualify for work needed in private agencies as travel agents and in corporate settings as reservationists, travel counselors, and travel planners.

### Required Courses

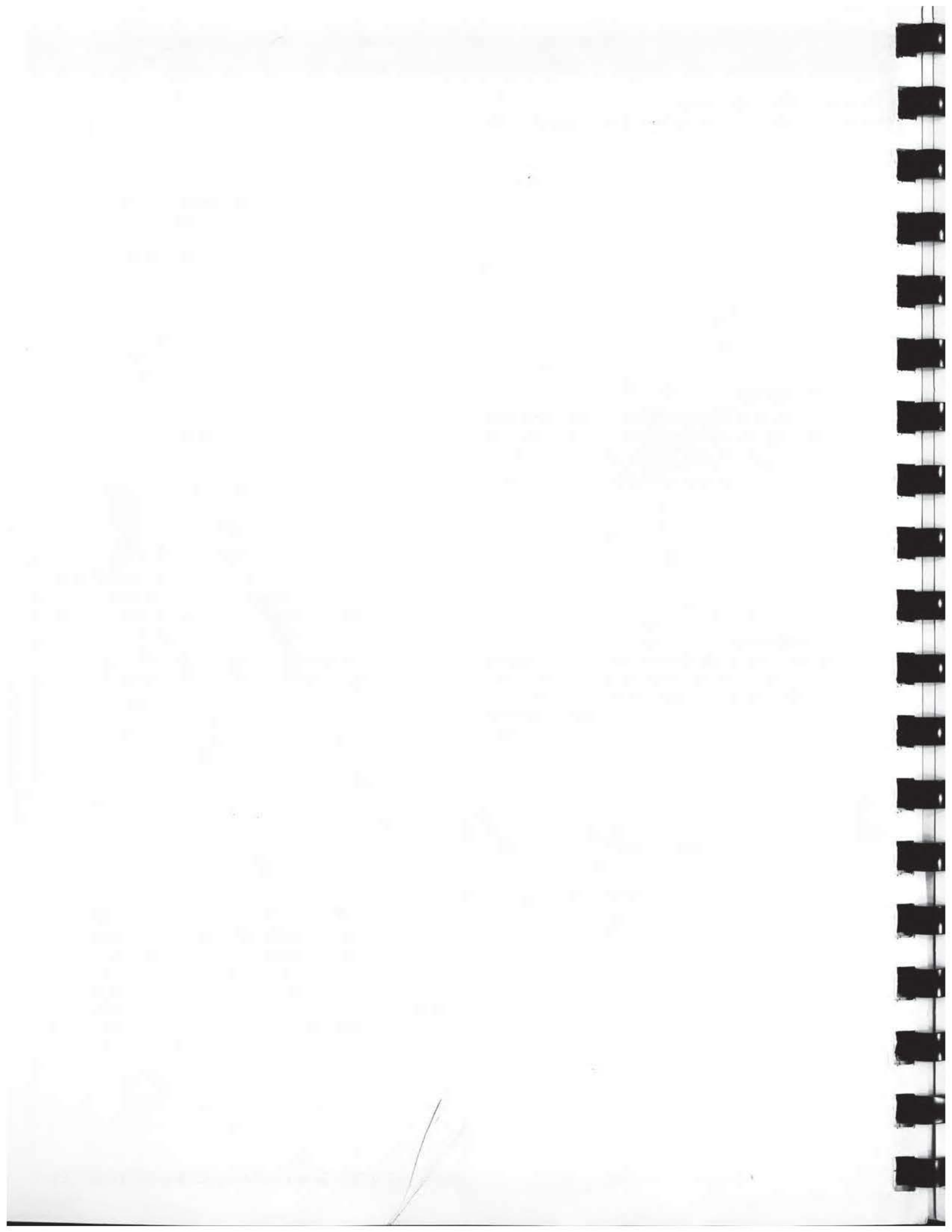
OFFC205	Business English	3
OFFC301	Typing Skill Development I	2
OFFC340	Intro to Office Computer Applications	3
OFFC414	Travel Personnel I	3
OFFC415	Travel Personnel II	3
OFFC416	Selling for Travel Personnel	3
OFFC417	Geography for Travel	3

## Word Processing

The purpose of the Word Processing certificate is to provide students with a basic understanding of word processing concepts and prepare them with the necessary training, knowledge and skills to work as a word processor. Certificate holders can be word processors or secretaries responsible for the written communications of a company or agency.

### Required Courses

OFFC205	Business English	3
OFFC206	Correspondence Techniques	3
OFFC302	Typing Skill Development II	2
OFFC337	Word Processing I	3
OFFC338	Word Processing II	3
OFFC340	Intro to Office Computer Applications	3
OFFC345	Advanced Word Processing Applications	3



Programs provide opportunities for students to address the various health care needs of individuals, families and communities. Students receive theoretical preparation in the classroom as well as practical clinical experience.

Careers available include dental assistant or hygienist in private dental offices, group practices or clinics; medical assistant or medical laboratory technician in private medical offices, clinics or labs; nurse; and respiratory therapist in hospitals, clinics or home health care agencies. All Health Service programs are fully accredited and lead to appropriate certification.

## Diplomas and Degrees

Dental Assistant  
Dental Hygiene  
Health Care Administration  
Medical Assistant  
Medical Laboratory Technician

### **Nursing Programs**

Practical Nursing  
Associate Degree Nursing  
Nursing - Advanced Standing  
Nursing - Advanced Standing - PT

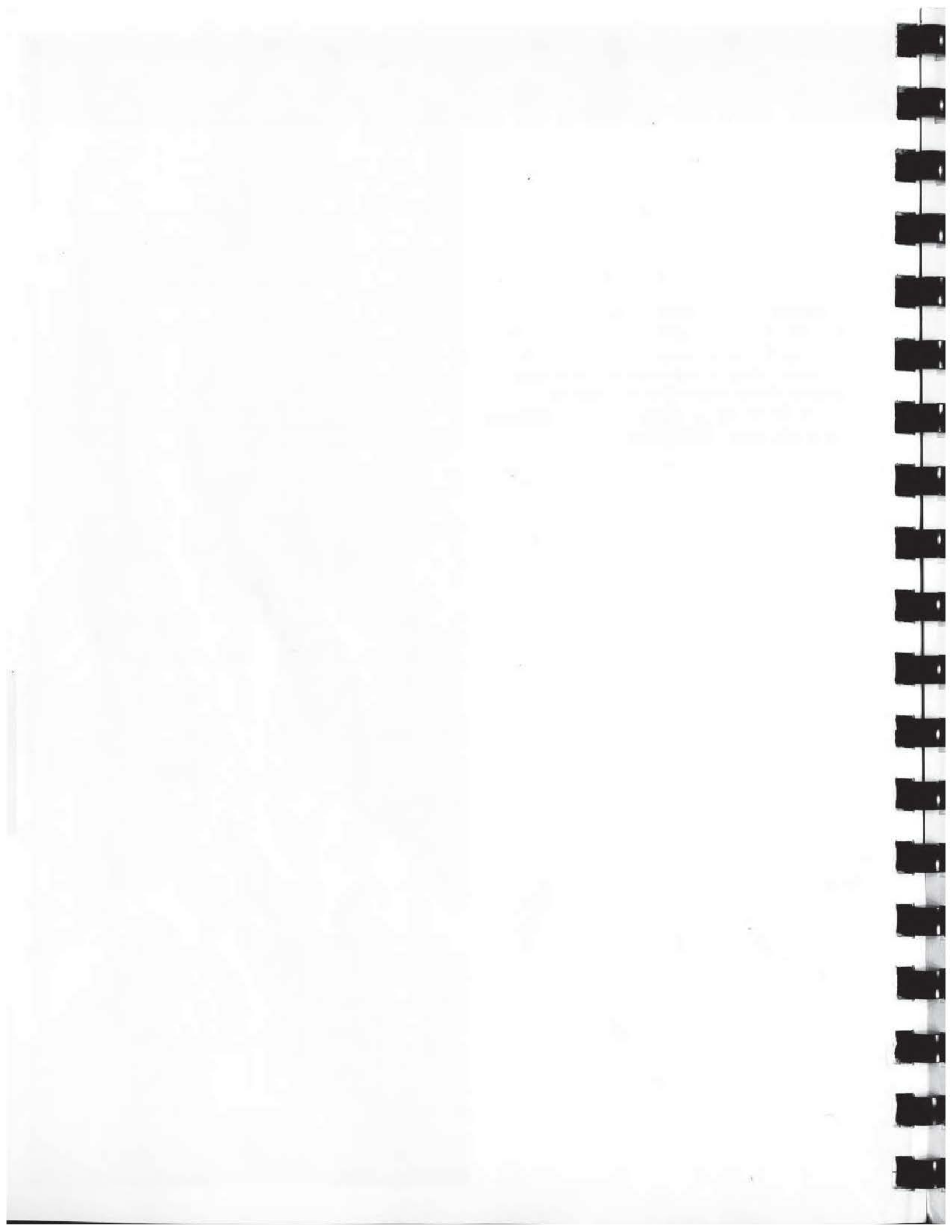
Respiratory Therapy

## Certificates of Specialization

Dietary Manager Specialist  
Emergency Medical Technician - Basic  
Long Term Care Administrator  
Phlebotomy  
Residential Care Facility Administrator







# Educational Programs

## Diplomas and Degrees

### Dental Assistant

The Dental Assistant program prepares the student, as a member of the dental health team, to assist the dentist in all phases of dentistry. The program includes general and specialty dentistry, chairside procedures, radiology, and laboratory and business office assisting.

An integral part of the educational program is clinical experience; this is provided by rotation through various dental facilities.

The Dental Assistant program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council of Postsecondary Accreditation and the United States Department of Education.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Keyboard skill of 35 WPM with no more than 5 errors is strongly recommended. High school biology is strongly recommended. Submit proof of high school graduation or GED prior to enrollment. Students start fall term.

#### Graduation Requirements

To earn a Dental Assistant diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

DENA302	Dental Science I	4
DENA304	Dental Anatomy	2
DENA325	Dental Materials Lab	1
DENA320	Preclinical Dental Assisting	6
DENH201	Dental Materials	2
DENH257	Dental Radiography I	3

#### Term 2

DENA305	Dental Radiography II	2
DENA309	Dental Assisting Seminar	1
DENA310	Dental Assisting Clinical	3
DENA312	Dental Science II	2
DENA322	Clinical Dental Assisting	5
DENA323	Dental Business Office Procedures	2
ENGL117	Composition I	3

#### Term 3

DENA316	Ethics and Clinical Seminar	1
DENA318	Dental Assisting Clinical II	4
PSCH106	Psychology of Human Relations & Adjustment	3
SPCH110	Fundamentals of Speech	3

### Dental Hygiene

The Dental Hygiene curriculum is designed to prepare graduates for positions in general and specialty dental offices, hospitals, schools, public health agencies and industrial agencies.

Students are trained in educational methods and preventive clinical services which qualify them as dental health educators and competent clinicians. Emphasis is placed on the correlation between prevention, education, and the clinical phases of dental hygiene practice as well as basic and social sciences.

The Dental Hygiene program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Council of Postsecondary Accreditation and the United States Department of Education.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session including a Dental Hygiene Program information session. Submit to Admissions office evidence of completion of college level General Chemistry I and General Anatomy and Physiology with a grade of "C" or better (DMACC equivalent course numbers are CHEM 131 and BIOL 154 or BIOL 133 and 134).

NOTE: Students must send their final grade report to the Admissions office upon successful completion of General Chemistry I and General Anatomy and Physiology.

On February 1st and June 15th the applicants who have completed the program entry requirements will be accepted by date of application until such time as the program has filled. Applicants will be notified in writing and will be given seven working days to accept or deny their acceptance in the program.

After the program is full and the applicant has fulfilled all program entry requirements, he/she will be placed on a waiting list until a position in the program becomes available. Applicants will be notified in writing of placement on a waiting list. Students start fall term.

#### Graduation Requirements

To earn a Dental Hygiene AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. Continuation in the program is dependent on achieving a grade of "C" or better in all DENH courses and maintaining a minimum cumulative grade point average of 2.0 in the program.

#### Term 1 . . . CPR Certification

CHEM132	General Chemistry II	4
DENH208	Principles of Dental Hygiene	2
DENH209	Principles of Dental Hygiene Practicum	3
DENH210	Oral Histology and Embryology	2
DENH230	Dental Anatomy	4
DENH257	Dental Radiography I	3

#### Term 2 . . . Select 1 Course From Option 1

DENH228	Dental Hygiene I	2
DENH229	Dental Hygiene I Practicum	4
DENH240	Nutrition/Preventative Dentistry	4
DENH259	Dental Radiography II	2
DENH293	General and Oral Pathology	3
BIOL132	Health Science Microbiology	4
BIOL149	General Microbiology	Opt1 4

#### Term 3

DENH278	Dental Hygiene II	2
DENH279	Dental Hygiene II Practicum	2
DENH280	Periodontology	2
DENH282	Dental Pharmacology	3
PSCH101	General Psychology	3

#### Term 4

DENH201	Dental Materials	2
DENH203	Dental Materials Lab	1
DENH227	Dental Health Education	3
DENH288	Dental Hygiene III	2
DENH281	Dental Hygiene III Practicum	5
SOCY101	Introduction to Sociology	3

#### Term 5 . . . Select 1 Course From Option 2

DENH290	Community Dentistry	3
DENH298	Dental Hygiene IV	2
DENH291	Dental Hygiene IV Practicum	5
ENGL117	Composition I	3
SPCH110	Fundamentals of Speech	Opt2 3
SPCH117	Interpersonal & Small Group Communication	Opt2 3

# Educational Programs

## Health Care Administration

The Health Care Administration program provides students with the opportunity to develop the abilities and skills needed to perform the duties of a health care administrator. Administrators play a vital role in planning, organizing, staffing, directing and controlling the operation of a health care facility. Students in this program will explore specific health care administration areas i.e., management, services, financial, legal, regulations, and human relations.

Students completing the AS degree will have the option of seeking employment in the health care administration field, writing the examination for nursing home administrator licensure, or transferring to a four year college/university.

NOTE: Students desiring to apply for licensure must complete 10 semester credit hours of option courses.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Health Care Administration AS degree, a student must complete the standard core requirements for the degree, plus the Health Care Administration program required courses and options and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
HCAD271	Admin of Long-Term Care	5
HCAD272	Services for Long Term Care	5
SOCY204	Social Gerontology / Applications	4
HCAD251	Practicum: Social Services	1
HCAD252	Practicum: Dietary	1
HCAD253	Practicum: Legal Aspects/Gov't Organization	1
HCAD264	Practicum: Seminar	2
HCAD254	Practicum: Nursing	1
HCAD255	Practicum: Environmental Services	1
HCAD256	Practicum: Activities/Community Resources	1
HCAD264	Practicum: Seminar	2
HCAD257	Practicum: Business Administration	1
HCAD258	Practicum: Administrative Organization	1
HCAD259	Practicum: Human Resource Management	1
HCAD281	Seminar in Health Care	3

### Option Courses . . . Select 1 Course From Each Option

ACCT101	Principles of Accounting I	Opt1	4
ACCT301*	Accounting Fundamentals	Opt1	3
BUSL101	Business Law I	Opt2	3
HCAD273	Law and Long-Term Care	Opt2	4
ACCT102	Principles of Accounting II	Opt3	4
HCAD237	Long-Term Care Financial Mgt.	Opt3	3

## Medical Assistant

The Medical Assistant program is designed to prepare students to be employed in a private physician's office, a clinic, hospital, or laboratory. As multiskilled health professionals, medical assistants perform a variety of clinical procedures and management functions in these settings.

Students gain a basic knowledge of anatomy and physiology, laboratory procedures, office management, and patient care techniques. These subjects are presented in the classroom, through laboratory experience, and in a 10-week supervised clinical experience in the field.

The Medical Assistant program is fully accredited by the Commission of Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Committee of Accreditation for Medical Assistant Education. DMACC graduates are eligible to take the certification examination given by the certifying board of the American Association of Medical Assistants and the State of Iowa Limited Radiographer examination upon completion of the program.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Submit evidence of grade "C" or better in one year of high school biology or equivalent (Academic Achievement Center Biology I & II or BIOL 127). Must also submit evidence of typing/word processing skill of 35 WPM with 5 errors or less. Submit proof of high school graduation or GED prior to enrollment. Students start fall term.

### Graduation Requirements

To earn a Medical Assistant diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all MEDA courses. A student must receive a grade of "C" or better in the first course of a sequential course offering before enrolling in the second level course of the sequence. Sequential courses include MEDA 461 & MEDA 471; MEDA 464 & MEDA 474; MEDA 465 & MEDA 475; MEDA 466 & MEDA 473; MEDA 472 & MEDA 482; and MEDA 473 & MEDA 483.

### Term 1

MEDA461	Human Body-Health and Disease I	4
MEDA462	Medical Terminology	1
MEDA464	Medical Laboratory Procedures I	4
MEDA465	Medical Office Procedures I	3
MEDA466	Medical Office Management I	2
MEDA467	Professional Development I	3
ENGL410*	Communication Skills	3

### Term 2

MEDA471	Human Body-Health and Disease II	4
MEDA472	Diagnostic Radiography I	2
MEDA473	Medical Office Management II	4
MEDA474	Medical Laboratory Procedures II	3
MEDA475	Medical Office Procedures II	3
MGMT203	Human Relations in Business	3

### Term 3

MEDA480	Professional Development III	1
MEDA482	Diagnostic Radiography II	2
MEDA483	Medical Office Management III	1
MEDA485	Practicum	5

## Medical Laboratory Technology

The Medical Laboratory Technology program prepares the student to perform complex laboratory procedures with a limited amount of supervision. This training includes a six-month hospital laboratory assignment.

The program is accredited by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). Graduates are eligible to take the National Certification Examination. Job opportunities are found in hospitals, clinics, doctors' offices, public health laboratories, veterinarians' offices, and industrial laboratories.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Submit evidence of grade "C" or better in one year high school biology, algebra and chemistry or equivalent (Academic Achievement Center Biology I & II or BIOL 127; Academic Achievement Center Algebra I & II or MATH 092 and Academic Achievement Center Chemistry I & II). Students start fall term.

### Graduation Requirements

To earn a Medical Laboratory Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A 2.0 grade point average or better is required in all MLTS courses.

# Educational Programs

<b>Term 1</b>		
BIOL154	General Anatomy and Physiology	5
CHEM131	General Chemistry I	4
MLTS400	Intro to Medical Laboratory	6
PSCH101	General Psychology	3
<b>Term 2</b>		
BIOL132	Health Science Microbiology	4
CHEM132	General Chemistry II	4
ENGL117	Composition I	3
MLTS411	Hematology	6
<b>Term 3</b>		
MLTS442	Immunohematology	5
MLTS450	Clinical Practicum I	2
SPCH110	Fundamentals of Speech	3
<b>Term 4</b>		
MLTS422	Clinical Chemistry	8
MLTS431	Clinical Microbiology	6
MATH	Any 100 level MATH	
<b>Term 5</b>		
MLTS455	Clinical Practicum II	12
MLTS460	Clinical Seminar	1
MLTS461	Medical Laboratory Review	1
MLTS463	Professional Development	1

## Nursing Program

### PRACTICAL NURSING ASSOCIATE DEGREE NURSING

The Nursing Program is designed as a career ladder program. The first two semesters provide a common core of nursing theory and skills for both the Practical Nursing student and the Associate Degree Nursing student.

The student has the option to complete two terms and is prepared to become a licensed practical nurse (LPN). As LPNs they provide nursing care under the supervision of a registered nurse or a physician. The LPN is prepared to provide basic therapeutic, rehabilitative, and preventative care for individuals of all ages, primarily in a structured care setting such as a nursing home or long-term care facility.

Upon successful completion of Terms 1 and 2 of the nursing curriculum, the student will be eligible to take the National Council Licensure exam for Practical Nurse Licensure (NCLEX - PN).

Program Locations: Ankeny, Boone, Carroll

An Associate Degree in Nursing and a career as a Registered Nurse are available to students who continue in the program and successfully complete Terms 3, 4, and 5. As members of the nursing profession, Registered Nurses are accountable for their own nursing practice. The Associate Degree Nurse utilizes more complex nursing knowledge and skills to assess, plan, provide, evaluate, and supervise bedside nursing care for patients primarily in hospitals and nursing homes.

Upon successful completion of Terms 1 - 5 of the nursing curriculum, the student will be eligible to take the National Council Licensure exam for Registered Nurse Licensure (NCLEX - RN).

Program Locations: Ankeny, Boone, (Carroll Terms 1, 2 and 3 only).

The Nursing Program is approved by the Iowa Board of Nursing and accredited by the National League for Nursing.

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration sessions. Complete required testing obtaining satisfactory scores and submit evidence of a grade "C-" or better in one year high school biology and chemistry or equivalent (Academic Achievement Center Biology I & II or BIOL 127; and Academic Achievement Center Chemistry I & II or CHEM 131). Submit proof of high school graduation or completion of GED prior to program enrollment. Practical Nursing starts fall term.

Students desiring to continue in the Associate Degree Nursing program must have a cumulative GPA of 2.0 or above in the Nursing program. Associate Degree Nursing starts summer term.

#### Graduation Requirements

To earn a Practical Nursing diploma, a student must complete all course work as prescribed in Terms 1 & 2 and maintain a 2.0 grade point average or above in the nursing program. A grade of "C" (2.0) or better is required in all NURS courses.

To earn an Associate Degree Nursing AAS degree, a student must complete all course work as prescribed in Terms 1-5 and maintain a 2.0 grade point average or above in the nursing program. A grade of "C" or better is required in all NURS and ASDN courses.

### PRACTICAL NURSING

<b>Term 1</b>		
BIOL133	Health Science Anatomy	3
NURS261	Nursing I	5
NURS262	Nursing II	5
PSCH101	General Psychology	3

<b>Term 2</b>		
ENGL117	Composition I	3
NURS263	Nursing III	10
PSCH103	Developmental Psychology	3

### ASSOCIATE DEGREE NURSING

#### Elective courses

Electives	3
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*Must complete terms 1 & 2 prior to enrolling in ASDN courses*

<b>Term 3</b>		
BIOL132	Health Science Microbiology	4
BIOL134	Health Science Physiology	3

<b>Term 4</b>		
ASDN264	Nursing IV	11
SOCY101	Introduction to Sociology	3

#### Term 5 . . . Select 1 Course From Option 1

ASDN265	Nursing V	11
SPCH110	Fundamentals of Speech	Opt1 3
SPCH117	Interpersonal & Small Group Communication	Opt1 3

## Nursing - Advanced Standing

This program offers the opportunity for current Iowa Licensed Practical Nurses to complete an Associate Degree in Nursing. Applicants with the equivalent of the first two terms of the Nursing Program are also eligible for admission. Students enter third term of the Associate Degree Nursing curriculum and upon completion of three terms and attainment of program objectives are eligible to take the NCLEX exam for Registered Nurse Licensure. The program is approved by the Iowa Board of Nursing and accredited by the National League for Nursing.

Locations: Ankeny, Boone

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration sessions. Complete required testing obtaining satisfactory scores. Submit evidence of grade "C-" or better in one year of high school chemistry or equivalent (Academic Achievement Center Chemistry I & II or CHEM 131). General Psychology, Composition I, and Developmental Psychology (or equivalent human growth and development course) must be successfully completed prior to acceptance. Licensed Practical Nurses must submit a copy of their current Iowa LPN license and proof of completion of an approved Practical Nursing Program with a cumulative GPA of 2.0 or above. Submit proof of high school graduation or completion of a GED prior to enrollment. Students start summer term.

# Educational Programs

## Graduation Requirements

To earn an Associate Degree Nursing AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average or above in the nursing program. A grade of "C" (2.0) or above is required in all ASDN courses.

### Elective Courses

Electives 3

### Term 3

BIOL132	Health Science Microbiology	4
BIOL134	Health Science Physiology	3
NURS266	Nursing Transition	2

### Term 4

ASDN264	Nursing IV	11
SOCY101	Introduction to Sociology	3

### Term 5 . . . Select 1 Course From Option 1

ASDN265	Nursing V	11
SPCH110	Fundamentals of Speech	Opt1 3
SPCH117	Interpersonal & Small Group Communication	Opt1 3

## Nursing Advanced Standing - PT

This program offers the opportunity for current Iowa Licensed Practical Nurses to complete an Associate Degree in Nursing. Applicants with the equivalent of the first two terms of the Nursing program are also eligible for admission. The part-time program provides the same quality curriculum and experienced faculty utilized in the full-time program on DMACC campuses. Scheduling extends the program over six terms.

Students enter the third term of the Associate Degree curriculum and upon completion of six terms and attainment of the program objectives, are eligible to take the NCLEX exam for registered nurse licensure.

The program is approved by the Iowa Board of Nursing and accredited by the National League For Nursing.

Location: Ankeny, Boone and Carroll (start year will vary by campus)

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration sessions. Complete required testing obtaining satisfactory scores. Submit evidence of grade "C-" or better in one year of high school chemistry or equivalent (Academic Achievement Center Chemistry I & II or CHEM 131). General Psychology, Composition I and Developmental Psychology (or equivalent human growth and development course) must be successfully completed prior to entry. Licensed practical nurses must submit a copy of their current Iowa LPN license and proof of completion of an approved practical nursing program with a cumulative GPA of 2.0 or above. Submit proof of high school graduation or completion of GED prior to enrollment. Students start summer term.

**NOTE: ASDN264 & ASDN265 are 11 credit hour courses. These courses are each extended over two semesters. Students will register in fall term for the appropriate course - ASDN264 for the first year of the part time program and ASDN265 for the second year. Tuition and fees will be paid the term the course begins. The student must successfully complete both terms, a total of 11 credit hours for each course, to earn a grade for each course at the end of spring term.**

### Graduation Requirements

To earn an Associate Degree Nursing AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average or above in the nursing program. A grade "C" (2.0) or above is required in all ASDN courses.

### Elective Courses

Electives 3

### Term 3

BIOL132	Health Science Microbiology	4
BIOL134	Health Science Physiology	3
NURS266	Nursing Transition	2

### Term 4

ASDN264	Nursing IV	11
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### Term 5

ASDN264	Nursing IV (Continued from Term 4)	
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### Term 6 . . . Select 1 Course From Option 1

SOCY101	Introduction to Sociology	3
SPCH110	Fundamentals of Speech	Opt1 3
SPCH117	Interpersonal & Small Group Communication	Opt1 3

### Term 7

ASDN265	Nursing V	11
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### Term 8

ASDN265	Nursing V (Continued from Term 7)	
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## Respiratory Therapy

The Respiratory Therapy program provides education in the dynamic profession of respiratory care. Respiratory care is an allied medical specialty involved in the diagnosis, treatment and prevention of diseases and conditions which affect the respiratory and cardiovascular systems. Respiratory therapists work closely with physicians and provide direct care to persons with pulmonary and cardiovascular diseases.

The curriculum includes 1000 hours of supervised clinical practicum experience in local health care facilities. The program provides students with the knowledge, skills and attitudes needed to begin successful careers in respiratory care.

Graduates of the program receive an Associate of Applied Science (AAS) degree. The program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and graduates are eligible for all credentialing examinations currently offered by the National Board of Respiratory Care (NBRC) and the Iowa Department of Public Health.

Employment opportunities are found in hospitals, clinics, physician's offices, home health care agencies, equipment and supply sales, and rehabilitation and continuing care.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Attend a Respiratory Therapy information session. Submit evidence of grade "C" or better in each semester of one year of high school algebra and biology or the equivalent (Academic Achievement Center Algebra I & II or MATH 092; and Academic Achievement Center Biology I & II or BIOL 127). One year of high school chemistry is highly recommended. Submit proof of high school graduation or GED prior to enrollment. Students start fall term.

### Graduation Requirements

To earn a Respiratory Therapy AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade "C" or better is required in all RESP courses.

### Term 1

BIOL133	Health Science Anatomy	3
MATH115	Finite Mathematics	4
RESP300	Fundamentals of Respiratory Therapy	3
RESP302	Gas, Humidity and Aerosol Therapy	4
RESP304	Cardiopulmonary Therapeutics	3

# Educational Programs

## Term 2 . . . Select 1 Course From Option 1

BIOL134	Health Science Physiology		3
RESP310	Cardiopulmonary Renal Pathophysiology		5
RESP315	Respiratory Therapy Pharmacology		3
RESP352	Respiratory Therapy Practicum I		3
ENGL117	Composition I	Opt1	3
ENGL410*	Communication Skills	Opt1	3

## Term 3

PHYL106	Survey of Physical Science		4
RESP325	Neonatal/Pediatric Respiratory Therapy		3
RESP362	Respiratory Therapy Practicum II		5

## Term 4

CHEM131	General Chemistry I		4
COMS181	Intro to Computer Literacy		3
RESP320	Advanced Respiratory Therapy		5
RESP372	Respiratory Therapy Practicum III		6

## Term 5 . . . Select 1 Course From Option 2

BIOL132	Health Science Microbiology		4
RESP330	Cardiopulmonary Diagnostics		3
RESP382	Respiratory Therapy Practicum IV		7
MGMT203	Human Relations in Business	Opt2	3
PSCH101	General Psychology	Opt2	3
PSCH106	Psychology of Human Relations & Adjustment	Opt2	3
SOCY101	Introduction to Sociology	Opt2	3

## Term 6

RESP335	Respiratory Therapy Mgmt & Ethics		3
RESP392	Respiratory Therapy Practicum V		7

## Certificates of Specialization

### Dietary Manager Specialist

The Dietary Manager is responsible for the management of food operations in a dietary department. This includes the management of food service personnel, food/kitchen supplies, and the routine nutritional aspects of food service. Working with a dietary consultant, the dietary manager assists in providing quality nutritional care services in a food service department, hospital and health care facilities. All students must attend a Dietary Manager Specialist program orientation.

#### Required Courses

DMAS350	Health Field	1
DMAS351	Food Preparation	1
DMAS352	Sanitation/Meal Service	2
DMAS353	Nutrition Life Cycle	1
DMAS354	Modified Diets	1
DMAS355	Food Production Management	1
DMAS356	Food Service Management	2
DMAS361	Food Prep Field Experience	1
DMAS362	Sanitation/Meal Service Field Experience	1
DMAS363	Nutrition Life Cycle Field Experience	1
DMAS364	Modified Diet/Field Experience	1
DMAS365	Food Production Field Experience	1
DMAS366	Food Service Mgmt Field Experience	1

### Emergency Medical Technician - Basic

The Emergency Medical Technician-Basic certificate is designed to provide an introductory learning experience for persons interested in the field of emergency medicine. This course includes practical and written testing in the classroom as well as clinical experience in the area hospitals. National Registry Certification tests will be administered at course completion in both the written and skill areas. Area ambulance units utilize EMT-B's.

#### Required Courses

HLCR307	Emergency Medical Tech Basic	6
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## Long Term Care Administrator

The Long Term Care Administrator certificate is for students with prior degrees who desire eligibility to sit for Nursing Home Administrator Licensure. The student must also meet the Iowa Board of Examiners for Nursing Home Administrator equivalency requirements.

#### Required Courses

HCAD271	Administration of Long-Term Care	5
HCAD272	Services for Long-Term Care	5
HCAD251	Practicum.: Social Services	1
HCAD252	Practicum.: Dietary	1
HCAD253	Practicum.: Legal Aspects/Gov't Organization	1
HCAD264	Practicum.: Seminar	2
HCAD254	Practicum.: Nursing	1
HCAD255	Practicum.: Environmental Services	1
HCAD256	Practicum.: Activities/Community Resources	1
HCAD264	Practicum: Seminar	2
HCAD257	Practicum: Business Administration	1
HCAD258	Practicum: Administrative Organization	1
HCAD259	Practicum: Human Resource Management	1
HCAD281	Seminar in Health Care	3
SOCY204	Social Gerontology/Applications	4

## Phlebotomy

A phlebotomist draws blood from patients for routine and diagnostic medical tests. Most phlebotomists are employed in hospitals. Students must complete an application for this program. The program runs approximately 9 weeks and is offered fall and spring term.

#### Required Course

PHLE310	Phlebotomy with Practicum	4
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## Residential Care Facility Administrator

The purpose of the Residential Care Facility Administrator certificate is to provide course work to qualify individuals to be administrators of residential care facilities. Administrators are generally responsible for budgeting and staffing, as well as developing programs for the care and supervision of residents. Select OPTION I (Mentally Retarded/Developmentally Disabled Residents) or II (Geriatric Residents).

#### Required Courses

ACCT301	Accounting Fundamentals	3
ENGL117	Composition I	3
HCAD271	Admin of Long-Term Care	5
HCAD273	Law and Long-Term Care	4

#### Option Courses..Select One Of The Following Options

HCAD227	Integrating Community Services-MH/MR/DD	Opt1	4
HCAD277	Service Delivery Systems-MH/MR/DD	Opt1	5
PSCH104	Abnormal Psychology	Opt1	3
HCAD272	Services for Long Term Care	Opt2	5
PSCH101	General Psychology	Opt2	3
SOCY101	Introduction to Sociology	Opt2	3
SOCY204	Social Gerontology/Applications	Opt2	4



# *J*Hospitality

Programs prepare students for service in the broad-based hospitality industry, which encompasses hotels, motels, clubs, and restaurants. Career opportunities are excellent as nearly one out of every 10 jobs in the U.S. is related to the hospitality industry.

Course work in all three programs emphasizes communications, human relations, and other practical job skills. Positions filled by graduates range from guest services clerk and night auditor (hospitality business) to garde manager and chef (culinary arts).

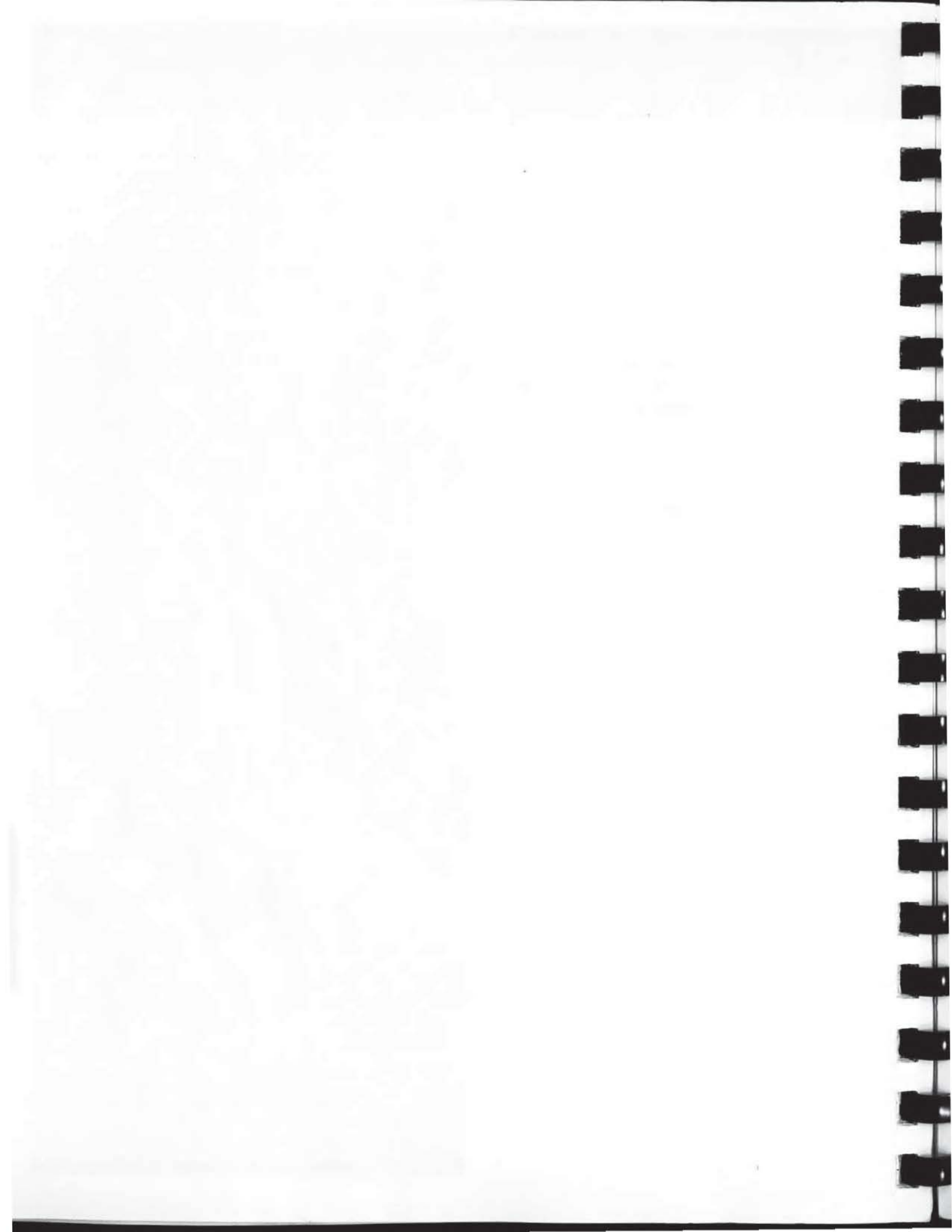
## **Diplomas and Degrees**

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Culinary Arts  
Hospitality Business  
Hotel and Restaurant Management







# Educational Programs

## Diplomas and Degrees

### Culinary Arts

The Culinary Arts program prepares students to enter culinary positions with hotels, restaurants, clubs or institutions and some select jobs in dining room service, catering or management. By the end of the program graduates will have taken courses in food preparation, nutrition, menu planning, purchasing, garde manger and baking. International cuisine, restaurant management and advanced culinary cuisine are practicum courses and a valuable part of the training. These courses are management designed and offer students practical knowledge of the restaurant industry.

Upon successful completion of terms 1 through 5, students will receive a Culinary Arts AAS degree. The first three terms must be completed before enrollment is allowed in terms 4 and 5. Students with a shorter term educational goal may receive a diploma upon completion of terms 1, 2 and 3.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall or spring term.

#### Graduation Requirements

To earn a Culinary Arts AAS degree or diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1 . . . Select 1 Course From Option 1

HRMT315	Sanitation and Equipment		2
HRMT319	Sanitation and Equipment Lab		1
HRMT316*	Food Preparation I		3
HRMT320*	Food Preparation I Lab		3
HRMT330	Intro to Hospitality Industry		2
BSAD223	Business/Financial Math	Opt1	3
MATH410*	Mathematics for Technicians I	Opt1	3

#### Term 2

CULA340	Baking		2
ENGL410*	Communication Skills		3
HRMT321	Dining Room Fundamentals		2
HRMT326	Food Preparation II		2
HRMT328	Food Preparation II Lab		2
HRMT350*	Nutrition		2
HRMT351	Menu Planning		2

#### Term 3

CULA386	Garde Manger		2
HRMT347	Work Experience		3
MGMT203	Human Relations in Business		3

#### Term 4

CULA446	International Cuisine Lab I		3
CULA456	International Cuisine		2
HRMT335	Restaurant Management		2
HRMT348	Food Service Purchasing		2
HRMT357	Culinary Skill Development		3
SPCH117	Interpersonal & Small Group Communication		3

#### Term 5

COOP220	Career-Seeking Skills		2
CULA349	International Cuisine Lab II		3
CULA365	Advanced Baking/Bufferet Decorating		2
CULA451	Culinary Cuisine Lab		4
CULA452	Advanced Culinary Cuisine		2
HRMT367	Beverage Seminar		2

## Hospitality Business

The Hospitality Business program prepares students to enter either the food service field or lodging industry at a job entry level position.

Students who have completed the program will have taken courses in subject areas including sanitation, dining room fundamentals, business math, food preparation, career-seeking skills and marketing. Positions that are filled by graduates include guest services clerk, night auditor and cooks.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall or spring term.

#### Graduation Requirements

To earn a Hospitality Business diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

ENGL410*	Communication Skills		3
HRMT315	Sanitation and Equipment		2
HRMT321	Dining Room Fundamentals		2
HRMT330	Intro to Hospitality Industry		2
MGMT203	Human Relations in Business		3
OFFC324	Office Calculators		1
OFFC329*	Keyboarding I		1

#### Term 2

BSAD223	Business/Financial Math		3
HRMT316*	Food Preparation I		3
HRMT319	Sanitation and Equipment Lab		1
HRMT320*	Food Preparation I Lab		3
MKTG103*	Principles of Selling		3
OFFC340	Intro to Office Computer Applications		3

**Term 3 . . . Students seeking a restaurant management emphasis should select the option 1 courses. Students seeking a hotel management emphasis should select the option 2 course.**

COOP220	Career-Seeking Skills		2
HRMT347	Work Experience		3
HRMT326	Food Preparation II	Opt1	2
HRMT328	Food Preparation II Lab	Opt1	2
MKTG102	Principles of Marketing	Opt2	3

## Hotel & Restaurant Management

The Hotel & Restaurant Management program prepares students for a career in the hospitality field. Most graduates will enter the industry either in cooking positions or line management positions with hotels, restaurants, and clubs.

Students who complete the program will have taken courses in sanitation, dining room fundamentals, business math, food preparation, marketing, purchasing, hotel services, menu planning and hotel administration. These courses are management designed and offer the student practical knowledge of either the restaurant management industry or the hotel management industry, depending on the students' chosen emphasis.

Terms 1, 2 & 3 must be completed before entry is allowed into terms 4 & 5 to receive the AAS degree. Students planning on transferring to a four-year college should see an advisor or the program chair before registration.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration sessions. Students start fall or spring term.

# Educational Programs

## Graduation Requirements

To earn a Hotel & Restaurant Management AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

ENGL410*	Communication Skills		3
HRMT315	Sanitation and Equipment		2
HRMT321	Dining Room Fundamentals		2
HRMT330	Intro to Hospitality Industry		2
MGMT203	Human Relations in Business		3
OFFC324	Office Calculators		1
OFFC329*	Keyboarding I		1

### Term 2

BSAD223	Business/Financial Math		3
HRMT316*	Food Preparation I		3
HRMT319	Sanitation and Equipment Lab		1
HRMT320*	Food Preparation I Lab		3
MKTG103*	Principles of Selling		3
OFFC340	Intro to Office Computer Applications		3

**Term 3 . . . Students seeking a restaurant management emphasis should select option 1 courses. Students seeking a hotel management emphasis should select the option 2 course.**

COOP220	Career-Seeking Skills		2
HRMT347	Work Experience		3
HRMT326	Food Preparation II	Opt1	2
HRMT328	Food Preparation II Lab	Opt1	2
MKTG102	Principles of Marketing	Opt2	3

**Term 4 . . . Terms 1,2,3 must be completed before enrolling in terms 4 & 5. Students seeking a restaurant management emphasis should select the option 3 courses. Students seeking a hotel management emphasis should select option 4 courses.**

ACCT301*	Accounting Fundamentals		3
MGMT229	Small Business Management		3
HRMT348	Food Service Purchasing		2
HRMT335	Restaurant Management	Opt3	2
HRMT357	Culinary Skill Development	Opt3	3
HRMT366	Hotel Services Internship	Opt4	5
HRMT368	Hotel Services	Opt4	2

**Term 5 . . . Students seeking a restaurant management emphasis should select the option 5 course. Students seeking a hotel management emphasis should select the option 6 course. All students must select one course from the option 7 courses.**

HRMT350	Nutrition		2
HRMT351	Menu Planning		2
SPCH117	Interpersonal & Small Grp Comm		3
HRMT367	Beverage Seminar	Opt5	2
HRMT364	Hotel Administration	Opt6	2
BSAD150	Intro to Business	Opt7	3
BUSL101	Business Law I	Opt7	3
MGMT101	Personnel Supervision	Opt7	3
MGMT102	Introduction to Management	Opt7	3

# Public and Human Services

Programs prepare students for direct employment in a variety of public service fields or for further study at a four-year institution.

When programs are completed, students find work in day care centers and preschools (child development); corrections facilities (criminal justice); municipal fire departments (fire science); treatment centers, group homes and state or county departments of social services (human services); private law firms (legal assistant); and health spas, YMCAs-YWCAs, retirement communities and public and private institutions (leisure studies).

## **Diplomas and Degrees**

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Child Development  
Child Development Associate  
Criminal Justice  
Fire Science  
Human Services  
Legal Assistant  
Leisure Studies - Holistic Wellness  
Leisure Studies - Recreational Leadership

## **Certificates of Specialization**

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Chemical Dependency Counseling  
Fire Specialist  
Legal Assistant





# Educational Programs

## Diplomas and Degrees

### Child Development

The Child Development program prepares students for careers working with children. By the end of the program, they can assume a position of responsibility in early childhood education.

Course work includes instruction in human development, observation and guidance techniques, curriculum planning, nutrition, and emergency care.

Students will have the opportunity each term to participate in the Des Moines Area Community College Day Care Center and will also complete a practicum for one-half of a term in a community child care program.

When course work is completed, students will be qualified to work in day care centers, preschools, or public and private schools working with infants, preschoolers, or school-aged children. This program also allows a graduate to become a nanny or day care home provider. A second career option, Child Development Associate, is also available.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall term.

#### Graduation Requirements

To earn a Child Development diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

CHLD170*	Child Development	3
CHLD240*	Emergency Care	1
CHLD260	Observation and Guidance of Children	3
CHLD262	Curriculum and Activities I	4
CHLD264*	Child Nutrition and Health	3
CHLD265	Curriculum and Activities II	4
CHLD268*	Professional Relationships	1
CHLD460	Student Participation I	3
CHLD461	Student Participation II	3
CHLD464*	Practicum	2

#### Option Courses . . . Select 1 Course From Each Option

ENGL119	Technical and Business Writing	Opt1	3
ENGL410*	Communication Skills	Opt1	3
ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
SOCY101	Introduction to Sociology	Opt2	3
PSCH101	General Psychology	Opt2	3
PSCH106	Psychology of Human Relations & Adj	Opt2	3
MGMT203	Human Relations in Business	Opt2	3

### Child Development-Associate

The Child Development Associate program is designed to build on those skills developed in the Child Development diploma program and to broaden the students' background in general education. Further competence in early childhood education is developed through course work in administration of programs for children and field practicum settings.

Students completing the Child Development diploma program plus the additional requirements listed, will earn a Child Development Associate in Science degree. They may choose to transfer to a four-year institution or take one of the many jobs available in early childhood education.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

#### Graduation Requirements

To earn a Child Development AS Degree, a student must complete the standard core requirements for the degree plus the Child Development required courses and options and maintain a 2.0 grade point average.

#### Required Courses

	Complete AS Degree Core Requirements	24
CHLD170*	Child Development	3
CHLD240*	Emergency Care	1
CHLD260	Observation and Guidance of Children	3
CHLD262	Curriculum and Activities I	4
CHLD264*	Child Nutrition and Health	3
CHLD265	Curriculum and Activities II	4
CHLD266	Admin of Programs/Children	3
CHLD268*	Professional Relationships	1
CHLD460	Student Participation I	3
CHLD461	Student Participation II	3
CHLD464*	Practicum	2
CHLD465	Child Development Assoc Practicum	3

#### Elective Courses

Electives	7
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### Criminal Justice - AA or AS

The Criminal Justice program prepares students for a career in such areas as law enforcement, corrections, security, and juvenile justice. The program allows students to choose either an AA or AS degree. All students must complete the basic Criminal Justice requirements, then select other Criminal Justice classes in areas of primary interest.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

#### Graduation Requirements

To earn a Criminal Justice AA or AS degree, a student must complete the standard core requirements for the degree, plus the Criminal Justice required courses and options and maintain a 2.0 grade point average.

### AA DEGREE

#### Required Courses

	Complete AA Degree Core Requirements	48
CRIM101	Intro to Criminal Justice	3
CRIM103	Community Relations	3
CRIM105	Constitutional Law	3
CRIM235	Survey/Criminal Justice Agencies	3
PLSC126	Intro to Public Administration	3
SOCY107	Criminology	3

#### Option Courses . . . Select 12 Credits From Option 1

CRIM104	Criminal Law	Opt1	3
CRIM106	Juvenile Law	Opt1	3
CRIM107	Theories of Interviewing	Opt1	3
CRIM110	Penology	Opt1	3
CRIM211	Correctional Treatment	Opt1	3
CRIM212	Correctional Law	Opt1	3
CRIM214	Criminal Investigation	Opt1	3
CRIM236	Internship	Opt1	3
CRIM255	Scientific Investigation I	Opt1	3
CRIM273	Introduction to Security	Opt1	3
CRIM275	Scientific Investigation II	Opt1	3
CRIM285	Criminal Justice Ethics	Opt1	3

### AS DEGREE

#### Required Courses

	Complete AS Degree Core Requirements	24
CRIM101	Intro to Criminal Justice	3
CRIM103	Community Relations	3
CRIM105	Constitutional Law	3
CRIM235	Survey/Criminal Justice Agencies	3
CRIM236	Internship	3
PLSC126	Intro to Public Administration	3
SOCY107	Criminology	3

# Educational Programs

## Option Courses . . . Select 15 Credits From Option 1

CRIM104	Criminal Law	Opt1	3
CRIM106	Juvenile Law	Opt1	3
CRIM107	Theories of Interviewing	Opt1	3
CRIM110	Penology	Opt1	3
CRIM211	Correctional Treatment	Opt1	3
CRIM212	Correctional Law	Opt1	3
CRIM214	Criminal Investigation	Opt1	3
CRIM255	Scientific Investigation I	Opt1	3
CRIM273	Introduction to Security	Opt1	3
CRIM275	Scientific Investigation II	Opt1	3
CRIM285	Criminal Justice Ethics	Opt1	3

## Elective Courses

Electives	4
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## Fire Science Technology

The Fire Science Technology program provides a fundamental base of knowledge for people seeking career opportunities in the broad field of fire protection.

During the program, students complete general education core requirements and specific fire science courses. The latter examine the causes and behavior of fire, and the means of minimizing its destructive effects through design, detection, suppression, and prevention.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Fire Science Technology AS degree, a student must complete the standard core requirements for the degree, plus the Fire Science Technology required courses and maintain a 2.0 grade point average.

### Required Courses

CHEM131	General Chemistry I	4
ENGL117	Composition I	3
ENGL118	Composition II	3
FIRE241	Fire Behavior and Investigation	3
FIRE242	Property Insurance and Fraud Investigation	3
FIRE243	Building Construction	3
FIRE244	Fire Protection Systems	3
FIRE245	Hazardous Materials	3
FIRE247	Planning for Fire Protection	3
FIRE248	Emergency Scene Management	3
MGMT102	Introduction to Management	3
PHIL112	Ethical Problems	3
PHYL106	Survey of Physical Science	4
PLSC112	State & Local Government	3
PSCH101	General Psychology	3

### Complete remaining AS degree Core Requirements

### Electives Courses

Electives	9-12
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## Human Services

The Human Services program prepares students for entry level jobs or for transfer to a four-year degree program. By the end of the program students will be able to interact effectively with clients in a human services agency.

The program emphasizes skills needed in working with clients such as interviewing, determining eligibility for services, making appropriate referrals, and assisting with counseling. A supervised field experience allows students to apply their skills in a work setting.

Specializations are offered in chemical dependency counseling, mental health, social services and psychosocial rehabilitation.

When the program is completed, students may find employment in a wide variety of settings, including public and private social services agencies, treatment centers, group homes, institutions, hospitals, com-

munity centers, and state or county departments of social services.

Locations: Ankeny, Urban

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Human Services AS degree, a student must complete the standard core requirements for the degree, plus the Human Services required courses and options, and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
HUMS101	Introduction to Human Services	3
HUMS104	Community Organization	3
HUMS109	Survey Mental Health Treatment	3
HUMS202	Interviewing/Interpersonal Relations	3
HUMS205	Intervention Theories/Practice I	3
HUMS206	Intervention Theories/Practice II	3
HUMS208	Field Experience	3
PSCH103	Developmental Psychology	3
PSCH104	Abnormal Psychology	3

### Option Courses . . . Select 3 Courses From Option 1 And 1

### Course From Option 2

ANTH120	Introduction to Anthropology	Opt1	3
PHIL112	Ethical Problems	Opt1	3
PLSC112	State & Local Government	Opt1	3
HUMS	any Human Services	Opt1	
SOCY	any Sociology	Opt1	
PSCH	any Psychology	Opt1	
SOCY101	Introduction to Sociology	Opt2	3
SOCY102	Social Issues	Opt2	3

### Elective Courses

Electives	1
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## Legal Assistant

Legal Assistants perform a variety of legal tasks under the supervision of an attorney. They work for attorneys in private practice, state agencies, and public service organizations. Legal assistants work with the attorney in virtually every area of legal practice. They do not give advice or represent clients since that would be the actual practice of law.

Our objective is to educate a legal assistant capable of performing a variety of legal tasks. Graduates of the program should be able to provide a broad spectrum of services needed by attorneys. This objective is met by providing intensive and practical instruction by attorneys with experience and expertise in their fields of instruction. This program is approved by the American Bar Association.

Students in the program complete general education core requirements and legal specialty courses. Course offerings include torts and litigation, family law, business law, probate, and income tax. All students complete an internship, under the supervision of an attorney, during which they use the skills and apply the knowledge gained in the classroom. Interested applicants who hold a prior college degree may seek the Legal Assistant Certificate.

A program chairperson, a legal assistant, and a program counselor are available to assist students with educational and career planning.

Graduates of the Legal Assistant program are employed in private law firms, the courts, public agencies, and legal departments of large companies. Additionally, some students work in law related jobs such as investigation, collections, and bank trust departments.

Location: Urban

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students may start any term.

# Educational Programs

## Graduation Requirements

To earn a Legal Assistant AS degree, a student must complete the standard core requirements for the degree, plus the Legal Assistant required courses and options, maintain a 2.0 grade point average, and receive a grade of "C" or above in all LEGA course work.

### Required Courses

	Complete AS Degree Core Requirements	24
LEGA240	Introduction to Law	3
LEGA260	Legal Research and Writing I	3
LEGA261	Legal Research and Writing II	3
LEGA242	Torts & Litigation I	3
LEGA246	Business & Corporate Law I	3
LEGA250	Legal Internship & Ethics	4

### Option Courses . . . Select 15 Credits From Option 1

ACCT206	Income Tax	Opt1	3
COMS181	Intro to Computer Literacy	Opt1	3
CRIM105	Constitutional Law	Opt1	3
LEGA243	Torts & Litigation II	Opt1	3
LEGA244	Family Law	Opt1	3
LEGA247	Business & Corporate Law II	Opt1	3
LEGA248	Real Estate Law	Opt1	3
LEGA249	Probate Procedure	Opt1	3
LEGA251	Wills, Estate Planning & Taxation	Opt1	3
LEGA252	Administrative Practice	Opt1	3
LEGA254	Evidence: Theory and Practice	Opt1	3
LEGA256	Debtor/Creditor Law	Opt1	3
LEGA258	Computerized Legal Research	Opt1	1
LEGA259	Adv Legal Research and Writing	Opt1	3
LEGA270	Legal Interviewing/Clinical Experience	Opt1	3
MGMT153	Office Management	Opt1	3

### Elective Courses

Electives	6
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## Leisure Studies-Holistic Wellness

The Leisure Studies program with the emphasis on the holistic wellness track prepares the student with the skills, training, and experience necessary to successfully develop and coordinate wellness programs for employees in the work place.

After completion of the program, a student has the choice of transferring to a four-year institution or to seek employment. If the student chooses employment, opportunities exist in corporations, factories, private businesses, government agencies, health spas and other work settings.

Location: Boone

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Leisure Studies-Holistic Wellness AS degree, a student must complete the standard core requirements for the degree, plus the Leisure Studies-Holistic Wellness required courses and electives and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
HUMS216	Survey of Addictive Disease	3
LRST142	Supervised Field Experience I	1
LRST144	Program Planning/Organization	3
LRST149	Supervised Field Experience II	11
LRST151	Introduction to Recreation	2
PHYE149	Wellness Program/Planning/Organization	3
PHYE150	Fitness Testing/Programming	3
PSCH110	Stress & Stress Management	3

### Elective Courses

Electives	11
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## Leisure Studies-Recreation Leadership

The Leisure Studies program with an emphasis in recreational leadership, prepares the student with the skills, training, and experience necessary to successfully organize and lead activities in a variety of recreational settings. After completion of the program, employment opportunities are available in YMCA's-YWCA's Boys' or Girls' Clubs, retirement communities, resorts, swimming pools, medical facilities, schools, industries, armed forces, and public and private institutions.

Location: Boone

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Leisure Studies-Recreational Leadership AS degree, a student must complete the standard core requirements for the degree plus the Leisure Studies-Recreational Leadership required courses and electives and maintain a 2.0 grade point average.

### Required Courses

	Complete AS Degree Core Requirements	24
LRST141	Recreation Leadership	3
LRST142	Supervised Field Experience I	1
LRST144	Program Planning/Organization	3
LRST146	Intro/Therapeutic Recreation	3
LRST149	Supervised Field Experience II	11
LRST151	Introduction to Recreation	2
PHYE149	Wellness Program/Planning/Organization	3

### Elective Courses

Electives	14
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## Certificates of Specialization

### Chemical Dependency Counseling

This one year certificate is offered cooperatively with Powell Chemical Dependency Center (Powell CDC) at Iowa Lutheran Hospital.

This certificate is designed for individuals with a Bachelor's Degree, Graduate Degree or Associate in Arts or Associate in Science degree who wish to update or develop skills in chemical dependency counseling. For those who do not have a degree, this certificate may be completed as a part of the two-year Associate in Science degree in Human Services.

### Please Note . . .

A limited number of practicum/field experience spaces are available at Powell CDC. Powell CDC reserves the right to establish admissions procedures and select their practicum/field experience students. Powell CDC charges a substantial fee for their practicum training. This is in addition to the usual tuition and fees paid to DMACC for the required credit course work.

For information about and admission procedures for the practicum phase, contact Training Coordinator, Powell CDC, Iowa Lutheran Hospital, 700 East University, Des Moines, Iowa 50316-2392.

### Required Courses

ENGL117	Composition I	3
HUMS109	Survey Mental Health Treatment	3
HUMS202	Interviewing/Interpersonal Relations	3
HUMS205	Intervention Theories/Practice I	3
HUMS206	Intervention Theories/Practice II	3
HUMS208	Field Experience	3
HUMS213	Practicum: Chemical Depend Counsel I	6
HUMS214	Practicum: Chemical Depend Counsel II	6
HUMS216	Survey of Addictive Disease	3



# Educational Programs

## Option Courses...Select 1 Course From Each Option

BIOL127	Human Biology	Opt1	3
PSCH103	Developmental Psychology	Opt1	3
PSCH104	Abnormal Psychology	Opt1	3
SOCY102	Social Issues	Opt1	3
SPCH110	Fundamentals of Speech	Opt1	3
PSCH103	Developmental Psychology	Opt2	3
PSCH104	Abnormal Psychology	Opt2	3

## Fire Specialist

The Fire Specialist certificate provides basic technical knowledge for people working in the fire protection field.

Course work covers the scientific principles that affect fire, its causes and behavior, and the means of minimizing its destructive effects through design, detection, suppression and prevention.

### Required Courses

FIRE241	Fire Behavior and Investigation	3
FIRE242	Property Insurance and Fraud Investigation	3
FIRE243	Building Construction	3
FIRE244	Fire Protection Systems	3
FIRE245	Hazardous Materials	3
FIRE247	Planning for Fire Protection	3
FIRE248	Emergency Scene Management	3

## Legal Assistant

The Legal Assistant certificate is for students with either a Bachelor's Degree, Associate in Science, or Associate of Arts Degree who wish to work as a legal assistant. A legal assistant performs a variety of legal tasks and provides a broad spectrum of services for attorneys in private practice, state agencies, and public service organizations. The legal assistant works with the attorney in virtually every aspect of the legal profession except giving advice or representing clients in court (the actual practice of law). To earn a Legal Assistant certificate, a student must submit proof of having earned a prior degree. Students must receive a grade of "C" or above in all LEGA course work.

### Required Courses

LEGA240	Introduction to Law	3
LEGA242	Torts & Litigation I	3
LEGA246	Business & Corporate Law I	3
LEGA250	Legal Internship & Ethics	4
LEGA260	Legal Research & Writing I	3
LEGA261	Legal Research & Writing II	3

### Option Courses...Select 15 Credits From Option 1

ACCT206	Income Tax	Opt1	3
COMS181	Intro to Computer Literacy	Opt1	3
CRIM105	Constitutional Law	Opt1	3
LEGA243	Torts & Litigation II	Opt1	3
LEGA244	Family Law	Opt1	3
LEGA247	Business & Corporate Law II	Opt1	3
LEGA248	Real Estate Law	Opt1	3
LEGA249	Probate Procedure	Opt1	3
LEGA251	Wills, Estate Planning & Taxation	Opt1	3
LEGA252	Administrative Practice	Opt1	3
LEGA254	Evidence: Theory & Practice	Opt1	3
LEGA256	Debtor/Creditor Law	Opt1	3
LEGA258	Computerized Legal Research	Opt1	1
LEGA259	Advanced Legal Research & Writing	Opt1	3
LEGA270	Legal Interviewing/Clinical Exper	Opt1	3
MGMT153	Office Management	Opt1	3

# Industrial Technology

The Industrial Technology curriculum prepares graduates for an ever-changing work place by teaching essential technical skills in a wide range of areas. Extensive laboratory experiences are provided to reinforce classroom theory and to help develop skills that ensure occupational competency.

Employment outlook for program graduates is very good.

## Diplomas and Degrees

Architectural Drafting  
ASEP - General Motors  
ASSET - Ford  
Auto Collision Technology  
Auto Mechanics Technology  
BSEP - General Motors  
Building Trades  
Computer-Aided Design Technology  
Conditioned Air  
Diesel Technology  
Electronics Maintenance  
High Tech Biomedical  
High Tech Computers  
High Tech Robotics/Automation  
Quality Technician  
Telecommunications Technology  
Tool and Die  
Upholstery  
Welding

## Certificates of Specialization

Building Maintenance  
CIM - Manufacturing Resource Planning  
CIM - Product Engineering  
CIM - Shop Floor Control  
High Tech Electronics - Biomedical  
Quality Technician  
Upholstery I, II & III  
Welding

## Certificate of Completion

Commercial Vehicle Operator Training





# Educational Programs

## Diplomas and Degrees

### Architectural Drafting

The Architectural Drafting program is designed to develop the proper skills and knowledge required for satisfactory entrance into the field of building construction, drafting, and detailing.

Graduates are employed by architects, structural, mechanical and electrical engineers, contractors, subcontractors, building equipment and material suppliers, and building code officials. Students periodically visit construction sites to observe actual construction practices.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Submit evidence of grade "C" or better in one year of high school algebra or the equivalent (Academic Achievement Center Algebra I & II or MATH 092). Students start summer term.

#### Graduation Requirements

To earn an Architectural Drafting diploma, complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1 . . . Select 1 Course From Option 1

ARCH410*	Architectural Drafting I	2
ARCH460*	Architectural Drafting Lab I	3
ARCH464	Construction Techniques I	2
ARCH472	Construction Estimating	2
MGMT203	Human Relations in Business	Opt1 3
PSCH101	General Psychology	Opt1 3
PSCH106	Psychology of Human Relations & Adj	Opt1 3
SOCY101	Introduction to Sociology	Opt1 3

#### Term 2

ARCH420	Architectural Drafting II	2
ARCH461	Architectural Drafting Lab II	3
ARCH470	Construction Techniques II	2
ARCH473	Building Equipment Techniques I	2
CADD401*	Intro Computer Aided Drafting	3
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3

#### Term 3

ARCH462	Architectural Drafting III	2
ARCH463	Architectural Drafting Lab III	3
ARCH465	Building Equipment Techniques II	2
ARCH471	Construction Techniques III	3
ARCH475	Technical Report & Specs	2
CADD403	Intermediate CADD-Architectural	3
MATH411	Mathematics for Technicians II	3

### ASEP - General Motors

The Automotive Service Educational Program (ASEP), co-sponsored by DMACC and General Motors, is a two-year automotive program designed to upgrade the technical competence and professional level of the incoming GM dealership technician. The curriculum, designed by General Motors and DMACC, leads to the associate degree in Automotive Technology. The program involves classroom lecture, laboratory experience, and dealership work experience.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement, aptitude and ability tests and be accepted by General Motors as a participant. In addition, all program participants must be employed by a participating General Motors dealership.

#### Graduation Requirements

To earn an ASEP General Motors AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

ASEP312	GM Specialized Electronics Training	3
ASEP317	GM Shop Fund and Minor Service	3
ASEP318	GM Steering/Suspension/Brakes	4
ASEP320	Technical Internship I	3
ASEP326	GM Auto Air Conditioning Systems	3
ASEP327	Minor Service/Repair-GM Engines	3
ASEP328	Diagnosis/Repair-GM Electrical System	3
ASEP330	Technical Internship II	3
ASEP333	Major Service Procedures/GM Engines	3
ASEP336	GM Carb and Fuel Induction System	3
ASEP337	GM Tune-Up Proc and Emission Control	4
ASEP340	Technical Internship III	3
ASEP343	GM Transmissions and Transaxles	8
ASEP350	Technical Internship IV	3
ASEP354	Advanced GM Motors Systems	5
AUTO464*	Auto Measurement and Tools	3
BSAD150	Intro to Business	3
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
PHYL401*	Physics for Technicians	3
PSCH106	Psychology of Human Relations & Adjustment	3
RCEL401*	Basic Electricity & Magnetism	1

### ASSET - Ford

The Automotive Student Service Educational Training Program (ASSET), co-sponsored by DMACC and Ford Motor Company, is a two-year automotive program designed to upgrade the technical competence and professional level of the incoming Ford or Lincoln/Mercury dealership technician. The curriculum, designed by Ford Motor Company and DMACC, leads to the associate degree in Automotive Technology. The program involves classroom lecture, laboratory experience and dealership work experience.

Location: Ankeny

#### Program Entry Requirements

Complete an application, satisfy the assessment requirement, aptitude and ability tests and be accepted by Ford Motor Company as a participant. In addition, all program participants must be employed by a participating Ford or Lincoln/Mercury dealership.

#### Graduation Requirements

To earn an ASSET Ford AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Required Courses

ASST312	Ford Automotive Electronics	5
ASST317	Ford Shop Fund and Minor Service	3
ASST318	Ford Steering/Suspension/Brakes	6
ASST320	Technical Internship I	3
ASST326	Ford Auto Air Conditioning Systems	3
ASST327	Minor Service/Repair Ford Engines	3
ASST328	Diagnosis/Repair Ford Electrical Systems	3
ASST330	Technical Internship II	3
ASST333	Major Service Procedures/Ford Engines	3
ASST336	Ford Carb and Fuel Induction Systems	3
ASST337	Ford Tune-Up Procedure and Emission Control	4
ASST340	Technical Internship III	3
ASST343	Ford Transmissions and Transaxles	8
ASST350	Technical Internship IV	3
ASST354	Ford Advanced Engine Controls, Electronics	5
BSAD150	Intro to Business	3
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
PHYL401*	Physics for Technicians	3
PSCH106	Psychology of Human Relations & Adj	3

### Auto Collision Technology

The Auto Collision Technology program is designed to prepare students for employment in the highly technological auto collision industry and to update those already employed.

There are two separate diploma options which can be taken individually or in combination. One option prepares graduates for entry in auto collision jobs related to paint and refinishing. The other option

# Educational Programs

prepares graduates for auto collision jobs related to major structural repairs. By completing both diploma options plus three courses, students may receive an AAS degree.

In addition, individual courses may be taken to satisfy the person wanting only specific segments of the complete program.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall or spring term.

## Graduation Requirements

To earn an Automotive Collision Technology diploma or AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

## AUTO COLLISION - PAINT

### Required Courses

AUTC403	Basic Shop Safety	2
AUTC405	Basic Shop Operations/Metal	5
AUTC408	Basic Shop Operations/Paint	5
AUTC410	Basic Estimating	2
AUTC412	Get Ready for Paint	7
AUTC413	Plastic Repair and Refinishing	4
AUTC420	Advanced Refinishing	6
AUTC421	Adv Estimating/Ownership/Management	3
HLCR314	Emergency Care	1
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
WELD468*	Related Welding/Auto Collision	2

## AUTO COLLISION - METAL

### Required Courses

AUTC403	Basic Shop Safety	2
AUTC405	Basic Shop Operations/Metal	5
AUTC408	Basic Shop Operations/Paint	5
AUTC410	Basic Estimating	2
AUTC414	Collision Analysis/Measuring	2
AUTC430	Suspension and Brakes	6
AUTC432	Auto Collision/Electrical Systems	4
AUTC440	Frame/Unibody Structural Repair	5
AUTO472	Auto AC and Heating	4
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
HLCR314	Emergency Care	1
UPHL433	Auto Upholstery Installation	3
WELD468*	Related Welding/Auto Collision	2

## AUTO COLLISION TECHNOLOGY

### Required Courses

PHYL401*	Physics for Technicians	3
PSCH106	Psychology of Human Relations & Adj	3

### Option Courses...Select 1 Course From Option 1

BUSL101	Business Law I	Opt1	3
MGMT229	Small Business Management	Opt1	3

## Auto Mechanics Technology

The Auto Mechanics Technology program is designed to prepare students for employment in the high technology automotive service industry and to update those already employed.

There are two separate diploma options which can be taken individually or in combination. One option prepares graduates for job entry in current Automotive Technology Tune-Up and Engine Repair. The other option prepares graduates to enter the automotive industry trained in the latest Power Train and Chassis Repair techniques. By completing the two diploma options plus three courses, students may receive an AAS degree.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall or spring term.

## Graduation Requirements

To earn an Auto Mechanics Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

## AUTO ENGINES AND TUNE-UP

### Required Courses

AUTO464*	Auto Measurement and Tools	3
AUTO466	Fuel Systems	4
AUTO468	Automotive Electricity	6
AUTO472	Auto AC and Heating	4
AUTO474*	Automotive Engine Fundamentals	3
AUTO476	Electronic Engine Controls	6
AUTO478	Advanced Tune-Up	4
AUTO479	Service Management	2
AUTO482	Advanced Engines	3
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
PHYL401*	Physics for Technicians	3

## AUTO CHASSIS & POWER TRAIN

### Required Courses . . . Select 1 Course from Option 1

AUTO464*	Auto Measurement and Tools	3	
AUTO484	Basic Power Train	6	
AUTO486*	Basic Brakes	3	
AUTO488*	Basic Suspension/Alignment	4	
AUTO490	Advanced Power Train	6	
AUTO492	Advanced Brakes & Alignment	5	
ENGL410*	Communication Skills	3	
HLCR314	Emergency Care	1	
MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology of Human Relations & Adj	Opt1	3
SOCY101	Introduction to Sociology	Opt1	3

## AUTOMOTIVE MECHANICS TECHNOLOGY

WELD467*	Related Weld-Transportation Trades	2
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## BSEP - General Motors

The Body Service Educational Program (BSEP), co-sponsored by DMACC and General Motors is a two-year cooperative auto collision repair training program designed to develop body technicians for GM dealerships and independent collision repair facilities that perform warranty collision repair for GM dealers.

The curriculum, designed by GM and DMACC leads to the associate degree in Auto Collision Technology. The program involves precision analysis and measurement of wrecked vehicles; repair and replacement of damaged body and structural components to include the latest composite materials used; refinishing and color matching of vehicles using the most current paint, chemicals and application technology.

The program is 82 weeks of rotational training including 45 weeks of classroom/lab work and 36 weeks of on-the-job paid work experience at a participating GM dealership or independent collision repair facility.

As a BSEP body technician a student will be trained not only in the technical areas, but also these other important related areas; reading, communication, and reasoning skills, business related subjects; and interpersonal skills. These subjects provide the foundation for future personal and professional growth.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement, aptitude and ability tests and be accepted by General Motors as a participant. In addition, all program participants must be employed as a

# Educational Programs

student intern by a participating General Motors dealership or participating independent auto collision repair facility.

## Graduation Requirements

To earn a BSEP General Motors AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

## Required Courses

ASEP312	GM Specialized Electronics Training	3
ASEP318	GM Steering/Suspension/Brakes	4
AUTC403	Basic Shop Safety	2
AUTC410	Basic Estimating	2
AUTC414	Collision Analysis/Measuring	2
BSAD150	Intro to Business	3
BSEP405	Basic GM Shop Operations/Metal	4
BSEP408	Basic GM Shop Operations/Paint	3
BSEP412	GM Refinishing Techniques	4
BSEP413	GM Plastic Repair/Refinishing	2
BSEP420	Advanced GM Refinishing	5
BSEP421	Adv. GM Estimating/Managership	2
BSEP440	GM Unibody Structural Repair	5
BSEP450	Internship I	3
BSEP460	Internship II	3
BSEP470	Internship III	3
BSEP472	A/C and Heating Systems	4
BSEP480	Internship IV	3
ENGL410*	Communication Skills	3
HLCR314	Emergency Care	1
MATH410*	Mathematics for Technicians I	3
PHYL401*	Physics for Technicians	3
PSCH106	Psychology of Human Relations & Adj	3
UPHL433	Auto Upholstery Installation	3
WELD468*	Related Welding/Auto Collision	2

## Building Trades

The Building Trades program provides students with the skills and knowledge necessary to enter either residential or commercial construction fields.

Classroom work focuses on familiarizing the students with basic knowledge of construction materials. Laboratory activities emphasize practical hands-on skills needed in the building trades.

The last term is devoted to applying classroom theory and lab skills in an actual construction job, either residential or commercial.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall term.

## Graduation Requirements

To earn a Building Trades diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

BLDG451	Materials/Construction Theory	5
BLDG452	Construction Techniques	7
BLDG453*	Care/Use of Hand/Power Tools	1
BLDG455*	Construction Blueprint Reading	1
BLDG456	Materials Takeoff	1
HLCR314	Emergency Care	1
MATH410*	Mathematics for Technicians I	3

### Term 2

BLDG461	Concrete Systems and Forming	4
BLDG462	Construction Drafting & Design	2
BLDG464	Interior Trim Practices	3
ENGL410*	Communication Skills	3

### Term 3

BLDG480	Construction Procedure/Application I	5
BLDG481	Construction Procedure/Application II	5
BLDG482	Construction Procedure/Application III	5

## Computer-Aided Design Technology

Computer-Aided Design (CAD) Technology prepares students for a career in a variety of design drafting disciplines. The CAD technology student will be exposed to different CAD software packages and computer operating systems. Students will learn how to create CAD models and drawings to international and U.S. customary drafting standards.

Students can attain a one year diploma or a two year associate degree in CAD technology. Students enrolled in the one year diploma will be taught basic drafting and CAD practices with emphasis on entry level drafting job skills. Students enrolled in the associate degree program will complete the first year diploma requirements and in the second year apply advanced CAD software operations including three-dimensional (solid) modeling, computer analysis and rendering. Associate degree students will also be taught a variety of specialized drafting standards in their respective field of interest.

Engineering and manufacturing design drafting, computer animation and graphics, technical publishing and independent CAD contracting are areas that computer-aided drafting technology graduates may find employment.

Location: Ankeny

## Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall term.

## Graduation Requirements

To earn a Computer-Aided Design Technology diploma or AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Term 1

CADT405	Principles of Computer Operations	3
CADT410	CAD Graphics I	6
ENGL117	Composition I	3
MATH410*	Mathematics for Technicians I	3

### Term 2... Select 1 Course From Option 1

CADT411	CAD Graphics II	6
CADT431	Manufacturing Interfaces-CAD/CAM/CIM	3
MATH411	Mathematics for Technicians II	3
MGMT203	Human Relations in Business	Opt1 3
PSCH106	Psychology of Human Relations & Adj	Opt1 3

### Term 3

CADT415	Engineering Disciplines & Practices	3
CADT420	Microstation CAD I	3
CADT425	Applied Materials and Processes	3

### Term 4

CADT412	CAD Applications I	6
CADT421	Microstation CAD II	3
CADT426	Pro/Engineer CAD I	3
CADT451	Mechanical Systems	3

### Term 5

CADT428	Introduction to CAD Analysis	3
CADT430	Networking Systems	3
CADT471	Layouts and Drawings	5
CADT472	Rendering and Animation	3
ENGL119	Technical and Business Writing	3

# Educational Programs

## Conditioned Air

The Conditioned Air program provides the theory, knowledge, and skills of refrigeration, air conditioning, heating, and ventilation equipment for systems in residential and light commercial structures. Students in air conditioning and refrigeration are taught in the classroom and laboratory on models and equipment to prepare the student for satisfactory entrance and advancement in the conditioned air field.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start summer term.

### Graduation Requirements

To earn a Conditioned Air diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

CONA451	Fundamentals of Refrigeration	3
CONA452*	Electricity I	3
CONA454	Fundamentals of Heating	3
MATH410*	Mathematics for Technicians I	3

#### Term 2

CONA461	Advanced Refrigeration/Heating	5
CONA462	Year Round Air Conditioning I	5
CONA463	Blueprint Reading	2
CONA464	Industrial Electricity	3
PHYL401*	Physics for Technicians	3

#### Term 3 . . . Select 1 Course From Option 1

CONA471	Air Distribution	5
CONA472	Year Round Air Conditioning II	7
ENGL410*	Communication Skills	3
MGMT203	Human Relations in Business	Opt1 3
PSCH101	General Psychology	Opt1 3
PSCH106	Psychology of Human Relations & Adj	Opt1 3
SOCY101	Introduction to Sociology	Opt1 3

## Diesel Technology

The Diesel Technology program prepares students for a career in the area of diesel repair. Instruction is in the repair, maintenance, and testing of diesel engines, power trains, and components of trucks and heavy construction equipment.

Employment opportunities exist in the servicing and repair of equipment such as buses, trucks, tractors, heavy construction equipment, etc.

By completing the first three terms plus ENGL 410, a student may receive the diploma option.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn a Diesel Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

DISL401	Diesel Engines I	6
DISL402	Diesel Engines II	6
MATH410*	Mathematics for Technicians I	3

#### Term 2

DISL404	Power Trains	6
DISL406	Hydraulics	3
DISL408	Basic Electricity	5

#### Term 3

DISL420	Air Conditioning	3
DISL428	Operation and Maintenance	6

#### Term 4

DISL407	Diesel Fuel Systems	6
DISL414	Electronic Diesel Engine Control	6
DISL409	Diesel Electronics	5

#### Term 5

DISL417	Heavy Equipment Repair	5
DISL418	Truck Repair	5
DISL470	Advanced Electricity	4
WELD467*	Related Weld-Transportation Trades	2

#### Term 6

ENGL410*	Communication Skills	3
PHYL401*	Physics for Technicians	3
MGMT203	Human Relations in Business	3

## Electronics Maintenance

The Electronics Maintenance curriculum is designed to prepare the student for entry level positions as an electronics service person.

Students who have completed the program should be able to perform the routine maintenance of electronic systems. The curriculum places emphasis on servicing consumer products, i.e., color TV, radio, video cassette recorders, video discs, and other related consumer product devices.

Upon program completion, students seek employment in TV service centers, stereo centers, audio-visual businesses, major retail outlets, as well as other related electronic service positions.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. High school algebra or equivalent is recommended. Students start fall term.

### Graduation Requirements

To earn an Electronics Maintenance AAS Degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1 . . . Select 1 Course From Option 1

ENGL117	Composition I	Opt1 3
ENGL119	Technical and Business Writing	Opt1 3
ENGL410*	Communication Skills	Opt1 3
ELEM450	Related Math	3
ELEM451*	DC and AC Fundamentals	3
ELEM452	DC and AC Fundamentals Lab	3
ELEM453	Basic Electrical Practices	3
ELEM454	Basic Electrical Practices Lab	3

#### Term 2

ELEM460	Applied Electronics	3
ELEM461	Applied Electronics Lab	3
ELEM462	Digital Electronics	3
ELEM463	Digital Electronics Lab	3
ELEM464	Industrial Electronics	3
ELEM465	Industrial Electronics Lab	3

#### Term 3 . . . Select 1 Course From Option 2

PSCH106	Psychology of Human Relations & Adj	Opt2 3
PSCH101	General Psychology	Opt2 3
SOCY101	Introduction to Sociology	Opt2 3
MGMT203	Human Relations in Business	Opt2 3
ELEM470	Communications	3
ELEM471	Communications Lab	2
ELEM472	Color Systems I	3
ELEM474	Color Systems I Lab	1

#### Term 4

ELEM480	Consumer Products	6
ELEM481	Consumer Products Lab	3
ELEM482	Color Systems II	6
ELEM483	Color Systems II Lab	3

# Educational Programs

## High Tech-Biomedical

The High Tech-Biomedical program prepares students for a career as a biomedical electronic technician. By the end of the program students will be able to perform entry level troubleshooting and repair of medical electronic instrumentation such as patient monitoring and EEG equipment as well as clinical lab instrumentation such as pH meters, spectrophotometers and blood cell counters. The technical curriculum is also supported by courses from the health field such as health care delivery and integrated services.

Upon program completion students may seek employment in hospitals or as a technician for a manufacturer of medical electronic equipment.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. High school algebra or equivalent is recommended. Students start fall or spring term.

### Graduation Requirements

To earn a High Tech-Biomedical AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

ELHT313	Technical Math I	3
ELHT314	Circuit Analysis I	5
ELHT315	Fabrication Techniques	3
ELHT316	Circuit Analysis I Lab	3
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
ELHT330	Digital Circuits I	2
ELHT331	Circuit Analysis II	3
ELHT340	Digital Circuits II	3
ELHT341	Digital Circuits II Lab	5
ELHT345	Operating Systems	2
ELHT362	Digital Circuits Lab	2
ELHT363	Circuit Analysis II Lab	3
HTBM353	Biomed Instrumentation I	3
HTBM354	Biomed Instrumentation I Lab	5
HTBM355	Electro-Mechanical Systems I	2
HTBM356	Electro-Mechanical Systems I Lab	2
HTBM358	Biomed Internship	1
HTBM362	Health Care Delivery	2
HTBM363	Biomed Instrumentation II	2
HTBM364	Biomed Instrumentation II Lab	2
HTCT364	Microcomputer Systems	3
BIOL127	Human Biology	3
CHEM120	Survey of Chemistry	3
ENGL410*	Communication Skills	3
MEDA462	Medical Terminology	1

### Option Courses . . . Select 1 Course From Each Option

SOCY101	Introduction to Sociology	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology of Human Relations & Adj	Opt1	3
MGMT203	Human Relations in Business	Opt1	3
HTCT371	Netware 3.x Administration	Opt2	2
HTCT374	Netware 4.x Administration	Opt2	2

## High Tech-Computers

The High Tech-Computers program prepares students for a career as a computer technician. At the end of the program students should be able to diagnose and repair digital electronic equipment including computers, microprocessor-based instrumentation and peripheral equipment such as floppy disk drives, terminals and computer networks. These skills will qualify students for positions such as computer field engineer, customer engineer or as a test technician prototyping microprocessor-based instrumentation for a variety of industrial uses.

Highly technical courses will train students in state of the art digital electronics and the use of specialized test equipment used for both circuit design and to diagnose and repair digital and microprocessor circuits.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. High school algebra or equivalent is recommended. Students start fall or spring term.

### Graduation Requirements

To earn a High Tech-Computers AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

ELHT313	Technical Math I	3
ELHT314	Circuit Analysis I	5
ELHT315	Fabrication Techniques	3
ELHT316	Circuit Analysis I Lab	3
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
ELHT330	Digital Circuits I	2
ELHT331	Circuit Analysis II	3
ELHT340	Digital Circuits II	3
ELHT341	Digital Circuits II Lab	5
ELHT345	Operating Systems	2
ELHT362	Digital Circuits Lab	2
ELHT363	Circuit Analysis II Lab	3
HTCT353	Microprocessors	3
HTCT354	Microprocessors Lab	4
HTCT355	UNIX Operating System	2
HTCT356	UNIX Operating System Lab	1
HTCT360	Network Compatibility Products	4
HTCT363	Network Compatibility Products Lab	2
HTCT364	Microcomputer Systems	3
HTCT366	TCP/IP Networking	3
HTCT367	TCP/IP Networking Lab	1
HTCT372	Netware 3.1x Adv Administration	2
ENGL410*	Communication Skills	3

### Option Courses . . . Select 1 Course From Each Option

SOCY101	Introduction to Sociology	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology of Human Relations & Adj	Opt1	3
MGMT203	Human Relations in Business	Opt1	3
BSAD150	Intro to Business	Opt2	3
BUSL101	Business Law I	Opt2	3
ECON101	Principles of Macro-Economics	Opt2	3
HTCT371	Netware 3.x Administration	Opt3	2
HTCT374	Netware 4.x Administration	Opt3	2
HTCT373	Networking Technologies	Opt4	2
HTCT375	Service and Support	Opt4	2

## High Tech-Robotics/Automation

The High Tech-Robotics program prepares students for a career as a technician in industrial manufacturing. At the end of the program students should be able to diagnose and repair industrial equipment ranging from the basic motor control devices used in hard automation to the sophisticated industrial robots and computer integrated manufacturing cells that utilize microprocessors for programming and servo control.

The curriculum includes both the fundamental technologies and system applications. Upon program completion students may seek employment with area manufacturers maintaining plant equipment or with companies that produce process control or robotic devices.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. High school algebra or equivalent is recommended. Students start fall or spring term.

### Graduation Requirements

To earn a High Tech-Robotics AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.



# Educational Programs

## Required Courses

ELHT313	Technical Math I	3
ELHT314	Circuit Analysis I	5
ELHT315	Fabrication Techniques	3
ELHT316	Circuit Analysis I Lab	3
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
ELHT330	Digital Circuits I	2
ELHT331	Circuit Analysis II	3
ELHT340	Digital Circuits II	3
ELHT341	Digital Circuits II Lab	5
ELHT345	Operating Systems	2
ELHT362	Digital Circuits Lab	2
ELHT363	Circuit Analysis II Lab	3
HTPC351	Hydraulics and Pneumatics	3
HTPC352	Hydraulics and Pneumatics Lab	2
HTPC355	Process Control Instrumentation	3
HTPC357	Process Control Instrumentation Lab	2
HTPC358	Motor Controls	3
HTPC359	Programmable Logic Controllers	3
HTPC360	Industrial Electronics	2
HTPC363	Mechanisms	2
HTPC364	Mechanisms Lab	2
CIM-404	Robotics	2
CIM-413	Introduction to FMS Cell	3
ENGL410*	Communication Skills	3

## Option Courses . . . Select 1 Course From Each Option

SOCY101	Introduction to Sociology	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology of Human Relations & Adj	Opt1	3
MGMT203	Human Relations in Business	Opt1	3
BSAD150	Intro to Business	Opt2	3
BUSL101	Business Law I	Opt2	3
ECON101	Principles of Macro-Economics	Opt2	3
HTCT371	Netware 3.x Administration	Opt3	2
HTCT374	Netware 4.x Administration	Opt3	2

## Quality Technician

Does quality mean a lot to you? Do you believe that excellence in the quality of products and service are essential to business and industry? Are you a "quality minded and committed" type of person? Then this program will prepare you in the knowledge and skills required to effectively work with and guide an organization in its quest for quality excellence. You will gain the knowledge, insights, abilities and skills most sought after by organizations who take quality seriously.

By completing the first two terms a student may receive a diploma. The Quality Technician diploma is designed for students who have completed the Quality Technician certificate requirements or have prior equivalent education and are looking to update or supplement their current skills and knowledge in the field of quality.

Upon completion of the AAS degree program, students will find they are uniquely prepared to seek employment and succeed in a variety of desirable positions in business or industry. Competent knowledge and skills in the practices of quality and quality improvement are highly sought after attributes of many job applicants in most any field today.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall or spring term.

### Graduation Requirements

To earn a Quality Technician diploma or AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

BSAD152	Business Statistics	4
BPQI400	Total Quality Management (TQM)	3
BPQI401	Intro to Statistical Process Control (SPC 1)	3
CIM-408	Intro to Computer-Integrated Manufacturing	3

TOOL480	Blueprint Reading I	2
TOOL482	Machine Shop Measurements I	2

#### Term 2

BPQI402	Application of Statistical Methods	3
BPQI403	Practices of Continuous Improvement	3
BPQI405	Statistical Process Control II	3
CADT425	Applied Materials and Processes	3
COMS181	Introduction to Computer Literacy	3
MGMT244	Leadership Development	3

#### Term 3

BPQI406	Quality Standards & Compliance	3
BPQI407	Teams and Teamwork	3
BPQI408	Introduction to Quality Control Mgmt.	3
BPQI409	Advanced Statistical Process Control	3
BUSL101	Business Law	3
ENGL117	Composition I	3

#### Term 4...Select 1 course from Option 1

BPQI410	Quality Technician Program Project	3	
ECON102	Principles of Micro-Economics	3	
ENGL119	Technical and Business Writing	3	
SPCH117	Interpersonal and Small Group Communication	3	
MGMT203	Human Relations in Business	Opt1	3
PSCH106	Psychology of Human Relations and Adj	Opt1	3

## Telecommunications Technology

The Telecommunications Technology program is designed to prepare students to begin a career in either the telecommunications or telephone industries. The program covers basic skills and knowledge associated with transmitting analog and digital communications. Hands-on training covers system installation, user configuration commands, system operation and diagnostic maintenance procedures. Students who successfully complete this program may seek employment in several areas of the telephone and telecommunications industries.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. High school algebra or equivalent is recommended. Students start fall term.

### Graduation Requirements

To earn a Telecommunications Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### Term 1

ELEM450	Related Math	3
ELEM451*	DC and AC Fundamentals	3
ELEM452	DC and AC Fundamentals Lab	3
TELE410	Telephony I	3
TELE411	Telephony Experience I	6

#### Term 2

ELEM462	Digital Electronics	3
ELEM463	Digital Electronics Lab	3
TELE420	Telephony II	4
TELE421	Telephony Experience II	7

#### Term 3

TELE430	Telephony III	3
TELE431	Telephony Experience III	6
TELE432	Data Communications	3

#### Term 4 . . . Select 1 Course From Option 1

BSAD150	Intro to Business	3	
COMS181	Intro to Computer Literacy	3	
ENGL410*	Communication Skills	3	
TELE440	Telephony IV	3	
TELE441	Telephony Experience IV	3	
MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology of Human Relations & Adj	Opt1	3
SOCY101	Introduction to Sociology	Opt1	3

# Educational Programs

## Tool & Diemaking

The Tool and Diemaking program prepares students to meet the demands for qualified personnel in either conventionally controlled or computer numerical controlled (CNC) tooling industry.

There are two separate diploma options available: Job Shop Machinist or Diemaking. Job Shop Machinist graduates should have the skills required to work in a general machine shop. Diemaking graduates should have the skills necessary to work as tool planners, tool makers, die makers, etc. By completing the two diploma options plus one course, students may receive a Tool & Diemaking AAS degree.

Location: Ankeny

### Program Entry Requirements

#### JOB SHOP MACHINIST

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall term.

#### DIEMAKING

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Submit proof of Job Shop Machinist Diploma or equivalent. Students start fall term.

### Graduation Requirements

To earn a Job Shop Machinist or Diemaking diploma, or Tool and Die Making AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

#### JOB SHOP MACHINIST

##### Required Courses

ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
MATH411	Mathematics for Technicians II	3
TOOL480*	Blueprint Reading I	2
TOOL481	Blueprint Reading II	3
TOOL482	Machine Shop Measurements I	2
TOOL484	Machine Tool Operations I	3
TOOL485	Machine Tool Operations II	4
TOOL486	Machine Tool Operations Lab I	5
TOOL487	Machine Tool Operations Lab II	7
TOOL489	Heat Treatment of Materials	2
TOOL490	Machine Tool Operations Lab III	7
TOOL491	Machine Tool Operations III	4

#### DIEMAKING

##### Required Courses

CADD401*	Intro Computer Aided Drafting	3
CADD402	Intermediate CADD-Mechanical	3
CIM-413	Introduction to FMS Cell	3
DIEM400	Basic Diemaking	4
DIEM401	Basic Diemaking Lab	6
DIEM402	Advanced Blueprint Reading	2
DIEM403	Progressive Die Design	3
DIEM404	Advanced Diemaking	4
DIEM405	Advanced Diemaking Lab	6
DIEM407	Plastic Moldmaking	3
DIEM413	Electrical Discharge Machining	3
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
MATH411	Mathematics for Technicians II	3

#### TOOL AND DIE

##### Select 1 Course From Option 1

MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology of Human Relations & Adj	Opt1	3
SOCY101	Introduction to Sociology	Opt1	3

## Upholstery

The Upholstery program is designed to provide the student with the necessary knowledge to enter employment in the automotive or furniture upholstery field. The program provides a blend of shop and theory activities utilizing laboratory projects and experiences.

Instruction includes the use of machines and hand tools, pattern layout, furniture construction, color concepts and coordination, and cost estimating. The listed sequence of courses may be altered.

Graduates of this program will find employment in the automotive or furniture upholstery business.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

### Graduation Requirements

To earn an Upholstery diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

UPHL460	Basic Upholstery	2
UPHL461	Pattern Layout	2
UPHL462	Cushion Construction	2
UPHL463	Padding Procedures	2
UPHL464	Frame Preparation	1
UPHL465	Technical Problems	2
UPHL466	Business Problems	2
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3

### Option Courses . . . Select Option 1 Or Option 2 And 1 Course

#### From Option 3

UPHL470	Skirt/Attached Pillow Construction	Opt1	2
UPHL471	Nosing/Advanced Cushion Construction	Opt1	2
UPHL472	Overstuffed Chair Project	Opt1	1
UPHL473	Tufting Techniques	Opt1	2
UPHL474	Pillow Back Chair Project	Opt1	2
UPHL475	Recliner Chair Project	Opt1	2
UPHL476	Large Sofa Project	Opt1	2
UPHL477	Loveseat/Small Sofa Project	Opt1	1
UPHL480	Installing Vinyl Tops	Opt2	2
UPHL481	Auto Bench/Bucket Seat Project	Opt2	2
UPHL482	Boat Seat Project	Opt2	1
UPHL483	Auto Pillow Back Seat	Opt2	2
UPHL484	Auto Door Panel/Headliner Project	Opt2	2
UPHL485	Auto Carpeting Project	Opt2	2
UPHL486	Vinyl/Convertible Top Project	Opt2	2
UPHL487	Boat/Tonneau Cover Project	Opt2	1
MGMT203	Human Relations in Business	Opt3	3
PSCH101	General Psychology	Opt3	3
PSCH106	Psychology of Human Relations & Adj	Opt3	3
SOCY101	Introduction to Sociology	Opt3	3

## Welding

Welding is the term used to describe numerous methods of joining metals. Students are provided with entry level welding skills and knowledge essential for employment in the industrial manufacturing, job shop, and pipe welding industries.

Ferrous and non-ferrous metals are joined using the oxy-acetylene, shielded metallic arc and gas shielded arc welding processes. Free-hand and machine flame cutting are also taught.

Classroom theory, blueprint reading and technical math are part of the instructional program. The listed sequence of course offerings may be altered.

Location: Ankeny

### Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start any term.

# Educational Programs

## Graduation Requirements

To earn a Welding diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

### Required Courses

ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
WELD473*	Oxygen-Acetylene Welding/Cutting	2
WELD474*	Shielded Metal Arc Welding I	2
WELD478	Shielded Metal Arc Welding II	3
WELD479	Shielded Metal Arc Welding III	2
WELD481*	Blueprint Reading	3
WELD486	Shielded Metal Arc Welding IV	3
WELD487	Shielded Metal Arc Welding V	3
WELD488	Shielded Metal Arc Welding VI	2
WELD483*	Gas Metal Arc Welding	2
WELD493	Gas Tungsten Arc Welding	2

## Certificates of Specialization

### Building Maintenance

The Building Maintenance certificate is a series of job related courses which provide a person with an understanding of how to keep a commercial or industrial type of building operating efficiently and effectively. Skill training enables a maintenance specialist to do the job from the first day of employment.

#### Required Courses

BLDM325	Boiler Room Maintenance	1
ELEM325	General Electricity	3

#### Option Courses...Select 3 Credits From Option 1

BLDM326	Steam Plant Operations	Opt1	2
BLDM329	Basic Plumbing	Opt1	2
HLCR314	Emergency Care	Opt1	1

### CIM - Manufacturing Resource Planning

Courses in this certificate are designed to present the student with a detailed background in applying the principles of inventory management, computer based scheduling, control of production operations, and JIT techniques. Particular emphasis is placed on cause and effect relationships, such as how reductions in set up costs can reduce inventory requirements, how more effective control of production operations can reduce total product cost and delivery lead times, and how changing the manner in which we manage a company can allow for more employee involvement and problem solving. Three of the courses (CIM- 409, 410, and 412) help to prepare the student to pass APICS certification exams on those topics.

#### Required Courses

CIM-408	Intro to Computer Integrated Mfg.	3
CIM-409	Inventory Management/Planning	3
CIM-410	Material Requirements Planning	3
CIM-411	Production and Capacity Management	3
CIM-412	Just In Time Inventory Control Techniques	3

### CIM - Product Engineering

The Product Engineering certificate covers many aspects of CAD. Beginning with an introductory course in mechanical AutoCAD, the program progresses to introduce the student to 3-D CAD. Finally, the student will generate computer-assisted part programs using CAM software. These programs are then post-processed and downloaded to CNC machines.

#### Required Courses

CADD401	Intro Computer Aided Drafting	3
CADD402	Intermediate CADD-Mechanical	3
CADD404	Computer Aided Design/Analysis	3
CIM-403	Introduction to CAD/CAM	3
CIM-408	Intro to Computer Integrated Mfg.	3

### CIM - Shop Floor Control

The Shop Floor Control certificate introduces the student to the programming and operation of the Manufacturing Cell components. It includes the programming and interfacing of PLC's, both Revolute and Scara robots and finally the integration of all components (PLC's, Robots, AS/RS and Vision) into a Flexible Manufacturing Cell. The objective of this certificate is to upgrade manufacturing technical personnel to state of the art systems and equipment.

#### Required Courses

CIM-404	Robotics	2
CIM-405	Programmable Controllers	3
CIM-408	Intro to Computer Integrated Mfg.	3
CIM-413	Introduction to FMS Cell	3

### High Tech Electronics-Biomed

The Biomedical Electronics certificate prepares graduates of electronics programs, civil or military, for a career as a biomedical electronic technician. By the end of the program students will be able to perform entry level troubleshooting and repair of medical electronic instrumentation such as patient monitoring EEG equipment as well as clinical lab instrumentation such as pH meters, spectrophotometers, and blood cell counters. The technical curriculum is also supported by courses from the health field such as health care delivery and integrated services.

Upon program completion graduates may seek employment in hospitals or as a technician for a manufacturer of medical electronic equipment. Students must obtain a satisfactory score on an entrance examination. Students start spring term only.

#### Required Courses

BIOL127	Human Biology	3
HTBM353	Biomed Instrumentation I	3
HTBM354	Biomed Instrumentation I Lab	5
HTBM358	Biomed Internship	1
HTBM355	Electro-Mechanical Systems I	2
HTBM356	Electro-Mechanical Systems I Lab	2
HTBM362	Health Care Delivery	2
HTBM363	Biomed Instrumentation II	2
HTBM364	Biomed Instrumentation II Lab	2

### Quality Technician

The Quality Technician certificate is designed to provide an introduction to the basics of quality assurance, quality control and inspection practices for individuals interested in the field of quality. Emphasis is placed on a well rounded, basic, entry-level set of courses stressing TQM, SPC, computer applications to business, specification/print reading and measurement principles.

Completion of this certificate will qualify students for a variety of entry level positions for occupations in the field of quality control or quality assurance.

#### Required Courses

BSAD152	Business Statistics	4
BPQI400	Total Quality Management (TQM)	3
BPQI401	Intro to Statistical Process Control (SPC I)	3
CIM-408	Intro to Computer-Integrated Manufacturing	3
TOOL480	Blueprint Reading I	2
TOOL482	Machine Shop Measurements I	2

### Upholstery I

The Upholstery I certificate is designed to provide instruction in the correct operation of sewing machines. The students will also gain knowledge of layout, cutting and fitting fabric for sewing machine operation.

#### Required Courses

UPHL460	Basic Upholstery	2
UPHL461	Pattern Layout	2
UPHL462	Cushion Construction	2
UPHL463	Padding Procedures	2
UPHL464	Frame Preparation	1

# Educational Programs

## Upholstery II

The Upholstery II certificate is designed to provide instruction in either furniture recovering or auto repair and restoration. Students will develop skills in layout, match fabric, and removal and replacement of pillow and channel backs. Students choosing the auto repair and restoration will develop skills in auto restoration and custom auto upholstery. Students must complete all courses in the Upholstery I certificate before advancing to the Upholstery II certificate.

### Required Courses

UPHL465	Technical Problems	2
UPHL466	Business Problems	2

### Option Courses...Select Option 1 Or Option 2

UPHL470	Skirt/Attached Pillow Const	Opt1	2
UPHL471	Nosing/Advanced Cushion Const.	Opt1	2
UPHL472	Overstuffed Chair Project	Opt1	1
UPHL480	Installing Vinyl Tops	Opt2	2
UPHL481	Auto Bench/ Bucket Seat Project	Opt2	2
UPHL482	Boat Seat Project	Opt2	1

## Upholstery III

The Upholstery III certificate is designed to provide the student with the necessary knowledge to enter employment in the furniture or automotive upholstery field.

Courses in the Upholstery I, II, III certificates also apply toward the one year Upholstery diploma program. Students must complete all courses in the Upholstery II certificate before advancing to the Upholstery III certificate.

### Option Courses...Select Option 1 Or Option 2

UPHL473	Tufting Techniques	Opt1	2
UPHL474	Pillow Back Chair Project	Opt1	2
UPHL475	Recliner Chair Project	Opt1	2
UPHL476	Large Sofa Project	Opt1	2
UPHL477	Loveseat/Small Sofa Project	Opt1	1
UPHL483	Auto Pillow Back Seat	Opt2	2
UPHL484	Auto Door Panel/Headliner Project	Opt2	2
UPHL485	Auto Carpeting Project	Opt2	2
UPHL486	Vinyl/Convertible Top Project	Opt2	2
UPHL487	Boat/Tonneau Cover Project	Opt2	1

## Welding

In an effort to meet the needs of interested students and local industry, the Welding program is offering open entry and open exit courses designed for the inexperienced as well as the more advanced and experienced welders. This flexibility allows students to take only those portions of the program they need at any given time. Students will be allowed to drop in and out as long as there is space available. Emphasis is placed on skill and knowledge that is required for the student to enter employment in the welding field, or for the student's own personal gain.

### OXY-ACETYLENE WELDING

WELD473	Oxygen-Acetylene Welding/Cutting	2
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### SHIELDED METAL ARC WELDING

WELD474	Shielded Metal Arc Welding I	2
WELD478	Shielded Metal Arc Welding II	3
WELD479	Shielded Metal Arc Welding III	2
WELD486	Shielded Metal Arc Welding IV	3
WELD487	Shielded Metal Arc Welding V	3
WELD488	Shielded Metal Arc Welding VI	2

### GAS METAL ARC WELDING

WELD483	Gas Metal Arc Welding	2
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### GAS TUNGSTEN ARC WELDING

WELD493	Gas Tungsten Arc Welding	2
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### BLUEPRINT READING

WELD481	Blueprint Reading	3
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## STRUCTURAL WELDING

WELD497	Advanced Shielded Met Arc Welding I	2
WELD498	Advanced Shielded Met Arc Welding II	3

## PIPE WELDING

WELD499	Intro-Shielded Met Arc Pipe Welding	3
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## Certificate of Completion

### Commercial Vehicle Operator Training

The Transportation Institute provides a training program that offers participants the opportunity to enter the transportation industry as a commercial vehicle driver. The 10-week, 320-hour, non-credit program utilizes the U.S. Department of Transportation Model Curriculum for it's training program. The course is certified by the Professional Truck Drivers Institute of America.

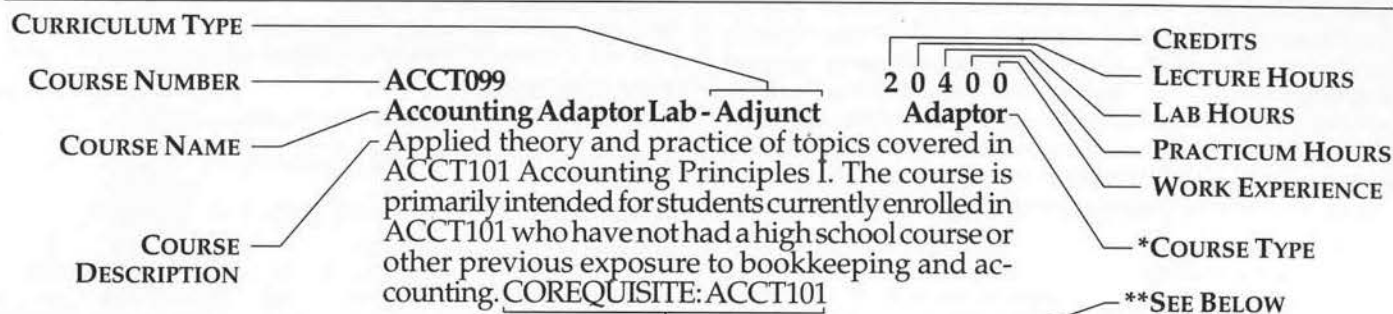
### Features

1. Placement with companies prior to beginning of training.
2. Extensive in-truck training with two students per truck ratio.
3. Student loan availability for most students.
4. Graduation with a Commercial Drivers License (CDL)
5. Earning potential - \$25,000 - \$35,000 first year.
6. Excellent career opportunities within the industry.

### Required Courses

Required Courses	Contact Hours
Basic Operations	112.00
Safe Operational Practices	112.75
Advanced Operating Procedures	22.00
Vehicle Maintenance	26.00
Non-Vehicle Activities	47.25

# Course Descriptions



ADJUNCT - Adjunct courses may be temporary or experimental and may be used to fulfill elective credit in programs that lead to a degree or diploma. Adjunct courses may not be used to fulfill or substitute for required or option courses in any degree or diploma program.

\* General = non-core courses identified as freshman-sophomore courses. Open = occupationally specific courses corresponding to courses in certain professional programs at four-year institutions. Vocational = occupationally specific courses. Core = traditional liberal arts courses in the first two years of a baccalaureate degree. Adaptor = developmental and remedial courses. Adaptor courses cannot be used to fulfill degree requirements. (P/F) = indicates courses taken pass/fail.

\*\* PREREQUISITES - successful completion of a course or other criterion necessary for a student to succeed in a higher level course. COREQUISITES - a course that must be taken concurrently with or prior to the course. RECOMMENDATION - a course or other criterion desirable for successful performance in another course.

**ACCT090\*\*\*** 2 0 4 0 0  
**Accounting Adaptor Lab** Adaptor  
 Applied theory and practice of topics covered in ACCT101 Accounting Principles I. The course is primarily intended for students currently enrolled in ACCT101 who have not had a high school course or other previous exposure to bookkeeping and accounting. **COREQUISITE: ACCT101**

**ACCT101** 4 4 0 0 0  
**Principles of Accounting I** General  
 Introduces the student to the principles of accounting with emphasis placed on the users and uses of accounting information. The double-entry bookkeeping system is presented with a focus on the end result of the accounting cycle, the financial statement.

**ACCT102** 4 4 0 0 0  
**Principles of Accounting II** General  
 A continuation of Principles of Accounting I. Introduces accounting procedures related to corporations, manufacturing, and branch operations. The course also includes an introduction to capital budgeting, analysis of financial statements and decision-making by managers. **PREREQUISITE: ACCT101**

**ACCT103** 4 4 0 0 0  
**Intermediate Accounting I** Open  
 Emphasis on theory, standards and principles—the “why” of accounting. The framework goes beyond the procedural level to the conceptual level. Topics include: preparation of income statements, balance sheets and related footnotes. Applicable FASB pronouncements are presented. **PREREQUISITE: ACCT102**

**ACCT104** 4 4 0 0 0  
**Intermediate Accounting II** Open  
 Continuation of Intermediate Accounting I, topics include: long-term debt, investments, equity, pensions, leases, accounting changes, earnings per share and accounting for inflation. **PREREQUISITE: ACCT103**

**ACCT105** 3 3 0 0 0  
**Nonprofit Accounting** Open  
 An introduction to the accounting and reporting principles, standards, and procedures applicable to federal, state, and local government. Also includes nonprofit institutions such as hospitals and universities. **PREREQUISITE: ACCT102** or dept permission

**ACCT203** 4 4 0 0 0  
**Cost Accounting** Open  
 An introduction to accounting concepts of product costing systems. Topics include: classification of costs, process costing, job order costing, joint and by-product costs, and standard cost systems, with variable analysis. **PREREQUISITE: ACCT102**

**ACCT206** 3 3 0 0 0  
**Income Tax** Open  
 An introduction to personal income tax. Emphasizes computation of federal and state income taxes and preparation of tax forms.

**ACCT208 - ADJUNCT** 3 1 2 0 0  
**Tax Assistance Institute** Voc/Tech  
 An opportunity to participate in a Volunteer Income Tax Assistance Program by applying classroom skills to actual experience. Includes training to provide community service of free tax assistance and preparation of basic tax returns for older, handicapped and low income taxpayers. (P/F) **PREREQUISITE: ACCT206**

**ACCT301** 3 3 0 0 0  
**Accounting Fundamentals** Open  
 An introductory course in accounting fundamentals and procedures. Includes capturing and analyzing business data and financial statement preparation.

**ACCT308 - ADJUNCT** 3 3 0 0 0  
**Managerial Accounting for Non-Accts** Voc/Tech  
 Managerial Accounting for Non-Accountants is a course designed to provide managers and supervisors with the basic skills essential for interpreting financial statements and financial performance measures. It also covers how the cost of a product or service is determined and the development and use of budgets.

**ACCT351** 3 3 0 0 0  
**Financial Acct./Microcomputers** Voc/Tech  
 Introductory course in microcomputer accounting operation. Includes topics in setting up the general ledger, accounts receivable, accounts payable, payroll and fixed asset depreciation. **PREREQUISITES: ACCT101, COMS181**

**ACCT352** 3 3 0 0 0  
**Managerial Acct/Microcomputers** Voc/Tech  
 Microcomputer operations with an emphasis on managerial uses. Includes topics in basic spreadsheet modeling, spreadsheet commands, manufacturing systems, budgeting, profit analysis and model building. **PREREQUISITES: ACCT203, COMS181**

**ACCT403** 3 0 0 0 14  
**Accounting Internship** Open  
 An opportunity to gain practical experience through on-the-job training in an approved business or governmental office. (P/F) **PREREQUISITE: Successful completion of 11 hours of ACCT and/or BKKA credit courses; permission of the department and demonstrable job readiness with computer literacy. COREQUISITE: ACCT404**

**ACCT404** 1 1 0 0 0  
**Accounting Career Seminar** Voc/Tech  
 Designed to provide in-depth discussion of accounting/bookkeeping/accounting technician work experiences. **PREREQUISITE: Successful completion of 11 hours of ACCT and/or BKKA credit courses; permission of the department and demonstrable job readiness with computer literacy. COREQUISITE: ACCT403**

**ACCT407** 1 1 0 0 0  
**Accounting Professional Dev** Voc/Tech  
 Includes how individuals fit into organizations. Development of individual career values and opportunities in the accounting profession. (P/F)

**AGRI201** 3 3 0 0 0  
**Feeding and Animal Nutrition I** Voc/Tech  
 The identification and study of feed ingredients, nutrients and additives. Determine feed requirements of various livestock classes. Ration balancing and feed formulation are computed.

**AGRI202** 3 2 2 0 0  
**Crop Scouting** Voc/Tech  
 The course develops an understanding of the factors which affect plant growth. Plant nutrients are considered as students gain experience in identifying major and micro nutrient deficiency symptoms in plants by means of soil tests, plant tests and observations.

**AGRI203** 3 3 0 0 0  
**Feeding & Animal Nutrition II** Voc/Tech  
 The practical application of feeding principles. An in-depth study of the various nutrients, their requirements and uses. An analysis of research feeding trials, research procedures and manufacturing terminology. **PREREQUISITE: AGRI201**

**AGRI204** 3 3 0 0 0  
**Animal Science I** Voc/Tech  
 An analysis of the livestock industry with emphasis on reproduction, inheritance, performance testing, selection and marketing.

**AGRI205** 3 3 0 0 0  
**Commodities I** Voc/Tech  
 Focus on the futures market and how it can be used as a marketing tool. Emphasis is on terminology and hedging.

**AGRI206** 3 3 0 0 0  
**Crop Management** Voc/Tech  
 An introductory course in the general principles of crop production and management. Major areas of study are food production, crop classification, plant growth factors, seed production and variety selection.

# Course Descriptions

**AGRI207** 3 3 0 0 0  
**Livestock Disease Prevention** Voc/Tech  
 A survey of diseases of large domestic animals, including discussion of causes, transmission, prevention and control.

**AGRI209** 1 0 2 0 0  
**Soils Laboratory** Voc/Tech  
 An introductory course in soils and nutrients. A study of the physical, chemical and biological properties of soils. Also includes the study of nutrients, land measurement and environmental concerns and soil management.

**AGRI215** 3 3 0 0 0  
**Commodities II** Voc/Tech  
 An in-depth study of the futures market. Major areas of study include hedging, speculation, price forecasting, spreading, technical analysis and fundamental analysis. PREREQUISITE: AGR1205

**AGRI219** 3 3 0 0 0  
**Soils and Fertilizers** Voc/Tech  
 An extended course in soils and fertilizers. A study of the physical, chemical and biological properties of soils. Also includes the study of fertilizers, their composition, manufacture and use. COREQUISITE: AGR1209

**AGRI304** 3 3 0 0 0  
**Swine Production and Management** Voc/Tech  
 The practical application of technical information to life-cycle swine production including production systems, breeding and genetics, herd health, housing, marketing, management and nutrition. PREREQUISITES: Permission of instructor or AGR1201, 204

**AGRI305** 3 3 0 0 0  
**Beef Production and Management** Voc/Tech  
 The practical application of technical information to life-cycle beef production with emphasis on cow-calf production and feedlot management. PREREQUISITES: Permission of instructor or AGR1201, 204

**AGRI306** 3 3 0 0 0  
**Advanced Crop Management** Voc/Tech  
 An advanced course using the problem solving approach to crop management. Principles and practices of agronomic science are used in the discussion of management problems related to corn, soybeans, forage, small grain, sorghum, and alternative crops. PREREQUISITES: Permission of instructor or AGR1202, 206, 219

**AGRI322** 3 3 0 0 0  
**Agri-Business Management** Voc/Tech  
 A study of the role and organization of several aspects of agribusiness including financial management and control, marketing, operation and resource management in agribusiness.

**AGRI323** 3 3 0 0 0  
**Farm Management** Voc/Tech  
 Includes management problem identification and solution using business and economic principles, enterprise and total farm budgeting, adjusting to uncertainty, investment decisions, farm business organization, farm records and business analysis.

**AGRI333** 3 3 0 0 0  
**Petroleum Products in Agriculture** Voc/Tech  
 Designed to acquaint students with the petroleum industry and its terminology. Major areas of study will be fuels and lubricants with emphasis on applications and selection, equipment operations, storage and handling procedures, and federal regulations.

**AGRI411** 3 3 0 0 0  
**Agricultural Economics** Voc/Tech  
 A study of economic principles and the application of these principles to the distribution of agricultural supplies.

**AGRI421** 3 3 0 0 0  
**Chemical Technology** Voc/Tech  
 Common features of pests, methods of control, how pesticides work, pesticide labels, application equipment, calibration, laws and regulation governing pesticide use.

**AGRI430** 4 0 0 0 18  
**Employment Experience I** Voc/Tech  
 Employment experience in an agri-business related to career objectives. PREREQUISITES: AGR1201, 219 or permission of instructor

**AGRI436** 2 2 0 0 0  
**Grain Management** Voc/Tech  
 Designed to acquaint the student with the complete cycle of grain from the farm to the country elevator. Major areas of study are the management of facilities, equipment, personnel and finances, warehouse requirements, grain grading, grain conditioning and grain inventory management.

**AGRI455** 4 0 0 0 18  
**Employment Experience II** Voc/Tech  
 Work experience in an agri-business area. PREREQUISITE: AGR1430

**ANTH120** 3 3 0 0 0  
**Introduction to Anthropology** Core  
 This course is an introduction to the comparative study of humankind from biological and cultural perspectives. It surveys anthropological theory, methods and major findings regarding human origins and variations, cultural development and change, cultural systems, and cross-cultural comparisons of people throughout the world.

**ANTH121** 3 3 0 0 0  
**Cultural Anthropology** Core  
 The application of anthropological theory and perspective to the comparison of different types of cultures throughout the world, and to the analysis of contemporary human problems. Using ethnographic techniques, students conduct research on selected cultural aspects of the surrounding community.

**ANTH122** 3 3 0 0 0  
**Peoples and Cultures Of Mexico** General  
 This course traces the rise and development of the Indian civilization, the Spanish conquest, and the emergence of Mestizo Mexico through such events as its independence from Spain and its 20th century revolution. The course also examines the varieties of cultures and contemporary Mexico.

**ARCH410** 2 2 0 0 0  
**Architectural Drafting I** Voc/Tech  
 An introduction to drafting and related equipment, along with a preliminary look at site, energy, the building code, and sketching.

**ARCH420** 2 2 0 0 0  
**Architectural Drafting II** Voc/Tech  
 Complete sets of residential working drawings involving plans, elevations, sections, details, and schedules will be developed. PREREQUISITE: ARCH410

**ARCH460** 3 0 6 0 0  
**Architectural Drafting Lab I** Voc/Tech  
 Practical application of the basic skills of drafting involving the mechanics and the necessary thought process.

**ARCH461** 3 0 6 0 0  
**Architectural Drafting Lab II** Voc/Tech  
 Practical application of techniques necessary to develop a set of residential drawings. PREREQUISITE: ARCH460

**ARCH462** 2 2 0 0 0  
**Architectural Drafting III** Voc/Tech  
 Small commercial building drawings will be developed including the mechanical systems and costs. PREREQUISITE: ARCH420

**ARCH463** 3 0 6 0 0  
**Architectural Drafting Lab III** Voc/Tech  
 Involvement in the practical drawing of commercial buildings including the normal system with emphasis on energy conservation. PREREQUISITE: ARCH461

**ARCH464** 2 2 0 0 0  
**Construction Techniques I** Voc/Tech  
 An introduction to building materials through the construction specification institutes' accounting and management systems.

**ARCH465** 2 2 0 0 0  
**Building Equipment Techniques II** Voc/Tech  
 Heating and cooling systems with support conditioning elements will be analyzed. PREREQUISITE: ARCH473

**ARCH470** 2 2 0 0 0  
**Construction Techniques II** Voc/Tech  
 An ongoing look into the construction specification institutes' system of categorizing building materials. PREREQUISITE: ARCH464

**ARCH471** 3 3 0 0 0  
**Construction Techniques III** Voc/Tech  
 Complete the construction specification institutes' uniform system and investigate the preliminary aspects of structural design. PREREQUISITE: ARCH470

**ARCH472** 2 2 0 0 0  
**Construction Estimating** Voc/Tech  
 An orderly process of accounting for the items involved in the construction project.

**ARCH473** 2 2 0 0 0  
**Building Equipment Techniques I** Voc/Tech  
 The mechanical systems of the building will be analyzed from the ground beginning with plumbing and electrical.

**ARCH475** 2 2 0 0 0  
**Technical Report and Specs** Voc/Tech  
 A look into the forms and contracts used in architecture as well as the technical section called specifications.

**ARTS101** 3 3 0 0 0  
**Art Appreciation** Core  
 A general survey course which explores in chronological sequence many artists, their lives, styles and media. The student will use art to recognize global cultural diversity and connect to universal human experience as expressed through art.

**ARTS102** 3 0 6 0 0  
**Fundamentals of Drawing** General  
 Lab study of tools and techniques necessary for entry level visual arts in drawing. Emphasis on still life using gesture, contour, shape, plane, volume and value/tonal techniques. Basic drawing skills with pencil, charcoal and eraser are explored.

**ARTS103** 3 0 6 0 0  
**Life Drawing** General  
 Drawing and painting a live model. Emphasis on structure, movement and expression.

**ARTS104** 3 0 6 0 0  
**Fundamentals of Painting** General  
 Acrylic painting with emphasis on still life, landscape and individual composition.

**ARTS105** 3 2 2 0 0  
**Art in the Elementary School** General  
 Designed for students in Education and Recreation to assist them with design, construction, and planning of multi-art forms and materials for instructional situations.

**ARTS109** 3 3 0 0 0  
**Design: Exploring Art Media** General  
 An introduction to basic techniques in media such as paper-making, clay, fibers and soft sculptures. Students will explore variety of traditional approaches to express a contemporary vision.

**ARTS111 - ADJUNCT** 3 0 6 0 0  
**Landscape Painting** General  
 Landscape painting using any waterbased media. Study of the elements of art to aid in composition and development of a personal painting style. Field trips will be required.

**ASDN264** 11 5 2 15 0  
**Nursing IV** Open  
 Focus is scientific nursing knowledge and nursing process with practicum application to restore clients' self-concept, sexuality, nutrition, elimination needs to level of optimum health. Interrelationships, pathophysiology and signs/symptoms of changing needs are analyzed. RN role and scope of practice are discussed. PREREQUISITES: BIOL132, 134, ENGL117, NURS263, PSCH101, 103

# Course Descriptions

**ASDN265** 11 5 2 15 0  
**Nursing V** Open

Focus is scientific knowledge and nursing process with practicum application to restore clients' activity/sensory, sleep/comfort, oxygenation/circulation & self concept needs to level of optimum health. Continue analysis of pathophysiology, multiple needs and evaluation of care plan. Management, role transition & bioethical issues are explored. PREREQUISITES: ASDN264, SOCY101

**ASEP312** 3 2 2 0 0

**GM Specialized Electronics Training** Voc/Tech  
A study of the electrical and electronics systems used in General Motors vehicles. The instruction includes fundamentals of electricity, series and parallel circuits, schematics, wire repair, diodes, transistors and microprocessors. PREREQUISITES: Admission to Automotive Service Educational Program

**ASEP317** 3 2 2 0 0

**GM Shop Fund and Minor Service** Voc/Tech  
A study of dealership organizational structure as it relates to the technician. Use of service manuals, electronic troubleshooting manuals and service bulletins are practiced. Also provides entry level automotive task competencies. PREREQUISITES: Admission to Automotive Service Educational Program

**ASEP318** 4 3 2 0 0

**GM Steering/Suspension/Brakes** Voc/Tech  
Instruction in the theory of operation and service procedures used in the maintenance and repair of General Motors steering, suspension and brake systems. PREREQUISITES: Admission to Automotive Service Educational Program

**ASEP320** 3 0 0 0 18

**Technical Internship I** Voc/Tech  
The technician will work in a participating dealership. The work will be full-time approximately 40 hours per week. The tasks will be consistent with the technician's ability and previous course work. A task list will be issued to each dealer. PREREQUISITES: Admission-Auto Service Ed Program, MATH410, ASEP312, 317, 318

**ASEP326** 3 2 2 0 0

**GM Auto Air Conditioning Systems** Voc/Tech  
Theory of operation of General Motors air conditioning systems leading to the diagnosis, service and repair of current models of GM vehicles. PREREQUISITES: Admission to Automotive Service Educational Program ASEP312, 317

**ASEP327** 3 2 2 0 0

**Minor Service/Repair-GM Engines** Voc/Tech  
Principles of operation of General Motors engines. Minor service procedures and engine component repair or replacement will be emphasized. Will also include diagnostic procedures. PREREQUISITES: Admission to Automotive Service Educational Program ASEP317, AUTO464

**ASEP328** 3 2 2 0 0

**Diagnosis/Repair-GM Electrical Sys** Voc/Tech  
Instruction in the diagnosis, repair and service of electrical and electronic components and accessories used on current GM vehicles. PREREQUISITES: Admission to Automotive Service Educational Program MATH410, ASEP312, 317

**ASEP330** 3 0 0 0 18

**Technical Internship II** Voc/Tech  
Work experience at a participating dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program ASEP320, 326, 327, 328

**ASEP333** 3 2 2 0 0

**Major Service Procedures/GM Engines** Voc/Tech  
Evaluating, reconditioning and replacing of major components of GM engines. Instruction will also include diagnostic routines. PREREQUISITES: Admission to Automotive Service Educational Program ASEP330, 327

**ASEP336** 3 2 2 0 0

**GM Carb and Fuel Induction Sys** Voc/Tech  
Theory of carburetion principles and current model fuel delivery systems to include diesel fuel systems, electro-mechanical carburetors and gasoline fuel injection. PREREQUISITES: Admission to Automotive Service Educational Program ASEP330, 327, 328

**ASEP337** 4 3 2 0 0

**GM Tune-Up Proc and Emission Con** Voc/Tech  
Diagnosis and service of microprocessor controlled fuel and ignition systems. Oscilloscopes, engine analyzers, digital meters and other high technology instruments will be used. PREREQUISITES: Admission to Automotive Service Educational Program ASEP330, 327, 328

**ASEP340** 3 0 0 0 18

**Technical Internship III** Voc/Tech  
Work experience at a sponsoring dealership. Tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program ASEP330, 333, 336, 337, PHYL401

**ASEP343** 8 7 2 0 0

**GM Transmissions and Transaxles** Voc/Tech  
Standard and automatic transmissions and transaxles including all components in front and rear drive powertrains and 4-wheel drive vehicles. PREREQUISITES: Admission to Automotive Service Educational Program ASEP340

**ASEP350** 3 0 0 0 18

**Technical Internship IV** Voc/Tech  
Work experience at a participating dealership. Tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program ASEP340, 343, ENGL410, PSCH106

**ASEP354** 5 3 4 0 0

**Advanced GM Motors Systems** Voc/Tech  
Instruction in techniques and procedures required to diagnose and service current vehicles. New systems developed by GM will be included. PREREQUISITES: Admission to Automotive Service Educational Program ASEP350

**ASST312** 5 3 4 0 0

**Ford Automotive Electronics** Voc/Tech  
A study of the electrical and electronics systems used in Ford Motor Company vehicles. The instruction will include fundamentals of electricity, series and parallel circuits, schematics, wire repair, diodes, transistors, microprocessors, and digital displays. PREREQUISITES: Admission to Automotive Student Service Ed Training

**ASST317** 3 2 2 0 0

**Ford Shop Fund and Minor Serv** Voc/Tech  
A study of dealership organizational structure as it relates to the technician. Use of service manuals, electronic troubleshooting manuals and service bulletins are practiced. Also provides entry level automotive task competencies. PREREQUISITES: Admission to Automotive Student Service Ed Training

**ASST318** 6 2 8 0 0

**Ford Steering/Suspension/Brakes** Voc/Tech  
Instruction in the theory of operation and service procedures used in the maintenance and repair of Ford Motor Company steering, suspension, and brake systems. PREREQUISITES: Admission to Automotive Student Service Ed Training

**ASST320** 3 0 0 0 18

**Technical Internship I** Voc/Tech  
Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training MATH410, ASST312, 317, 318

**ASST326** 3 2 2 0 0

**Ford Auto Air Conditioning Systems** Voc/Tech  
Theory and operation of Ford Motor Company air conditioning systems leading to the diagnosis, service, and repair of current models of vehicles. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST312, 317

**ASST327** 3 2 2 0 0

**Minor Service/Repair Ford Engines** Voc/Tech  
Principles of operation of Ford Motor Company four stroke engines. Minor service procedures and engine component repair or replacement will be emphasized. Will also include diagnostic procedures. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST317, AUTO464

**ASST328** 3 2 2 0 0

**Diagnosis/Repair Ford Elec System** Voc/Tech  
Instruction in the diagnosis, repair and service of electrical and electronic components and accessories used on current Ford Motor Company vehicles. PREREQUISITES: Admission to Automotive Student Service Ed Training MATH410, ASST312, 317

**ASST330** 3 0 0 0 18

**Technical Internship II** Voc/Tech  
Work experience at a participating dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 326, 327, 328

**ASST333** 3 2 2 0 0

**Major Serv Procedures/Ford Engines** Voc/Tech  
Evaluating, reconditioning, and replacing of major components of Ford Motor Company engines. Will include instruction in machining operations performed in Ford Motor Company dealerships. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 327

**ASST336** 3 2 2 0 0

**Ford Carb and Fuel Induction Sys** Voc/Tech  
Theory of carburetion principles and current model fuel delivery systems to include diesel fuel systems, feedback carburetors, gasoline fuel injection, electronic engine controls and Ford EEC specialist certification. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 327, 328

**ASST337** 4 3 2 0 0

**Ford Tune-Up Proc & Emission Con** Voc/Tech  
Diagnosis and service of microprocessor controlled fuel and ignition systems. Oscilloscopes, engine analyzers, digital meters, and other high technology instruments will be used. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 327, 328

**ASST340** 3 0 0 0 18

**Technical Internship III** Voc/Tech  
Work experience at a participating dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST330, 333, 336, 337, PHYL401

**ASST343** 8 6 4 0 0

**Ford Transmissions and Transaxles** Voc/Tech  
Standard and automatic transmissions and transaxles including all components in front and rear drive powertrains and 4-wheel drive vehicles. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST340

**ASST350** 3 0 0 0 18

**Technical Internship IV** Voc/Tech  
Work experience at a participating dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST340, 343, ENGL410, PSCH106

**ASST354** 5 3 4 0 0

**Ford Adv Engine Controls, Elect** Voc/Tech  
Instruction in techniques and procedures required to diagnose and service current vehicles. New systems developed by Ford Motor Company will be included. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST350

**AUTC403** 2 1 2 0 0

**Basic Shop Safety** Voc/Tech  
A course designed to acquaint the student with the hazards in an auto collision facility. Emphasis on EPA regulations, OSHA guidelines and personal health and safety in the shop area.

# Course Descriptions

**AUTC405** 5 2 6 0 0  
**Basic Shop Operations/Metal** Voc/Tech  
 Automobile design, the materials used in construction, collision, and corrective forces, and procedures for repair and services are analyzed through class and lab study. PREREQUISITES: AUTC403, HLCR314, WELD468

**AUTC408** 5 3 4 0 0  
**Basic Shop Operations/Paint** Voc/Tech  
 This course will give the student an overall understanding of the complexities of today's auto refinishing. Developing industry standard preparation habits and spray painting skills with various chemicals will be studied. PREREQUISITE: AUTC403

**AUTC410** 2 1 2 0 0  
**Basic Estimating** Voc/Tech  
 Vehicle damage estimating skills are needed to provide a written report. This report can then be used as a repair guide, a legal document, an analysis report and for business evaluation. Ability to use estimating guides and write estimates accurately will be emphasized. PREREQUISITES: AUTC403, HLCR314

**AUTC412** 7 3 8 0 0  
**Get Ready for Paint** Voc/Tech  
 This course covers the application techniques and equipment used in auto collision repair shops for refinishing and will deal with potential problems with chemicals. Sheet metal and plastic parts repair and replacement in preparation for painting will also be studied in the lab. Shop and personal safety will be emphasized. PREREQUISITE: AUTC403, 408

**AUTC413** 4 2 4 0 0  
**Plastic Repair and Refinishing** Voc/Tech  
 The wide variety of solid plastics, flexible panels, plastic compounds and reinforced plastic panels now used in automobile manufacturing require separate repair procedures. Repair, replacement and refinishing of the substrates will be studied in classroom and lab. PREREQUISITE: AUTC403, 408, 412

**AUTC414** 2 1 2 0 0  
**Collision Analysis/Measuring** Voc/Tech  
 Unibody design and construction has created a need for methods of damage analysis, gauging, measuring, and sequencing total collision repair. This course emphasizes these new technologies.

**AUTC420** 6 3 6 0 0  
**Advanced Refinishing** Voc/Tech  
 Industry application of colors and clear coats require the latest information on repair and refinishing of today's vehicles. This course covers the latest manufacturer's preferred methods for repair using current colors and chemicals. Color matching will be emphasized. PREREQUISITE: AUTC403, 408, 412, 413

**AUTC421** 3 2 2 0 0  
**Adv Estimating/Ownership/Mgt** Voc/Tech  
 Estimating, customer relations and service selling are all important skills of ownership and managership. Hand and computer estimates will be written. Labor, parts, and material cost and profits will be studied. Customer and employee relations will be studied. PREREQUISITE: AUTC403, 410, HLCR314

**AUTC430** 6 3 6 0 0  
**Suspension and Brakes** Voc/Tech  
 Students will study theory of operation and service procedures of suspension and brake systems in today's unibody vehicle. Importance of systems as they relate to the damaged unibody vehicle will be emphasized. PREREQUISITES: AUTC403, 414

**AUTC432** 4 2 4 0 0  
**Auto Collision/Electrical Systems** Voc/Tech  
 A course designed to help auto collision students to understand the troubleshooting, diagnostic problems, and repair of today's complex electrical systems.

**AUTC440** 5 1 8 0 0  
**Frame/Unibody Structural Repair** Voc/Tech  
 This course builds upon the knowledge and skill in previous auto collision courses to prepare the student to diagnose and repair conventional frame and unibody structural components. The theory and operating principles of unibody structural components will be emphasized. Lab instruction on late model vehicles will be included. PREREQUISITES: AUTC405, HLCR314, WELD468

**AUTO464** 3 2 2 0 0  
**Auto Measurement and Tools** Voc/Tech  
 This course provides instruction in the correct selection and use of mechanic's tools and precision measuring devices. Shop safety will be emphasized.

**AUTO466** 4 2 4 0 0  
**Fuel Systems** Voc/Tech  
 A course designed to acquaint the student with basic fuel system principles. Instruction will be offered in the theory, cleaning, repair and adjustment of automotive fuel systems.

**AUTO468** 6 2 8 0 0  
**Automotive Electricity** Voc/Tech  
 A course to provide instruction in basic electricity and circuitry used in the automobile. Components, diagnosing, and servicing will be emphasized.

**AUTO472** 4 2 4 0 0  
**Auto AC and Heating** Voc/Tech  
 Provides instruction in the theory of operation of auto air conditioning and heating systems as well as diagnosing and servicing automotive air conditioning and heating systems.

**AUTO474** 3 2 2 0 0  
**Automotive Engine Fundamentals** Voc/Tech  
 A course to provide instruction in the theory and operation of the four stroke automotive engine. Emphasis will be placed on cylinder head service and repair. PREREQUISITE: AUTO464

**AUTO476** 6 3 6 0 0  
**Electronic Engine Controls** Voc/Tech  
 This course builds upon the knowledge and skills in previous automotive courses to prepare the student to service electronically controlled vehicles. The theory and operating principles of automotive computers, sensors, and control devices will be emphasized. Lab instruction on late model cars will be included. PREREQUISITES: AUTO466, 468

**AUTO478** 4 2 4 0 0  
**Advanced Tune-Up** Voc/Tech  
 Provides instruction in testing, diagnosis, and repair of the automobile's ignition, electrical, and fuel systems. Modern test equipment, procedures, and technology are utilized. PREREQUISITE: AUTO476

**AUTO479** 2 1 2 0 0  
**Service Management** Voc/Tech  
 Provides instruction in customer relations, service sales, shop management and business practices in the automotive shop. PREREQUISITE: AUTO474

**AUTO482** 3 1 4 0 0  
**Advanced Engines** Voc/Tech  
 Provides instruction in proper diagnosis of engine malfunctions and repair or replacement of defective components and assemblies. Diagnosis procedures, repair, and adjustment will be emphasized. PREREQUISITE: AUTO474

**AUTO484** 6 3 6 0 0  
**Basic Power Train** Voc/Tech  
 Principles of operation and construction of automotive power trains. Includes instruction in the theory of hydraulic and planetary systems used in automatic transmissions.

**AUTO486** 3 2 2 0 0  
**Basic Brakes** Voc/Tech  
 Instruction in the theory of operation and service procedures of automotive brakes.

**AUTO488** 4 2 4 0 0  
**Basic Suspension/Alignment** Voc/Tech  
 Instruction in the theory of operation and service procedures of automotive alignment and suspension systems.

**AUTO490** 6 2 8 0 0  
**Advanced Power Train** Voc/Tech  
 The student will study powertrain and drive line systems. Proper diagnosis procedures, service and repair will be emphasized through hands-on experience. PREREQUISITE: AUTO484

**AUTO492** 5 2 6 0 0  
**Advanced Brakes and Alignment** Voc/Tech  
 The student will study advanced brakes and alignment theory, practice proper diagnosis, service and repair procedures through hands-on experience. PREREQUISITES: AUTO486, 488

**BIOL118** 3 3 0 0 0  
**Environmental Conservation** Core  
 This course combines the basic principles of ecology with current environmental issues. Includes energy, land use, pesticides, and pollution. Wildlife, fisheries, forestry, soil and water conservation practices are emphasized. Designed for the non-science major.

**BIOL119** 1 0 2 0 0  
**Environmental Conservation Lab** Core  
 Lab supplements discussion course BIOL 118. Lab includes measurement of soil nutrients and water pollutants. Selected field trips deal with soil conservation, wildlife management, wastewater treatment and other aspects of environmental conservation. PREREQUISITE: BIOL118 COREQUISITE: BIOL118

**BIOL126** 3 2 2 0 0  
**Field Biology** Core  
 Field and laboratory studies of native plants and animals of Iowa. Emphasis is placed on ecological relationships. Selected field trips are conducted to forest, prairie, marsh, and riparian habitats in the local area.

**BIOL127** 3 2 2 0 0  
**Human Biology** Core  
 A study of biology which emphasizes the human body. Topics such as the cell, basic chemistry, basic genetics and human ecology are included. Designed for the non-science and inadequately prepared health science major.

**BIOL132** 4 3 2 0 0  
**Health Science Microbiology** Open  
 Basic concepts and applications of medical microbiology. Topics include morphology and physiology of microorganisms, pathology, epidemiology and immunology. Designed for the health science major. PREREQUISITES: H.S. biology and H.S. chemistry recommended

**BIOL133** 3 2 2 0 0  
**Health Science Anatomy** Open  
 Offers the student basic concepts in human anatomical structure with relation to body functions. The course covers all major body systems with emphasis on structure. The accompanying lab will reinforce lecture with cat dissection. PREREQUISITE: H.S. biology or equivalent

**BIOL134** 3 2 2 0 0  
**Health Science Physiology** Open  
 Detailed human physiology of the nervous, circulatory, respiratory, digestive, urinary and endocrine systems. Designed for the health science major. PREREQUISITES: BIOL133 OR 154

**BIOL141** 4 3 2 0 0  
**Principles of Biology I** Core  
 First semester of biology for majors. Topics covered include: chemistry of life, cells, bioenergetics, genetics, evolution, viruses, prokaryotes and protists. PREREQUISITES: H.S. biology and H.S. chemistry or equivalent.

**BIOL142** 4 3 2 0 0  
**Principles of Biology II** Core  
 Second semester of biology for majors. Topics covered include: fungi, plants, animals and ecology. PREREQUISITES: BIOL141 or equivalent



# Course Descriptions

**BIOL144** 3 4 0 0  
**General Zoology** Core  
 A progressive study of the animal kingdom. Topics include: the anatomy, physiology, development, classification, evolution, and ecology of representative animals of each phylum. PREREQUISITES: BIOL141 or permission of instructor

**BIOL147** 3 2 2 0 0  
**Introduction to Botany** Core  
 Course covers structure, functions and development of plants. Study of morphology and taxonomy of representative species of algae, fungi, byrophytes, and the vascular plants, with emphasis on the local flora. Includes study of plant ecology. PREREQUISITES: BIOL141 or permission of instructor

**BIOL149** 4 2 4 0 0  
**General Microbiology** Core  
 A general microbiology course with laboratory designed for the science major. Emphasis is placed on morphology, physiology, microbial genetics, virology and basic immunology, and applications. PREREQUISITES: BIOL141 or 154

**BIOL150** 1 0 2 0 0  
**Ecology Field Trip** General  
 This course involves an extended field trip to study unique natural ecosystems. Topics may include field studies of forest, prairie, wetland and wildlife ecology. May be taken twice for credit with permission of instructor.

**BIOL154** 5 3 4 0 0  
**General Anatomy and Physiology** Core  
 A classic integration of human anatomy and physiology at the cellular level and organ/ system level. Includes cat dissection. PREREQUISITES: H.S. biology and H.S. chemistry

**BIOL155** 3 3 0 0 0  
**Ecology of Iowa** General  
 Surveys the major landforms of Iowa including the Mississippi River Valley, northern prairie lakes region, loess hills, and southern hills area. Landforms are emphasized from the standpoint of climate, soils, geology, water resources, forestry, wildlife and environmental concerns. One Saturday field trip.

**BIOL161** 5 2 6 0 0  
**Cell and Molecular Biology I** Open  
 This is the first semester of Cell and Molecular Biology for Biotechnology program majors. Topics covered include: cell structure and function, DNA and RNA structure and function; characterization, manipulation and cloning of DNA; tissue culture and monoclonal antibodies; applications of biotechnology for agriculture and human therapeutics, laboratory methods and instrumentation. PREREQUISITES: BIOL142, 149, CHEM132, MATH123

**BIOL162** 5 2 6 0 0  
**Cell and Molecular Biology II** Open  
 Second semester of Cell and Molecular Biology for Biotechnology majors. Topics covered include: immunochemistry; recombinant DNA methods and principles; the human genome project; protein analysis and characterization; and chromatography principles and methods. PREREQUISITES: BIOL161, 165

**BIOL165** 3 3 0 0 0  
**Genetics** Open  
 An introductory genetics course for Biology and Biotechnology majors. Topics covered include: DNA and chromosome structure and function; Mendelian genetics; molecular genetics in eucaryotes, procarvates and viruses; recombinant DNA technology; gene expression; and the genetic basis of immunology. PREREQUISITES: BIOL141, H.S. Chemistry and credit or enrollment in CHEM131 or 151

**BIOL167** 3 0 0 0 12  
**Biotechnology Internship** Open  
 This internship is the final requirement for completion of the Biotechnology AS degree requirements. It will be conducted in cooperation with potential employers. During this period, students will be expected to demonstrate their technical skills and practicum competencies in a professional manner, showing progressive independence, greater efficiency and confidence. PREREQUISITES: BIOL162

**BKKA403** 4 3 2 0 0  
**Accounting Procedures/Mgmt** Voc/Tech  
 A project approach to record keeping systems and office management. Includes topics in receivables, payables, banking records, planning and organizing; leadership and human relations, and communications. PREREQUISITES: ACCT101, BSAD223, OFFC324

**BKKA411** 2 2 0 0 0  
**Payroll Accounting** Voc/Tech  
 Develops an appreciation and an understanding of the personnel and payroll records that provide the information required under the numerous laws affecting the operations of a payroll system. PREREQUISITES: departmental permission or ACCT101, BSAD223

**BLDG451** 5 5 0 0 0  
**Materials/Construction Theory** Voc/Tech  
 An introduction to the materials used in the construction industry and the methods involved in the application of these building materials.

**BLDG452** 7 0 15 0 0  
**Construction Techniques** Voc/Tech  
 A practical "hands-on" introductory experience that covers the construction process including rough and finish carpentry.

**BLDG453** 1 0 2 0 0  
**Care/Use of Hand/Power Tools** Voc/Tech  
 Proper care, use and selection of hand and power tools with an emphasis on maintenance and safety.

**BLDG455** 1 0 2 0 0  
**Construction Blueprint Reading** Voc/Tech  
 Fundamentals of blueprint reading designed to allow the student to translate plans into practical job experiences.

**BLDG456** 1 0 2 0 0  
**Materials Takeoff** Voc/Tech  
 A study of the techniques needed to create a materials list by reading a blueprint. PREREQUISITE: BLDG455

**BLDG461** 4 1 6 0 0  
**Concrete Systems and Forming** Voc/Tech  
 An introduction to concrete as a material; concrete design, placement and finish. Identification and application of forming systems will be studied in the classroom and applied in the lab. PREREQUISITE: BLDG453

**BLDG462** 2 1 2 0 0  
**Construction Drafting and Design** Voc/Tech  
 An introduction to the fundamentals of design and basic drafting methods. Includes the preparation of the blueprint used to construct the student built project. PREREQUISITE: BLDG455

**BLDG464** 3 0 7 0 0  
**Interior Trim Practices** Voc/Tech  
 Advanced lab experience that emphasizes complex finish skills. The student will be able to demonstrate the skills and work habits necessary to complete tasks in a safe manner and to adapt previously learned skills to complete more complex building tasks. PREREQUISITE: BLDG452

**BLDG480** 5 0 10 0 0  
**Const. Procedure/Application I** Voc/Tech  
 This course includes footings, drainage, foundation, basement insulation and decking. (5 week session) PREREQUISITES: BLDG451, 452, 453, 455, 461, 464

**BLDG481** 5 0 10 0 0  
**Const Procedure/Application II** Voc/Tech  
 Course includes exterior wall construction, interior wall construction, ceiling joist framing, rafter framing, exterior trim, window installation and roofing. (5 week session) PREREQUISITE: BLDG480

**BLDG482** 5 0 10 0 0  
**Const Procedure/Application III** Voc/Tech  
 Course includes concrete flatwork, insulation, dry-wall application, cabinet work and interior trim. (5 week session) PREREQUISITE: BLDG481

**BOLDM325** 1 1 0 0 0  
**Boiler Room Maintenance** Voc/Tech  
 Boiler accessories, fittings, controls, water treatment and fundamentals for beginners.

**BOLDM326** 2 2 0 0 0  
**Steam Plant Operations** Voc/Tech  
 High-pressure steam boilers, operation, controls, burning equipment instruments. PREREQUISITE: BOLDM325

**BOLDM329** 2 2 0 0 0  
**Basic Plumbing** Voc/Tech  
 Plumbing, plumbing components, plumbing codes, and reading blueprints.

**BPQI400** 3 3 0 0 0  
**Total Quality Management** Voc/Tech  
 The basis of this course is to provide an understanding of the principles and concepts of continuous improvement and the ability to apply them to an organization. Team concepts and the tools of SPC are also discussed.

**BPQI401** 3 3 0 0 0  
**Intro to Statistical Process Control** Voc/Tech  
 Introduction to the concepts of variability and statistical process control. The student will develop the ability to utilize the basic SPC tools, monitor and interpret charts and exercise statistical methods for continuous improvement.

**BPQI402** 3 3 0 0 0  
**Applications of Statistical Methods** Voc/Tech  
 An in-depth study in applying the concepts of BPQI401. Additional areas of concentration include sampling plan theory, FMEA study, alpha and beta calculations, reliability values and applying these concepts in case studies. PREREQUISITES: BSAD152, BPQI401

**BPQI403** 3 3 0 0 0  
**Practices - Continuous Improvement** Voc/Tech  
 Course provides understanding of the theories, methods and concepts of continuous improvement. Includes detailed, in-depth study of current theories and practices used in business and provides the student with the knowledge to implement these techniques. PREREQUISITES: BPQI400

**BPQI405** 3 3 0 0 0  
**Statistical Process Control II** Voc/Tech  
 This course continues to build upon the concepts of control charts covered in BPQI401. It will also continue to cover the SPC of short runs and applying SPC to the non-manufacturing sectors of business. PREREQUISITES: BSAD152, BPQI402

**BPQI406** 3 3 0 0 0  
**Quality Standards and Compliance** Voc/Tech  
 Study of the current quality system standards such as ISO 9000, MBNQA and OS 9000. Emphasis is placed on techniques such as implementing, maintaining, auditing, complying and assessing techniques. PREREQUISITE: BPQI400

**BPQI407** 3 3 0 0 0  
**Teams and Teamwork** Voc/Tech  
 Study of the concepts of teams, teamwork, participation and work teams. The participant will develop the knowledge and ability to work in and develop a team and team environment. PREREQUISITE: BPQI400, 401, MGMT244

**BPQI408** 3 3 0 0 0  
**Intro to Quality Control Management** Voc/Tech  
 This course provides the student with an in-depth knowledge of the skills, tools and management techniques unique to supervising and managing a quality function within an organization. PREREQUISITE: BPQI400, 401, 403, MGMT244

**BPQI409** 3 2 2 0 0  
**Advanced Statistical Process Control** Voc/Tech  
 The purpose of this course is to study the application of advanced statistics and SPC to formulating and conducting tests on case studies and industry examples. PREREQUISITE: BSAD152, BPQI403, BPQI405, MGMT244

# Course Descriptions

**BPOI410** 3 0 6 0 0  
**Quality Technician Program Project** Voc/Tech  
 This course challenges the student to utilize the content of much of the course work and knowledge covered in this program. This project shall involve a faculty preapproved business partner. A final, formal management presentation shall be required to complete this course. PREREQUISITE: BSAD152, BPOI409

**BSAD150** 3 3 0 0 0  
**Intro to Business** General  
 An overview of the ever-changing world of business. Provides information in the areas of ownership, management, marketing and finance as well as the role of government.

**BSAD151** 3 3 0 0 0  
**Personal Finance** Open  
 Management of personal income with emphasis on family financial planning including budgeting, income taxes, types of insurance and investing.

**BSAD152** 4 4 0 0 0  
**Business Statistics** Core  
 Tabular and graphical presentation, measures of central tendency and variability, standard elementary procedures involving the binomial, normal, student's t's, chi-squares and f distributions, correlation, regression, analysis of variance, and several nonparametric procedures. PREREQUISITES: 2 years of H.S. algebra or MATH094 or dept permission

**BSAD201** 3 3 0 0 0  
**Principles of Banking** Open  
 This course surveys the banking functions. It provides a comprehensive introduction to the diversified services offered by the banking industry today.

**BSAD223** 3 3 0 0 0  
**Business/Financial Math** Open  
 Mathematical computations are reviewed and strengthened with emphasis on facility and accuracy. Includes topics in the mathematics of buying and selling, banking, payroll, markups and mark-downs, discounts, interest, consumer math and other related business applications.

**BSAD224** 3 3 0 0 0  
**Introduction To Investments** Open  
 Provides basic information to familiarize students with various investments including securities, options, commodities, tax shelters, and other investment alternatives. Topics include analyzing investment opportunities, review of risks and returns, averages and indexes, and analyzing securities.

**BSAD225** 3 3 0 0 0  
**Principles of Insurance** Open  
 An introduction to managing risks and making the best use of insurance. Various forms of personal and property insurance coverages are introduced. Insurance coverages as they relate to both business operations and personal situations are discussed.

**BSAD226** 3 3 0 0 0  
**Principles of Real Estate** Open  
 Fundamental principles, economics, law, working concepts, and terminology. Focuses on real estate law, and assists those preparing for the apprentice salesperson examination.

**BSAD243** 4 4 0 0 0  
**Quantitative Methods** General  
 An introduction to management research methods which are used in business. Topics include probability, break-even analysis, inventory control, statistics and transportation models. PREREQUISITES: MATH094 or department permission

**BSAD250** 3 3 0 0 0  
**Real Estate Appraisal** Open  
 Residential appraisal principles of real estate valuations cost, market data, summation and sales analysis, methods of appraisal and estimating current trends and techniques in appraising residential dwellings.

**BSEP405** 4 2 4 0 0  
**Basic GM Shop Operations/Metal** Voc/Tech  
 Automobile design, the materials in construction, collision and corrective forces, and procedures for repair and services are analyzed through class and lab studies on GM vehicles. COREQUISITES: AUTC403, HLCR314, WELD468

**BSEP408** 3 2 2 0 0  
**Basic GM Shop Operations/Paint** Voc/Tech  
 Course will give an overall understanding of complexities of today's auto refinishing. Industry-standard preparation habits and spray painting skills with various chemicals used to refinish GM vehicles will be studied. PREREQUISITE: AUTC403

**BSEP412** 4 2 4 0 0  
**GM Refinishing Techniques** Voc/Tech  
 Course covers application techniques and equipment used in today's auto collision repair shops and deals with potential problems with chemicals when refinishing GM vehicles. Shop and personal safety emphasized. PREREQUISITE: BSEP408

**BSEP413** 2 1 2 0 0  
**GM Plastic Repair/Refinishing** Voc/Tech  
 This course covers the wide variety of solid plastics, flexible panels, plastic compounds, and fiberglass reinforced plastic panels now used in manufacturing GM vehicles. Repair, replacement and refinishing of the substrates will be studied in the classroom and lab.

**BSEP420** 5 2 6 0 0  
**Advanced GM Refinishing** Voc/Tech  
 This course covers the latest preferred methods for repair and refinishing using current colors and chemicals. Color matching, mixing, and blending will be emphasized. PREREQUISITE: BSEP413

**BSEP421** 2 2 0 0 0  
**Adv. GM Estimating/Managership** Voc/Tech  
 This course covers estimating skills, customer and employee relations and service selling techniques for business ownership and management. Labor, parts, material cost and profits will be studied. Hand and computer estimates will be written. PREREQUISITE: AUTC410

**BSEP440** 5 2 6 0 0  
**GM Unibody Structural Repair** Voc/Tech  
 This course builds upon the knowledge and skills developed in previous auto collision courses to prepare the student to diagnose and repair unibody structural components. The theory and operating principles of unibody structural components will be emphasized. Lab instruction on late model GM vehicles will be included. PREREQUISITE: AUTC414, BSEP405, WELD468

**BSEP450** 3 0 0 0 18  
**Internship I** Voc/Tech  
 Work experience at a participating dealership or body shop. PREREQUISITES: AUTC403, 410, BSEP405, 408, HLCR314, UPHL433, WELD468

**BSEP460** 3 0 0 0 18  
**Internship II** Voc/Tech  
 Work experience at a participating dealership or body shop. PREREQUISITE: BSEP412, 413

**BSEP470** 3 0 0 0 18  
**Internship III** Voc/Tech  
 Work experience at a participating dealership or body shop. PREREQUISITES: ASEP318, BSEP420, 421

**BSEP472** 4 3 2 0 0  
**A/C and Heating Systems** Voc/Tech  
 This course provides instruction in the theory of operation of auto air conditioning and heating systems as well as diagnosing and servicing automotive air conditioning and heating systems.

**BSEP480** 3 0 0 0 18  
**Internship IV** Voc/Tech  
 Work experience in a participating dealership or body shop. PREREQUISITES: AUTC414, BSEP440, 472

**BUSL101** 3 3 0 0 0  
**Business Law I** General  
 Provides introductory overview of legal rights and social forces, the impact of government regulation of business, consultant relationships, and sales law.

**BUSL102** 3 3 0 0 0  
**Business Law II** General  
 Provides for overview of commercial paper, creditors' rights and secured transactions, the law of agency and business associations. PREREQUISITE: BUSL101

**BUSL112 - ADJUNCT** 3 3 0 0 0  
**Law of Purchasing and Sales** Voc/Tech  
 Covers U.C.C. Article 2, Sales of Goods; relationship of agents and employers; creation of sales-purchase contract; performance and remedies of buyer and seller. PREREQUISITE: BUSL102

**BUSL301 - ADJUNCT** 3 3 0 0 0  
**Legal Aspects of Management** Voc/Tech  
 Provides an overview of the history, structure and principles of our legal environment with special emphasis on managerial issues such as product liability, discrimination law, employment law and environmental law.

**BUSL312** 3 3 0 0 0  
**Law of Purchasing and Sales** Voc/Tech  
 This course covers U.C.C. Article 2, Sales of Goods; relationship of agents and employers, creation of sales-purchase contracts and the performance and remedies of buyer and seller. PREREQUISITE: BUSL101

**CADD401** 3 2 2 0 0  
**Intro Computer Aided Drafting** Voc/Tech  
 This course will introduce the student to computer-aided drafting and design. Basic computer hardware, software and operating systems will be discussed. Basic two-dimensional CADD drawing creation and editing techniques will be covered. Drawings will be created and plotted.

**CADD402** 3 2 2 0 0  
**Intermediate CADD-Mechanical** Voc/Tech  
 This course will introduce the student to advanced computer-aided drafting and design applications. Program customization, file manipulation/translation and library creation/usage will be covered. Complex three-dimensional models will be created, edited, rendered and plotted. PREREQUISITE: CADD401 or equivalent

**CADD403** 3 2 2 0 0  
**Intermediate CADD-Architectural** Voc/Tech  
 This course will apply architectural drafting practices to the CADD environment. Two-dimensional plans (including plumbing, HVAC, electrical, etc.) will be developed. Three-dimensional models, site plans and presentation are some of the topics that will be discussed. PREREQUISITE: CADD401 or equivalent

**CADD404** 3 2 2 0 0  
**Computer Aided Design/Analysis** Voc/Tech  
 This course will introduce the student to analysis of simple structures. Basic statics will be taught. Analysis will be taught and then verified using analysis software in conjunction with CAD. PREREQUISITE: CADD402 or equivalent

**CADT405** 3 2 2 0 0  
**Principles of Computer Operations** Voc/Tech  
 Basic computer operating systems will be examined. System commands and file management will be addressed. Computer hardware/software relationships and their compatibilities and conflicts will be taught.

**CADT410** 6 4 4 0 0  
**CAD Graphics I** Voc/Tech  
 Drawing formats, geometric construction and lettering will be taught on computer-aided drafting (CAD) software. Drafting standards will be covered. CAD operations and commands will be addressed. Sketching and fundamentals of orthographic projection are stressed. Prints will be prepared. PREREQUISITE: Basic computer skills required for this course.

# Course Descriptions

**CADT411** 6 4 4 0 0  
**CAD Graphics II** Voc/Tech  
 Advanced geometric description applicable to all fields of drafting will be emphasized. Auxiliary views will be created. Descriptive geometry principles will be examined. Intermediate and advanced dimensioning techniques will be covered including dimensional tolerance analysis. CAD applications will be taught. PREREQUISITE: CADT410, MATH410

**CADT412** 6 4 4 0 0  
**Computer-Aided Drafting Appl. I** Voc/Tech  
 Mechanical components and processes that are used in product design will be covered. Geometric dimensioning and tolerancing will be taught. Preparation of welding drawings will be presented with the emphasis on proper usage of American Welding Society symbols. Precision bending of sheet metal will be covered. PREREQUISITE: CADT411, MATH411

**CADT415** 3 2 2 0 0  
**Engineering Disciplines & Practices** Voc/Tech  
 Types of engineering disciplines and their application of drawings will be examined. Drawing styles, engineering units and professional standards (ANSI, ASME, etc.) will be covered. PREREQUISITE: CADT405, 410

**CADT420** 3 2 2 0 0  
**MicroStation CAD I** Voc/Tech  
 This course will introduce the student to MicroStation CAD software. Basic two-dimensional CAD drawings will be taught. Drawings will be created and plotted. PREREQUISITE: CADT405, CADT410

**CADT421** 3 2 2 0 0  
**MicroStation CAD II** Voc/Tech  
 This course will introduce the student to intermediate MicroStation CAD commands. Advanced two-dimensional CAD drawing and editing techniques will be taught. Basic three-dimensional applications and editing will be introduced. Drawings will be created and plotted. PREREQUISITES: CADT 411, 420, MATH411

**CADT425** 3 2 2 0 0  
**Applied Materials and Processes** Voc/Tech  
 Standard industrial raw materials and forming processes will be examined. Students will see various machining, forming and welding operations. Field trips to industry will be offered.

**CADT426** 3 2 2 0 0  
**Pro/Engineer CAD I** Voc/Tech  
 Pro/Engineer CAD basics will be taught. Solid CAD models will be built and edited. Drawings will be created and plotted. Model rendering and application module interfaces will be discussed. PREREQUISITES: CADT411, 425, MATH411

**CADT428** 3 2 2 0 0  
**Introduction to CAD Analysis** Voc/Tech  
 This course will introduce CAD students to analysis of simple structures. Analysis shall be examined then verified using computer analysis software in conjunction with CAD. Basic engineering statics will be taught. PREREQUISITES: CADT412 426, MATH411

**CADT430** 3 2 2 0 0  
**Networking Systems** Voc/Tech  
 Network system key features and functionality will be covered. System file management will be addressed. Operating systems and hardware will be discussed. PREREQUISITES: CADT405, 411, MATH411

**CADT431** 3 2 2 0 0  
**Manuf. Interfaces CAD/CAM/CIM** Voc/Tech  
 Computer interfaces between manufacturing and engineering will be the primary focus of the class. File exchange formats, data compilation and machining interpretation of the model file will be addressed. Tool path generation and robotic controls will be discussed. Manufacturing system integration will be covered. PREREQUISITES: CADT405, MATH410

**CADT451** 3 2 2 0 0  
**Mechanical Systems** Voc/Tech  
 Standard and non-standard fastening systems will be examined. CAD part libraries and applications will be covered. Basics of power train/mechanical components will be introduced. Mechanical bearings and hydraulic/pneumatic sealing systems will be addressed. PREREQUISITES: CADT411, MATH411

**CADT471** 5 2 6 0 0  
**CAD Layouts and Drawings** Voc/Tech  
 Detailing individual parts, types of assembly drawings and parts lists will be covered on an individual basis. Design process and procedures will be discussed. The student shall conform to industry standards for their design project. PREREQUISITES: CADT412, 451, MATH411

**CADT472** 3 2 2 0 0  
**CAD Rendering and Animation** Voc/Tech  
 This course pertains to all disciplines of drafting. Axonometric, exploded view and perspective drawings will be covered. Renderings of computer models will be created. Emphasis will focus on computer-aided model presentations and catalog illustrations. Animations will be examined and developed. PREREQUISITES: CADT412, 426, MATH411

**CART401** 3 3 0 0 0  
**Commercial Art Orientation** Voc/Tech  
 A prerequisite for all commercial art courses. Commercial art terminology, tools and techniques are practiced.

**CART403** 3 2 2 0 0  
**Communication Design I** Voc/Tech  
 This course will create awareness of design use. Topics of lecture and lab study will include design fundamentals, the creative process, principles of design, and basic advertising design formats with application of design theories in simple design projects.

**CART404** 3 2 2 0 0  
**Typography II** Voc/Tech  
 Typography course including the principles and basic skills in typographic design on computer. PREREQUISITE: CART405

**CART405** 2 1 2 0 0  
**Typography I** Voc/Tech  
 A study of the history of typography as it relates to advertising design. Includes emphasis on use of typography in design.

**CART407** 3 2 2 0 0  
**Production Art I** Voc/Tech  
 First of a two-part course which will enable the student to seek an entry level position in production art. Problems and solutions in the preparation of camera-ready art for printing are studied.

**CART410** 4 2 4 0 0  
**Illustration I** Voc/Tech  
 Lab and lecture study of tools and skills necessary for entry level visual communication in a graphic arts studio environment. Emphasis on line art, marker rendering, perspective concepts and basic drawing skills.

**CART411** 3 2 2 0 0  
**Communication Design II** Voc/Tech  
 Lab and lecture study will develop a solid base in technical and creative skills necessary in the field of graphic design. Emphasis on packaging design, continuous page layout and grid design. PREREQUISITE: CART403

**CART414** 4 2 4 0 0  
**Illustration II** Voc/Tech  
 Lab and lecture study of tools and skills necessary for creating color comps and visuals. Study includes a variety of media and surfaces including the human figure. PREREQUISITE: CART410

**CART415** 3 2 2 0 0  
**Production Art II** Voc/Tech  
 This will add to the student's qualifications from Production Art I by emphasizing two-color & advanced camera-ready art for printing. PREREQUISITE: CART407

**CART419** 2 0 4 0 0  
**Lettering and Sign Art** Voc/Tech  
 The study of traditional letter forms, typography, hand lettering skills and design principles for the production of posters, signs, logos and other graphic images.

**CART421** 2 2 0 0 0  
**Internship Preparation** Voc/Tech  
 Students seeking an internship will be required to develop job interviewing techniques and a presentation portfolio. The student develops a knowledge of human relations in the profession through use of goal setting, interpersonal and group skills.

**CART424** 3 1 0 0 8  
**Commercial Art Internship I** Voc/Tech  
 On-the-job training for commercial art students. Included is a weekly seminar for exchange of information, review and evaluation. PREREQUISITE: CART421

**CART425** 3 1 0 0 8  
**Commercial Art Internship II** Voc/Tech  
 Second semester elective on-the-job training for commercial art students. Included is a weekly seminar for the exchange of advanced techniques and skills learned on the job. PREREQUISITE: CART424

**CART426** 3 2 2 0 0  
**Communication Design III** Voc/Tech  
 An advanced course using skills and understanding developed in Communication Design I and II. Emphasis is on image generation, integration of type and design, development of a direct mail advertising campaign and outdoor advertising. PREREQUISITE: CART411

**CART428** 3 2 2 0 0  
**Illustration III** Voc/Tech  
 Lab and lecture study of color theory, and various paint media. Emphasis on creative solutions to specific communication projects. PREREQUISITE: CART414

**CART430** 3 2 2 0 0  
**Production Art III** Voc/Tech  
 Computer technology is used in the preparation of material to be printed. Included are lectures and experiences in the production of printed portfolio samples. PREREQUISITES: CART415, DKTP401

**CART436** 3 3 0 0 0  
**Portfolio Preparation I** Voc/Tech  
 A student seeking employment must have a well prepared portfolio. Such a portfolio will be developed and reviewed by the Commercial Art Advisory Committee in this course. PREREQUISITE: CART424

**CART437** 3 2 2 0 0  
**Communication Design IV** Voc/Tech  
 Lab and lecture study of advanced design problems with emphasis on the development of professional quality portfolio pieces. Projects will include development of multipage publication, corporate identity package and newspaper advertising. PREREQUISITE: CART426

**CART440** 3 2 2 0 0  
**Production Art IV** Voc/Tech  
 To complete the study of production art, emphasis will be on the development of portfolio projects. PREREQUISITE: CART430

**CART442** 3 2 2 0 0  
**Illustration IV** Voc/Tech  
 Advanced study of full color media, tools and techniques in preparation for final portfolio. PREREQUISITE: CART428

**CART444** 3 3 0 0 0  
**Portfolio Preparation II** Voc/Tech  
 "Portfolio night" is the highlight of completing this course. The student will be required to present a completed portfolio to commercial art professionals and prospective employers at the annual event. PREREQUISITE: CART436

# Course Descriptions

**CART449** 4 2 4 0 0  
**Airbrush I** Voc/Tech  
 The fundamental principles of airbrush techniques and application to advertising design and use of airbrush as an illustrative tool.

**CART451** 4 2 4 0 0  
**Airbrush II** Voc/Tech  
 Advanced course in airbrush techniques as necessary for portfolio samples. Emphasis in utilization of advanced skills learned in Airbrush I. PREREQUISITE: CART449

**CART459** 3 2 2 0 0  
**Computer Graphics I** Voc/Tech  
 Electronic drawing in 2-D in full color. Includes study of typeface as a design and illustration element with all creative projects produced electronically.

**CART462** 3 1 4 0 0  
**Computer Graphics II** Voc/Tech  
 Advanced study of electronic drawing programs including graph creation, introduction to color separation and creation of full color art from electronic scanner sources. PREREQUISITE: CART459

**CART463** 3 2 2 0 0  
**Electronic Photo Editing** Voc/Tech  
 Course will cover how to electronically merge and edit color images as well as manipulate and retouch photographs on a Macintosh computer. Scanning, color separation, combining photos, using channels and working with type will be covered. PREREQUISITE: DKTP401

**CDEV100** 1 1 0 0 0  
**Orientation to College** Open  
 This course is designed to introduce students to college resources, services, and expectations and to assist them in gaining maximum benefit from their college experience.

**CDEV110** 1 1 0 0 0  
**Career Planning** Open  
 Provides help in choosing a career goal. Emphasis will be placed on how to access labor market information, interests, abilities and values, explore options and make decisions that will lead to career satisfaction and success.

**CHEM120** 3 2 2 0 0  
**Survey of Chemistry** Core  
 An introduction to chemical topics with little mathematics. Topics include energy, food chemistry, air and water pollution, agricultural chemicals, detergents, and drugs. For students who need one semester of laboratory science.

**CHEM131** 4 3 2 0 0  
**General Chemistry I** Core  
 A study of the concepts of general chemistry including atomic structure, bonding, reactions, stoichiometry, gas laws, solutions, acids and bases, equilibrium, nuclear chemistry and an introduction to organic chemistry. Problem solving is emphasized. For non-science majors and students in health related programs. PREREQUISITES: 1 year H.S. algebra or MATH092

**CHEM132** 4 3 2 0 0  
**General Chemistry II** Core  
 A continuation of the study of organic chemistry and a study of biochemistry. Organic topics include the structure of organic molecules, the nature and reactions of functional groups, and stereochemistry. Biochemistry topics include carbohydrates, proteins, lipids, nucleic acids, enzymes and metabolism. PREREQUISITE: CHEM131 or equivalent

**CHEM151** 4 3 2 0 0  
**General/Inorganic Chemistry I** Core  
 A thorough treatment of general chemistry including atomic structure, stoichiometry, chemical bonding, states of matter, solutions, acids and bases, reaction rates, equilibrium, thermodynamics and electrochemistry. This course is intended for science, engineering, pre-vet, pre-med, pre-dental and pre-optometry majors. PREREQUISITES: 1 yr. H.S. chem or CHEM 131 & 2 yrs. H.S. algebra or MATH094

**CHEM152** 4 3 2 0 0  
**General/Inorganic Chemistry II** Core  
 A continuation of General and Inorganic Chemistry I. PREREQUISITE: CHEM151 or equivalent

**CHEM161** 5 3 4 0 0  
**Organic Chemistry I** Core  
 A study of the principles of organic chemistry including the nomenclature and chemistry of the various organic functional groups. Structure, bonding, synthesis, reaction mechanisms and spectroscopy are emphasized. The sequence is designed to satisfy the one year of organic chemistry required by most medical schools. PREREQUISITES: CHEM132 or 152 or 1 year college level general chemistry.

**CHEM162** 5 3 4 0 0  
**Organic Chemistry II** Core  
 A continuation of Organic Chemistry I. PREREQUISITE: CHEM161 or equivalent

**CHLD170** 3 3 0 0 0  
**Child Development** Open  
 Course includes an overview of child development theory and principles as related to language-cognitive, physical-motor and social-emotional development of the child from conception through adolescence.

**CHLD240** 1 1 0 0 0  
**Emergency Care** Open  
 Cardio-pulmonary resuscitation according to Iowa Heart Guidelines. Childhood diseases, immunization laws, and environmental safety for children are discussed. Designed for day care personnel. Certificate for first aid and CPR awarded upon successful completion. Course may be repeated for a maximum of 3 credits.

**CHLD260** 3 3 0 0 0  
**Observation and Guidance of Children** Open  
 A study of observation and guidance techniques appropriate for use with young children. Various guidance philosophies are studied and applied through work with children. Students acquire the skills of objective observation as well as completing appropriate written observations of children.

**CHLD262** 4 4 0 0 0  
**Curriculum and Activities I** Open  
 Introductory course includes planning developmentally appropriate curriculum for infants to school age groups of children. Course covers writing objectives, exploring resources, presenting activities and designing equipment. PREREQUISITES: CHLD170, 260, COREQUISITES: CHLD170, 260

**CHLD264** 3 3 0 0 0  
**Child Nutrition and Health** Open  
 A basic study of nutrition and the nourishment of young children and the provision of a healthy and safe environment for children.

**CHLD265** 4 4 0 0 0  
**Curriculum and Activities II** Open  
 A continuation of Curriculum and Activities I, with emphasis on equipping a day care center and program evaluation. Areas of curriculum include literature, language development, small motor skills, science and math awareness. PREREQUISITES: CHLD170, 260, 262

**CHLD266** 3 3 0 0 0  
**Admin of Programs/Children** Open  
 Course covers basic principles involved in setting up and administering a child care center. Emphasis is placed on funding, bookkeeping, business procedures, insurance, enrollment and record keeping.

**CHLD268** 1 1 0 0 0  
**Professional Relationships** Open  
 A course designed to give Child Development students an overview of professional behaviors and responsibilities. Students will focus on communication skills, job performance, job-seeking skills, and professional associations and conferences.

**CHLD362** 1 1 0 0 0  
**Activities for Infants/Toddlers** Open  
 Practical ideas for guidance and development of the child from birth to 48 months. Health, safety and special techniques will be covered.

**CHLD364** 1 1 0 0 0  
**Activities-Schoolage Children** Open  
 Focus on ideas for working with the child ages 48 months through 12 years. Course includes a variety of activities that are designed to keep the child busy after school.

**CHLD460** 3 0 0 0 12  
**Student Participation I** Open  
 Participation with children in the day care center on campus under the supervision of a lead teacher. Students have limited responsibilities for curriculum planning. Daily student-teacher guidance conferences are held. PREREQUISITE: CHLD260  
 COREQUISITES: CHLD260, 262

**CHLD461** 3 0 0 0 12  
**Student Participation II** Open  
 A continuation of Student Participation I in which students assume full responsibility for planning, head teaching and parent communications in the day care center on campus under the supervision of a lead teacher. PREREQUISITES: CHLD170, 260, 460 (2.0 required in CHLD460)

**CHLD464** 2 0 0 0 8  
**Practicum** Open  
 Placement in a community-based program for children. Emphasis is on development of the competencies necessary for employment in a similar setting. PREREQUISITES: A cumulative G.P.A. of 2.0 in all CHLD courses and CHLD170, 260, 262, 460

**CHLD465** 3 0 0 0 12  
**Child Development Assoc Practicum** Open  
 Placement for the associate degree student in a community-based center designed to further build competencies necessary for employment and to develop competence in the area of program administration. PREREQUISITES: A cumulative G.P.A. of 2.0 in all CHLD courses and CHLD464, COREQUISITE: CHLD266

**CIM-403** 3 3 0 0 0  
**Introduction to CAD/CAM** Voc/Tech  
 The objectives of this course will be to apply Computer Aided Design software and Computer Aided Manufacturing software for the purpose of generating computer assisted part programs. These are to be post processed and downloaded to Computer Numerically Controlled (CNC) machine tools, where the student will cut chips on the shop floor.

**CIM-404** 2 1 2 0 0  
**Robotics** Voc/Tech  
 Course provides an introduction to robotic fundamentals. The student will examine parameters of robot operation and program robots for various applications.

**CIM-405** 3 3 0 0 0  
**Programmable Controllers** Voc/Tech  
 This course is an introduction to programmable logic controllers. The student will examine hardware and software aspects and program various programmable controllers with relay logic, timers, counters and sequencers.

**CIM-406 - ADJUNCT** 3 3 0 0 0  
**Programmable Controllers II** Voc/Tech  
 A continuation of Programmable Controllers (CIM-405). This course includes analog I/O, networking, remote I/O, non-standard I/O, workstation interfacing and advanced programming techniques. PREREQUISITE: CIM-405

**CIM-408** 3 3 0 0 0  
**Intro to Computer Integrated Mfg.** Voc/Tech  
 Designed to familiarize the student with computer aided design, computerized production planning, and automated shop floor control.

**CIM-409** 3 3 0 0 0  
**Inventory Management/Planning** Voc/Tech  
 This course examines the variety of inventory ordering and lot-sizing techniques available to firms. Includes methods for reducing the investment in inventory without reducing the ability of firm to maintain production or deliver customer orders promptly. Computer spreadsheets for controlling inventory orders and levels are also used.

# Course Descriptions

<b>CIM-410</b>	<b>3 3 0 0 0</b>	<b>Material Requirements Planning</b>	<b>Voc/Tech</b>
This course is designed to present the student with the information to successfully implement and use an MRP system. The course includes a case study problem using a computer-based MRP program.			
<b>CIM-411</b>	<b>3 3 0 0 0</b>	<b>Production and Capacity Management</b>	<b>Voc/Tech</b>
This course studies such topics as breakeven analysis, time and motion studies, forecasting of demand, scheduling, statistical process control, and make vs. buy analysis to provide manufacturing managers with simple but effective tools to control plant operations to maximize productivity and minimize cost.			
<b>CIM-412</b>	<b>3 3 0 0 0</b>	<b>Just In Time Inventory Control Tech.</b>	<b>Voc/Tech</b>
This course examines the effects that a JIT environment has on a firm including the topics of setup reduction, inventory control, accounting practices, marketing, quality control, management, plant layout, scheduling and implementation. Industry case studies are used to demonstrate real-world applications and problems.			
<b>CIM-413</b>	<b>3 2 2 0 0</b>	<b>Introduction to FMS Cell</b>	<b>Voc/Tech</b>
This course introduces the student to all aspects of a flexible manufacturing system cell. It is designed to familiarize the student with cell software and hardware. It includes labs on all cell components. PREREQUISITES: HTPC358 & 359 or instructor permission			
<b>CIM-417 - ADJUNCT</b>	<b>3 3 0 0 0</b>	<b>Advanced Purchasing Operations</b>	<b>Voc/Tech</b>
This course addresses the issues of material flow, inventory control, basic uses of SPC & MRP, forecasting, supplier relationships, the use of computer systems, and control and disposal issues of materials as they relate to purchasing.			
<b>COMH410</b>	<b>3 2 2 0 0</b>	<b>Greenhouse Production I</b>	<b>Voc/Tech</b>
An introduction to greenhouse structures, heating and environmental control systems and watering. Winter and spring commercial pot plants, cut flowers, and bedding plant crops will be explored vocationally in the college greenhouses.			
<b>COMH411</b>	<b>2 2 0 0 0</b>	<b>Horticulture Chemical Techniques</b>	<b>Voc/Tech</b>
Types of chemicals will be identified and how to use and apply them properly will be studied. The safe handling of chemicals and calibration of spray equipment will be covered. Includes study of core manual and category for commercial pesticide license.			
<b>COMH437</b>	<b>2 2 0 0 0</b>	<b>Turf I</b>	<b>Voc/Tech</b>
The study of soil and turf relationships as to planning, seed bed preparation, seed selection, fertilization, sowing and establishing of turf and lawn. The student receives practical experience in starting and maintaining new lawn areas.			
<b>COMH440</b>	<b>2 1 2 0 0</b>	<b>Landscape Design I</b>	<b>Voc/Tech</b>
Fundamentals of landscape design for homes presented. Introduction to principles of landscaping as they apply to residential landscaping. Student is given opportunity to draw basic residential landscape plans. PREREQUISITE: COMH488			
<b>COMH450</b>	<b>3 3 0 0 0</b>	<b>Botany</b>	<b>Voc/Tech</b>
A course designed to introduce the student to the principles of botany that are basic to plant life. Topics covered include plant cell chemistry, cell structure, functions, photosynthesis, transpiration.			
<b>COMH452</b>	<b>3 2 2 0 0</b>	<b>Arboriculture</b>	<b>Voc/Tech</b>
A study of tree culture with emphasis on propagation, pruning, transplanting, pest control, urban environmental concerns and recognition of hazards and liabilities. Methods of evaluation of values also studied. PREREQUISITE: COMH479			
<b>COMH453</b>	<b>2 1 2 0 0</b>	<b>Landscape Design/Plant Materials II</b>	<b>Voc/Tech</b>
Course will include design of residential, commercial, public areas and flower beds. Using landscape construction materials in design and material and labor estimates will be developed. Plant materials will be expanded to include annuals. PREREQUISITES: COMH440, 488			
<b>COMH454</b>	<b>3 0 0 0 15</b>	<b>Supervised Employment Exp.</b>	<b>Voc/Tech</b>
Experience in a business setting related to the student's career objective. Taken over a five week period. (P/F) PREREQUISITES: COMH410, 437, 479, 488			
<b>COMH455</b>	<b>3 2 2 0 0</b>	<b>Turf II</b>	<b>Voc/Tech</b>
Turf management practices on golf and recreation areas with practical experience in maintaining turf on outdoor campus facilities. PREREQUISITE: COMH437			
<b>COMH457</b>	<b>3 2 2 0 0</b>	<b>Fruit and Vegetable Science</b>	<b>Voc/Tech</b>
A study of tree fruits, small fruits and vegetable culture, including varietal selection, planting, pruning, fertilizing, disease and insect control programs.			
<b>COMH458</b>	<b>2 2 0 0 0</b>	<b>Insects and Diseases</b>	<b>Voc/Tech</b>
Identification of diseases and insects which frequently infest horticultural crops and plant materials. Structures, functions and life cycles of those pests will be studied with environmental conditions favoring development. Chemical, organic, biological and mechanical control methods will be presented. A collection will aid I.D. process.			
<b>COMH459</b>	<b>1 0 2 0 0</b>	<b>Interior Landscaping</b>	<b>Voc/Tech</b>
The commercial production of foliage plants. Culture, propagation, and nomenclature will be discussed. Interior use, design and display of foliage plants will be studied.			
<b>COMH469</b>	<b>3 3 0 0 0</b>	<b>Garden Center Management</b>	<b>Voc/Tech</b>
Display, promotion and merchandising in the modern garden center will be stressed. Problems of distribution functions of marketing and their costs will be studied. Management's role in organizing a business and financial planning will be discussed.			
<b>COMH478</b>	<b>3 2 2 0 0</b>	<b>Plant Propagation I</b>	<b>Voc/Tech</b>
An introduction to plant propagation with emphasis on grafting, herbaceous and hardwood cuttings, and greenhouse and nursery seeds. Propagation schedules, equipment, structures and growth regulators will be discussed.			
<b>COMH479</b>	<b>3 2 2 0 0</b>	<b>Nursery Production I</b>	<b>Voc/Tech</b>
Introduces the student to site selection, equipment and supplies with an introduction to field production, harvesting and marketing. Basic nursery and landscape skills will be developed on and off campus.			
<b>COMH483</b>	<b>1 0 2 0 0</b>	<b>Plant Propagation II</b>	<b>Voc/Tech</b>
Summer methods of plant propagation including softwood and semi-hardwood cuttings, budding, layering, divisions and an overview of apical meristem culture. PREREQUISITE: COMH478			
<b>COMH485</b>	<b>1 0 2 0 0</b>	<b>Floral Design II</b>	<b>Voc/Tech</b>
An advanced class in commercial floral design, flower shop organization and management. Advanced wedding work, funeral work and commercial flower arrangements will be taught. PREREQUISITE: COMH497			
<b>COMH486</b>	<b>1 0 2 0 0</b>	<b>Horticulture Equip Safety/Maint</b>	<b>Voc/Tech</b>
A practical course in the proper care and use of hand tools and power equipment, including the repair and maintenance of the small gasoline engines used in horticulture mechanics.			
<b>COMH488</b>	<b>3 2 2 0 0</b>	<b>Plant Materials/Landscape Drafting</b>	<b>Voc/Tech</b>
The study of plant material using the plant materials in their growing environment. It will cover use of identification keys and plant families. Introduction to landscape drafting will be developed.			
<b>COMH490</b>	<b>3 2 2 0 0</b>	<b>Greenhouse Production II</b>	<b>Voc/Tech</b>
Greenhouse maintenance, nutrition, watering, cooling systems and pest control shall be developed further in college greenhouse facilities. Summer and fall crops will be grown by students. PREREQUISITE: COMH410			
<b>COMH494</b>	<b>1 0 2 0 0</b>	<b>Horticulture Product Alternatives</b>	<b>Voc/Tech</b>
A discussion and comparison of the possibilities and profitability of job opportunities in the various fields of horticulture production in Iowa, i.e., fruit, vegetable, nursery, Christmas tree, sod and greenhouse crops.			
<b>COMH496</b>	<b>1 0 2 0 0</b>	<b>Landscape Construction</b>	<b>Voc/Tech</b>
To provide study and experience in choosing materials, planning and construction of landscape facilities.			
<b>COMH497</b>	<b>1 0 2 0 0</b>	<b>Floral Design I</b>	<b>Voc/Tech</b>
Construction and mechanics of merchandising flowers and plants at retail.			
<b>COMH498</b>	<b>3 0 0 0 15</b>	<b>Supervised Employment Exp III</b>	<b>Voc/Tech</b>
A final opportunity for the student to gain employment experience in their specialization. In many instances they will continue as full time employees upon completion of the program. Taken over a five week period. (P/F) PREREQUISITE: COMH499			
<b>COMH499</b>	<b>1 0 0 0 5</b>	<b>Supervised Employment Exp II</b>	<b>Voc/Tech</b>
Student will continue on his/her first employment experience. Taken over a three week period. (P/F) PREREQUISITE: COMH454			
<b>COMS111</b>	<b>3 3 0 0 0</b>	<b>Computers and Programming I</b>	<b>Open</b>
A block structured language will be used to introduce fundamental structured programming techniques. Structured programs will be developed through an algorithmic approach, then written, tested and debugged. PREREQUISITES: 2 years H.S. algebra or MATH115 or MATH124			
<b>COMS112</b>	<b>3 3 0 0 0</b>	<b>Computers and Programming II</b>	<b>Open</b>
A block structured language will be used to introduce commonly used data structures. Programs using these data structures will be developed, written, tested and debugged. PREREQUISITE: COMS111			
<b>COMS125</b>	<b>3 3 0 0 0</b>	<b>Business Programming COBOL I</b>	<b>Open</b>
Introduces the programming language COBOL through writing, testing and debugging COBOL programs. Emphasis is given to business applications. PREREQUISITE: COMS111 or 176			
<b>COMS126</b>	<b>4 4 0 0 0</b>	<b>Business Programming COBOL II</b>	<b>Open</b>
Introduces advanced COBOL programming techniques through the writing, testing and debugging of COBOL programs. Emphasis is given to the SORT verb and ISAM file access techniques. PREREQUISITE: COMS125			
<b>COMS160</b>	<b>3 3 0 0 0</b>	<b>Computational Structures</b>	<b>Open</b>
Relates mathematics as a tool and language to the computer. A block structured language will be used to acquaint students with application areas in computer science. PREREQUISITES: COMS112, MATH129			

\*\*\* Adaptor Courses cannot be used to fulfill degree requirements

# Course Descriptions

**COMS172** 2 2 0 0 0  
**Computer Programming-FORTRAN** Open  
 For students desiring an introductory background in the programming language of FORTRAN. Included are FORTRAN structures, i/d statements, arrays, subscripting, control statements, data storage, and retrieval. PREREQUISITES: MATH129, COMS111

**COMS174** 3 3 0 0 0  
**Applied Programming I Pascal** Open  
 Introduction to structured programming using a blocked structured language. Emphasis will be on an algorithmic approach to program development. Programs will be developed, written, tested and debugged. PREREQUISITES: MATH115, 123

**COMS176** 4 4 0 0 0  
**Applied Programming II** Open  
 Data structures as related to computer programming will be emphasized. Programs using these data structures will be developed, written, tested and debugged. The programs written will also be business application oriented. PREREQUISITE: COMS174

**COMS181** 3 2 2 0 0  
**Intro to Computer Literacy** Open  
 Presents the basic concepts of computers and the effect that computers are having, and will continue to have, in the future. Incorporates theory as well as hands-on practice by looking at examples of computers at work in the real world, and exploring the principles behind the application. Includes an introduction to basic programming.

**CONA451** 3 2 2 0 0  
**Fundamentals of Refrigeration** Voc/Tech  
 Principles of refrigeration, domestic systems and equipment. Installation, operation and troubleshooting with lab work on actual equipment.

**CONA452** 3 2 2 0 0  
**Electricity I** Voc/Tech  
 A study of basic electricity principles, Ohm's law, series and parallel circuits as applied to refrigeration. Hands-on practice with training boards in the lab.

**CONA454** 3 2 2 0 0  
**Fundamentals of Heating** Voc/Tech  
 A study of the combustion process, heating values of different fuels, including piping, venting, controlling and troubleshooting with lab work on actual equipment.

**CONA461** 5 3 5 0 0  
**Advanced Refrigeration/Heating** Voc/Tech  
 Lectures on the compression cycle, different refrigeration and electrical circuits and lubrication problems found in supermarket equipment. Lab work on actual equipment. PREREQUISITES: CONA451, 454

**CONA462** 5 3 4 0 0  
**Year Round Air Conditioning I** Voc/Tech  
 The science of heating and cooling consisting of psychrometrics, humidity control, computation of equipment selection and system cost with a study of installation and service procedures through lab practices. PREREQUISITES: CONA451, 454

**CONA463** 2 2 0 0 0  
**BLUEPRINT READING** VOC/TECH  
 A comprehensive study of blueprints consisting of drafting symbols and terminology which prepares the student to make an installation according to a set of blueprints and specifications.

**CONA464** 3 2 2 0 0  
**Industrial Electricity** Voc/Tech  
 The application of motor control circuits and types of motors used in the HVAC field. These applications include contactors, starters and control circuits used with capacitor start, shaded-pole and three-phase motors. PREREQUISITE: CONA452

**CONA471** 5 3 5 0 0  
**Air Distribution** Voc/Tech  
 Involves the study of fans, blowers and dampers. The design of duct systems for proper air delivery and allows for final system balancing. Includes lab practice.

**CONA472** 7 2 10 0 0  
**Year Round Air Conditioning II** Voc/Tech  
 The theory and function of commercial heating and cooling equipment consisting of heat pumps, cooling towers, evaporators, condensers, related electric and pneumatic controls with lab practice. PREREQUISITE: CONA462

**COOP212** 1 1 0 0 0  
**Coop Career Seminar** Voc/Tech  
 Designed to provide in-depth exploration of careers. Includes discussion topics such as positive work attitudes, conditions for salary increases, job promotions, employer/employee responsibilities and other phases of the work. These discussions will be related to student employment.

**COOP220** 2 2 0 0 0  
**Career-Seeking Skills** Voc/Tech  
 Covers all aspects of professional job placement procedures including career goal setting, developing prospective employer lists, resume writing, job application forms, employment tests, personal appearance, interviewing, and follow-up.

**COOP221** 1 0 0 0 4  
**Coop Career Experience** Voc/Tech  
 Supervised work experience with employers that enables students to apply their skills and knowledge. Work experiences will relate to the students' academic programs of study. (P/F)

**COOP222** 2 0 0 0 8  
**Coop Career Experience** Voc/Tech  
 See COOP 221. (P/F)

**COOP223** 3 0 0 0 12  
**Coop Career Experience** Voc/Tech  
 See COOP 221. (P/F)

**COOP224** 4 0 0 0 16  
**Coop Career Experience** Voc/Tech  
 See COOP 221. (P/F)

**COOP225** 5 0 0 0 20  
**Coop Career Experience** Voc/Tech  
 See COOP 221. (P/F)

**COOP226** 6 0 0 0 24  
**Coop Career Experience** Voc/Tech  
 See COOP 221. (P/F)

**CRIM101** 3 3 0 0 0  
**Intro to Criminal Justice** General  
 An in-depth examination of the three components of the criminal justice system and the roles they play in society.

**CRIM103** 3 3 0 0 0  
**Community Relations** Open  
 Examination of the role of criminal justice personnel in a democratic society; emphasis on ethical uses of discretion, analysis of officer stress and the popular perceptions of the criminal justice system.

**CRIM104** 3 3 0 0 0  
**Criminal Law** General  
 An examination of the elements of offenses and the procedural safeguards in the criminal process.

**CRIM105** 3 3 0 0 0  
**Constitutional Law** General  
 A study of the application of constitutional principles to social and political questions including the powers of the national government vs. state government through focus on the incorporation issue, examination of the evolution of civil liberties guarantees.

**CRIM106** 3 3 0 0 0  
**Juvenile Law** General  
 The social and legal aspects of juvenile delinquency, examination of procedures, legislation, juvenile court and prevention programs.

**CRIM107** 3 3 0 0 0  
**Theories of Interviewing** Open  
 The process of gathering information from others: the interviewee, the setting, types of questions, non verbal communication, deception, and theories of communication.

**CRIM110** 3 3 0 0 0  
**Penology** Open  
 Social organization and goals of correctional programs. Principles of institutional corrections and the social structure within institutions. Examination of non-institutional alternatives include probation and parole.

**CRIM211** 3 3 0 0 0  
**Correctional Treatment** Open  
 Institutional options for preventing recidivism. Introduction to therapeutic techniques. Comparison of punishment, freudian treatments and behavior modification systems. Student presentation required.

**CRIM212** 3 3 0 0 0  
**Correctional Law** Open  
 Law in the field of corrections: procedural and substantive rights of both convicts and the state, "good time" detainers, multiple sentences and double jeopardy. Emphasis on sentencing and classification; efforts to reduce sentencing disparity.

**CRIM214** 3 3 0 0 0  
**Criminal Investigation** Open  
 Rudiments of criminal investigation: techniques, principles, problems, sources of information, and evidentiary processes.

**CRIM235** 3 2 2 0 0  
**Survey/Criminal Justice Agencies** Open  
 Study of the criminal justice system through an examination of actual agencies, focusing on theoretical vs. real roles and functions of the agencies. Includes on-site visits. PREREQUISITES: 24 hours of CRIM courses or instructor permission

**CRIM236** 3 0 0 0 12  
**Internship** Open  
 Involves one-hundred fifty hours of active internship for students in an agency other than one in which they may be employed. Synthesis paper required. (P/F) PREREQUISITES: 24 hrs of CRIM courses with minimum grade of C in each, CRIM235

**CRIM255** 3 3 0 0 0  
**Scientific Investigation I** Open  
 An in-depth study of investigative techniques as applied to specific offenses. Court room presentation will also be emphasized.

**CRIM273** 3 3 0 0 0  
**Introduction to Security** Open  
 Fundamental principles and practices of physical security, internal security, defense systems, and fire safety are discussed in detail. Specific problems in hospital, transportation, retail and computer security are analyzed.

**CRIM275** 3 3 0 0 0  
**Scientific Investigation II** Open  
 An introduction to investigative techniques which stresses the identification and examination of physical evidence from the time of its discovery until a final disposition by the courts.

**CRIM285** 3 3 0 0 0  
**Criminal Justice Ethics** Open  
 Focuses on philosophical and theoretical issues and analyzes research findings to determine their implications for future practice. The student will learn how to identify and confront difficult ethical decisions they are likely to face in their daily routines.

**CULA340** 2 0 4 0 0  
**Baking** Voc/Tech  
 Course offers instruction in baking fundamentals and procedures as applied to bread, rolls, cakes, pastries and cake decorating. Practical experience in sanitation, safety and the use of large equipment is also emphasized in this course. PREREQUISITES: HRMT316, HRMT320 or instructor permission

**CULA349** 3 0 6 0 0  
**International Cuisine Lab II** Voc/Tech  
 Application of gourmet cooking through actual quantity preparation of eight course international dinners. Four evening gourmet dinners will be prepared and served during the semester. PREREQUISITES: CULA446, 456

# Course Descriptions

**CULA365** 2 0 4 0 0  
**Adv Baking/Buffer Decorating** Voc/Tech  
 Advanced principles and procedures of producing baked goods, decorative work and display pieces. PREREQUISITES: CULA340, 386

**CULA386** 2 0 4 0 0  
**Garde Manger** Voc/Tech  
 Application of techniques used in preparation of hot and cold hors d'oeuvres, decorative food displays and ice carvings. Emphasis is placed on aspics, galantines and buffet presentations. PREREQUISITE: instructor permission

**CULA446** 3 0 6 0 0  
**International Cuisine Lab I** Voc/Tech  
 Application of gourmet cooking through actual quantity preparation of eight course international dinners. Four evening gourmet dinners will be prepared and served during the semester. PREREQUISITES: HRMT316, 320, 326, 328 COREQUISITE: CULA456

**CULA451** 4 0 8 0 0  
**Culinary Cuisine Lab** Voc/Tech  
 Preparation of intricate and difficult classical cuisine dishes. Students will rotate through the cooking stations of the traditional brigade kitchen and then prepare food for service to the public. A la carte preparation is emphasized. PREREQUISITE: HRMT357 COREQUISITE: CULA452

**CULA452** 2 2 0 0 0  
**Advanced Culinary Cuisine** Voc/Tech  
 Discussion of the more intricate and difficult cooking principles and techniques of classical cuisine and planning for advanced culinary cuisine lab. PREREQUISITE: HRMT357 COREQUISITE: CULA451

**CULA456** 2 2 0 0 0  
**International Cuisine** Voc/Tech  
 Students research and plan international dinners. Emphasis is on menu and production planning for eight course gourmet dinners. The lecture will also focus on the pronunciation and definition of French terms. PREREQUISITES: HRMT326, 328 COREQUISITE: CULA446

**DATA102** 3 3 0 0 0  
**New Literacy/Intro to Computers** Voc/Tech  
 A television course giving a comprehensive introduction to computer principles and presenting a broad overview of data processing concepts.

**DATA103** 3 3 0 0 0  
**BASIC** Voc/Tech  
 An elementary course in the use of the BASIC programming language. The various commands will be presented; and students design, code, and test several programs including file processing. PREREQUISITES: COMS181 or instructor permission

**DATA104** 3 3 0 0 0  
**BASIC/Advanced** General  
 "Applications" approach developed around data file programming. Manipulation of string variables, data entry, formats, error checking routines, sequential and random access files. PREREQUISITE: DATA103

**DATA106** 3 2 2 0 0  
**Microcomputers in Business** General  
 This course provides the person already familiar with microcomputer usage, additional skill development in the areas of the operating system (DOS), word processing, spreadsheets and database management software. Course features extensive hands-on usage combined with lecture and discussion. PREREQUISITES: COMS181 or instructor permission

**DATA110** 3 3 0 0 0  
**Microcomputer Systems Design** Voc/Tech  
 Designed to give added depth in the area of micro computer system applications and design. Telecommunications, networks, bulletin boards and RS232 formats will be discussed. PREREQUISITES: COMS181 or instructor permission

**DATA221** 3 3 0 0 0  
**PL/I** General  
 Introductory course in the facilities and techniques in the use of the PL/I language. Students design, code and test several business programs using the features of the PL/I. PREREQUISITE: COMS181

**DATA231** 3 3 0 0 0  
**RPG/II** General  
 Study of basic steps of programming. Students design, code and debug various problems written in report program generator language. PREREQUISITE: COMS181

**DATA301** 4 3 2 0 0  
**DOS Job Control** Voc/Tech  
 Provides an individual with a working knowledge of disk operating systems/virtual storage extended (DOS/VSE) job control language. PREREQUISITE: DATA304 COREQUISITE: DATA319

**DATA304** 4 3 2 0 0  
**COBOL/Beginning** Voc/Tech  
 Introduces the student to structured COBOL design and coding including control break processing. COREQUISITES: COMS181, DATA310

**DATA306** 4 3 2 0 0  
**COBOL/Intermediate** Voc/Tech  
 ANS COBOL programming involving sequential disk, table processing and VSAM file processing. PREREQUISITE: DATA304 COREQUISITE: DATA301

**DATA308** 3 2 2 0 0  
**COBOL/Advanced** Voc/Tech  
 ANS COBOL involving advanced editing programs, table processing, VSAM file process, programs linkage, and report writer. PREREQUISITE: DATA306 COREQUISITE: DATA321

**DATA310** 4 3 2 0 0  
**Program Logic Design** Voc/Tech  
 The study of the logical design of programs using the structured method. Various design tools and applications will be covered. COREQUISITE: COMS181

**DATA318** 3 2 2 0 0  
**Intro C++ Programming** Voc/Tech  
 An introduction to standard "C++" programming on IBM-PC, using Borland's Turbo-C compiler. Students will examine the structure of typical "C++" programs and design eight small to medium sized programs. PREREQUISITE: DATA310 or equivalent

**DATA319** 4 3 2 0 0  
**Assembler/Beginning** Voc/Tech  
 An introductory course in the syntax rules of assembler language programming. Business problems are analyzed and programmed. PREREQUISITES: COMS181 and DATA304 or instructor permission COREQUISITE: DATA301

**DATA320 - ADJUNCT** 3 2 2 0 0  
**Intermediate C++ Programming** Voc/Tech  
*A second course in Object Oriented Programming using C++. Review and extend the concepts of class hierarchies, encapsulation, inheritance and polymorphism. Explore class libraries, templates, streamable classes and exception handling. Use a CASE tool to generate code for both MS-DOS and Windows applications. PREREQUISITES: DATA318 or permission of instructor*

**DATA321** 4 3 2 0 0  
**Assembler/Intermediate** Voc/Tech  
 An intermediate course in the concepts and techniques of using assembler language, including machine language and table processing. PREREQUISITES: DATA319, 301

**DATA327** 4 4 0 0 0  
**Assembler/Advanced** Voc/Tech  
 An advanced course in the more complex concepts of assembler type instructions, including VSAM and macro processing with inter-program linkage. PREREQUISITE: DATA321

**DATA328** 1 0 2 0 0  
**MS DOS An Introduction** Voc/Tech  
 An introduction to PC disk operating system. Topics include: directory, direct commands, format, chkdsk, copy, diskcopy, rename and other DOS commands.

**DATA329** 2 1 2 0 0  
**MS DOS An Advanced Course** Voc/Tech  
 An advanced disk operating system course. Topics include: advanced utilities (EDLIN, shell commands, system files, network considerations and DOS environment menu systems). PREREQUISITES: DATA328 or instructor permission

**DATA330** 1 0 2 0 0  
**dBase An Introduction** Voc/Tech  
 An introduction to Data Base Management using dBase III+. Topics include: create, edit, update, report, delete, modify. Students will generate reports from Data Base file they have created. PREREQUISITES: COMS181 or instructor permission

**DATA331** 2 1 2 0 0  
**dBase An Advanced Course** Voc/Tech  
 An advanced study of dBase III+ concentrating on the creation of dBase programs - menu driven, screen generation and file manipulation. PREREQUISITE: DATA330 or DATA106

**DATA332** 1 0 2 0 0  
**Lotus 1-2-3 Introduction** Voc/Tech  
 Orientation to Lotus 1-2-3. Topics include spreadsheet layout, totals, report generation. Designed for uses of Lotus 1-2-3.

**DATA333** 2 1 2 0 0  
**Lotus 1-2-3 Advanced** Voc/Tech  
 Advanced topics on Lotus 123. Topics include macro, graphic and menu design. PREREQUISITES: COMS181 and DATA332 or DATA106

**DATA334** 6 4 4 0 0  
**Applications Programming** Voc/Tech  
 Individual projects are assigned which require the student to apply the programming knowledge gained in prerequisite courses to the design and implementation of assigned business applications. PREREQUISITES: DATA301, 308, 321, 352

**DATA335 - ADJUNCT** 1 0 2 0 0  
**Excel-An Introduction** Voc/Tech  
*Orientation to Excel. Topics include spreadsheet layout and terminology, charting, enhancing a worksheet and chart. Designed for beginning users of Excel.*

**DATA338** 2 2 0 0 0  
**OS/JCL** Voc/Tech  
 Course presents concepts and coding rules of OS Job Control language in an easily understood manner. The course is primarily intended for both operators and programmers with DOS experience who plan to use OS in the near future. PREREQUISITE: COMS181

**DATA341** 3 3 0 0 0  
**Database Programming** Voc/Tech  
 An introductory course in the concepts, facilities and techniques used in data base language. Students design, organize and create data independent business applications. PREREQUISITES: DATA306, 321

**DATA342** 1 0 2 0 0  
**Wordstar** Voc/Tech  
 Hands-on instruction using the Wordstar word processing software, special features include spelling check, merge and columns. PREREQUISITE: OFFC301

**DATA345** 1 0 2 0 0  
**Spreadsheets** Voc/Tech  
 Orientation to P.C. spreadsheets. Topics include spreadsheet layout, totals, report generation.

**DATA346** 2 1 2 0 0  
**Advanced Spreadsheets** Voc/Tech  
 Advanced topic within spreadsheets, including macros, graphics, and menu driven systems. PREREQUISITE: DATA332 or instructor permission.

**DATA347** 1 0 2 0 0  
**P.C. Database** Voc/Tech  
 Introduction to database management systems on the P.C. Topics include create, update, report, delete, modify. Students will generate reports from database file they have created. PREREQUISITE: COMS181 or instructor permission.

# Course Descriptions

<b>DATA348</b> <b>Advanced P.C. Database</b> An advanced study of P.C. database concentrating on programs that are menu driven; screen generation and file manipulation. PREREQUISITE DATA330 or instructor permission.	<b>2 1 2 0 0</b> Voc/Tech	<b>DENA322</b> <b>Clinical Dental Assisting</b> A continuation of Preclinical Dental Assisting (DENA 320) with emphasis on operative dentistry, dental specialties and advanced functions. The laboratory phase develops students' competencies in clinical assisting. PREREQUISITES: DENA302, 304, 320, 325, DENH201, 257	<b>5 3 4 0 0</b> Voc/Tech	<b>DENH240</b> <b>Nutrition/Preventative Dentistry</b> Lecture-discussion course relating the nutrients and their effects on general and oral health throughout the life cycle. An introduction to the principles of counseling and instruction in preventive dentistry necessary to maintain optimum oral health. PREREQUISITES: BIOL154, CHEM132	<b>4 4 0 0 0</b> Open
<b>DATA352</b> <b>Telecommunications/CICS Prog</b> Provides theory and working knowledge of telecommunication programming. Students will code programs using CICS. PREREQUISITES: DATA306, 321	<b>4 4 0 0 0</b> Voc/Tech	<b>DENA323</b> <b>Dental Business Office Procedure</b> Covers the business aspects of the dental office: patient relations, appointment book management, financial records, telephone communications, credits and collections, dental insurance, tax records, supply and inventory systems. PREREQUISITE: 35 wpm keyboard skills	<b>2 2 0 0 0</b> Voc/Tech	<b>DENH257</b> <b>Dental Radiography I</b> Lecture includes radiation physics, biological effects, radiation safety and protection, properties of x-ray film and techniques of exposing, processing, mounting and evaluating film. Laboratory experiences develop competence in exposing, processing, mounting and evaluating radiographs. PREREQUISITE: DENA304 or DENH230 COREQUISITE: DENA304 or DENH230	<b>3 2 2 0 0</b> Open
<b>DATA382</b> <b>Systems Analysis</b> Designed to acquaint the student with the various considerations in the design of a system. The course considers project initiation, fact gathering, procedures, forms, system implementation and evaluation. PREREQUISITES: COMS181, DATA304	<b>4 4 0 0 0</b> Voc/Tech	<b>DENA325</b> <b>Dental Materials Lab</b> Through laboratory experience the student learns techniques in preparation and utilization of dental materials. COREQUISITE: DENH201	<b>1 0 2 0 0</b> Voc/Tech	<b>DENH259</b> <b>Dental Radiography II</b> A continuation of Dental Radiography I. Weekly seminars for basic interpretation of radiographs and laboratory experience to develop student competence in taking oral radiographic surveys. PREREQUISITE: DENH257 COREQUISITE: DENH229	<b>2 1 2 0 0</b> Open
<b>DENA302</b> <b>Dental Science I</b> Introduction to the various sciences necessary for the dental assistant. Microbiology and oral pathology are covered. PREREQUISITE: DENA304, 320 COREQUISITE: DENA304, 320	<b>4 4 0 0 0</b> Voc/Tech	<b>DENH201</b> <b>Dental Materials</b> A study of materials utilized in the practice of dentistry. Properties of dental materials and ADA requirements are presented. COREQUISITE: DENA325 or DENH203	<b>2 2 0 0 0</b> Open	<b>DENH278</b> <b>Dental Hygiene II</b> A continuation of clinical practices. Further instruction and application in techniques for a complete oral prophylaxis and Phase I therapy. Topics include smoking cessation, intraoral photography, sonic scaling and air polishing. PREREQUISITES: DENH228, 229 COREQUISITE: DENH279	<b>2 2 0 0 0</b> Open
<b>DENA304</b> <b>Dental Anatomy</b> The study of head, neck and dental anatomy is combined to give the student background information for application in dental assisting courses.	<b>2 2 0 0 0</b> Voc/Tech	<b>DENH203</b> <b>Dental Materials Lab</b> Through laboratory experience the student learns techniques in preparation and utilization of dental materials. COREQUISITE: DENH201	<b>1 0 2 0 0</b> Open	<b>DENH279</b> <b>Dental Hygiene II Practicum</b> See DENH278. PREREQUISITES: DENH228, 229 COREQUISITE: DENH278	<b>2 0 0 6 0</b> Open
<b>DENA305</b> <b>Dental Radiography II</b> A continuation of Dental Radiography I. Weekly seminars for basic interpretation of radiographs and laboratory experience to develop student competence in making oral radiographic surveys. PREREQUISITES: DENA302, 304, 320, DENH257	<b>2 1 2 0 0</b> Voc/Tech	<b>DENH208</b> <b>Principles of Dental Hygiene</b> Basic principles of clinical dental hygiene are introduced. The etiology of deposits and their effect on oral tissue and the theory and techniques of instrumentation in removal of deposits are emphasized in the practicum portion. PREREQUISITES: BIOL154, CHEM131 COREQUISITE: DENH209	<b>2 2 0 0 0</b> Open	<b>DENH280</b> <b>Periodontology</b> The clinical characteristics, histopathology, etiology, and treatment of periodontal diseases are presented. Special emphasis is placed on the role of the dental hygienist in the prevention and management of periodontal diseases. PREREQUISITES: DENH210, 228, 229 COREQUISITE: DENH279	<b>2 2 0 0 0</b> Open
<b>DENA309</b> <b>Dental Assisting Seminar</b> Discussion and problem solving from clinical practice. Provides an awareness of types of office situations and discussion of clinical aspects of dental assisting and dentistry. Oral reports and weekly evaluations are required. PREREQUISITES: DENA302, 304, 320, 325, DENH201, 257 COREQUISITE: DENA310	<b>1 1 0 0 0</b> Voc/Tech	<b>DENH210</b> <b>Oral Histology and Embryology</b> General and oral histology beginning with a consideration of cytology, which is followed by a study of the fundamentals of oral embryology and the normal microscopic anatomy of oral tissues. PREREQUISITE: BIOL154	<b>2 2 0 0 0</b> Open	<b>DENH281</b> <b>Dental Hygiene III Practicum</b> See DENH288. PREREQUISITES: DENH278, 279 COREQUISITE: DENH288	<b>5 0 0 15 0</b> Open
<b>DENA310</b> <b>Dental Assisting Clinical</b> Application of knowledge and skills as students rotate through dental offices, clinics and hospital clinics. General and specialty practices are included in rotations. PREREQUISITES: Current CPR certification DENA302, 304, 320, 325, DENH201, 257 COREQUISITE: DENA309	<b>3 0 0 0 12</b> Voc/Tech	<b>DENH227</b> <b>Dental Health Education</b> An introduction to the principles of instruction in health care. The course will include developing, presenting, and evaluating dental health education programs for public schools and community groups. PREREQUISITES: DENH208, 209	<b>3 2 2 0 0</b> Open	<b>DENH282</b> <b>Dental Pharmacology</b> The study of drugs and their action on living tissue including their use as an aid in the diagnosis and treatment and prevention of disease or to control or improve any physiological or pathological condition. PREREQUISITES: CHEM132, DENH230, 228, 229	<b>3 3 0 0 0</b> Open
<b>DENA312</b> <b>Dental Science II</b> A continuation of Dental Science I. Emphasis on effects of drugs, and emergency procedures. PREREQUISITES: CPR credentials DENA302, 304, 320	<b>2 2 0 0 0</b> Voc/Tech	<b>DENH228</b> <b>Dental Hygiene I</b> A continuation of instrumentation techniques. Emphasis is placed on patient assessment and principles of patient education in chairside instruction. Topics include polishing techniques, topical application of fluoride and supplementary procedure. PREREQUISITES: DENH208, 209 COREQUISITE: DENH229	<b>2 2 0 0 0</b> Open	<b>DENH288</b> <b>Dental Hygiene III</b> A continuation of clinical practices. Topics include treatment planning, dental insurance, restoration polishing, ethics, sexual harassment, substance abuse, child and adult abuse. PREREQUISITES: DENH278, 279 COREQUISITE: DENH281	<b>2 2 0 0 0</b> Open
<b>DENA316</b> <b>Ethics and Clinical Seminar</b> Continuation of DENA 309. Also includes the study of the ethics and legal responsibilities of the dental profession, as well as the functions and jurisprudence of the auxiliary personnel. PREREQUISITES: Second semester standing in Dental Assisting program. COREQUISITE: DENA318	<b>1 1 0 0 0</b> Voc/Tech	<b>DENH229</b> <b>Dental Hygiene I Practicum</b> See DENH228. PREREQUISITES: DENH208, 209 COREQUISITES: DENH228, 259	<b>4 0 8 0 0</b> Open	<b>DENH290</b> <b>Community Dentistry</b> Concepts of dental public health and preventive dentistry including principles of biostatistics, epidemiology, dental manpower and delivery systems. Students plan, implement and evaluate a community dental health project. PREREQUISITE: DENH227	<b>3 2 2 0 0</b> Open
<b>DENA318</b> <b>Dental Assisting Clinical II</b> Continuation of DENA310. COREQUISITE: DENA316	<b>4 0 0 0 16</b> Voc/Tech	<b>DENH230</b> <b>Dental Anatomy</b> Programmed dental anatomy supplemented by lectures, quizzes and discussions on the development, morphology and functions of the teeth. Anatomy and physiology of the head and neck, including mastication. PREREQUISITE: BIOL154	<b>4 4 0 0 0</b> Open	<b>DENH291</b> <b>Dental Hygiene IV Practicum</b> See DENH298. PREREQUISITES: DENH281, 288 COREQUISITE: DENH298	<b>5 0 0 15 0</b> Open
<b>DENA320</b> <b>Preclinical Dental Assisting</b> Basic concepts of chairs assisting are covered with emphasis on the role of the team in delivery systems. Terminology, instruments, equipment and basic procedures are covered. PREREQUISITE OR COREQUISITE: DENA302, 304, 325, DENH201	<b>6 4 4 0 0</b> Voc/Tech			<b>DENH293</b> <b>General and Oral Pathology</b> Basic concepts of disease process and the oral manifestations of inflammation, degenerative changes, neoplasms and developmental anomalies of the oral cavity. PREREQUISITES: BIOL154, DENH210, 230	<b>3 3 0 0 0</b> Open

\*\*\* Adaptor Courses cannot be used to fulfill degree requirements



# Course Descriptions

**DENH298** 2 2 0 0 0  
**Dental Hygiene IV** Open

A continuation of clinical practices. Students present and discuss completed clinical cases. Legal and management aspects of the dental care system are considered. Career alternatives and job seeking skills are demonstrated. PREREQUISITES: DENH288, 281 COREQUISITE: DENH291

**DEVS072\*\*\*** 3 3 0 0 0  
**Thinking Skills** Adaptor

To increase awareness of thinking as a skill which can be improved. Students will develop the ability to identify and improve the use of basic patterns of cognition. Activities will include personal, academic, and career applications.

**DEVS080\*\*\*** 3 3 0 0 0  
**Study Skills** Adaptor

Emphasis on improving time management, developing listening skills, and taking class notes and tests. Guidance in developing study habits and using the library and textbooks.

**DIEM400** 4 4 0 0 0  
**Basic Diemaking** Voc/Tech

Introduction to diemaking principles covering die sets, die components, cutting and forming applications, and material utilization. PREREQUISITE: TOOL491 or equivalent COREQUISITE: DIEM401

**DIEM401** 6 0 12 0 0  
**Basic Diemaking Lab** Voc/Tech

Introducing the student to basic diemaking procedures as they construct a blank die, piercing die and a forming die. PREREQUISITE: TOOL490 or equivalent COREQUISITE: DIEM400

**DIEM402** 2 0 4 0 0  
**Advanced Blueprint Reading** Voc/Tech

An interpretation of progressive die blueprints, jig and fixture blueprints including assembly drawings, plan and section views, and detailing. PREREQUISITE: TOOL481 or equivalent COREQUISITE: CADD401

**DIEM403** 3 1 4 0 0  
**Progressive Die Design** Voc/Tech

Hands-on drafting experience in the design, drawing, and detailing of a progressive die using Computer Aided Design (CAD). PREREQUISITE: DIEM402 COREQUISITE: DIEM404

**DIEM404** 4 4 0 0 0  
**Advanced Diemaking** Voc/Tech

Complex die making procedures, including CAM actuated dies and exposure to cost estimating and quoting. PREREQUISITE: DIEM400 COREQUISITE: DIEM405

**DIEM405** 6 0 12 0 0  
**Advanced Diemaking Lab** Voc/Tech

Constructing a more complex stamping die, including a progressive die that has been partially designed and detailed by the student. PREREQUISITE: DIEM401 COREQUISITE: DIEM404

**DIEM407** 3 2 2 0 0  
**Plastic Moldmaking** Voc/Tech

The student is presented with the basic fundamental of plastic mold construction and molding processes. COREQUISITE: CIM-413

**DIEM413** 3 2 2 0 0  
**Electrical Discharge Machining** Voc/Tech

Operation of both conventional and wire EDM machines. Construction of EDM electrodes. COREQUISITE: DIEM405

**DISL401** 6 1 10 0 0  
**Diesel Engines I** Voc/Tech

Instruction provided in the technical and non-technical aspects of diesel engines. This information will give the students the basic understanding needed to continue in the Diesel Mechanic program.

**DISL402** 6 1 10 0 0  
**Diesel Engines II** Voc/Tech

Instruction in diagnosing problems and the nature of repairs needed. Information on preventative measures to eliminate failures. PREREQUISITE: DISL401

**DISL404** 6 2 8 0 0  
**Power Trains** Voc/Tech

Class and lab activities in the design and operation of drive train components including clutches, torque converters, automatic and manual transmissions, drive lines, rear axles, and wheel bearings.

**DISL406** 3 1 4 0 0  
**Hydraulics** Voc/Tech

The study of mobile hydraulic systems. Introduces hydraulic principles, components, fluids systems and circuits.

**DISL407** 6 1 10 0 0  
**Diesel Fuel Systems** Voc/Tech

The student will be introduced to basic fuel systems principles and operational theory of some commonly used systems as well as general repair and diagnostic procedures. PREREQUISITE: DISL402

**DISL408** 5 1 8 0 0  
**Basic Electricity** Voc/Tech

An introduction to basic electricity and electronic principles that apply to diesel powered equipment. Systems and components covered include starting, charging, lighting and accessories.

**DISL409** 5 2 6 0 0  
**Diesel Electronics** Voc/Tech

A study of electronic fundamentals, lab work with electronic components, and testing equipment. Diesel engines which are computer controlled are used in lab to demonstrate applications of electronics on diesel power which meet demands of the future. PREREQUISITE: DISL408

**DISL414** 6 1 10 0 0  
**Electronic Diesel Engine Control** Voc/Tech

The student will be introduced to the fundamentals of electronic systems with exposure to several different electronically controlled engines and their diagnostic tools. The student will also perform testing, troubleshooting and adjustments on both electronic and mechanical engines. PREREQUISITE: DISL407

**DISL417** 5 1 8 0 0  
**Heavy Equipment Repair** Voc/Tech

Instruction in the repair and service of equipment relating to the heavy equipment industry. This includes all phases normally done in a general repair shop. Instruction is given under structured lab and field conditions. PREREQUISITES: DISL402, 404, 406, 408

**DISL418** 5 1 8 0 0  
**Truck Repair** Voc/Tech

Instruction in the repair and service of equipment relating to the trucking industry. This includes all phases normally done in a general repair shop. Instruction is given under structured lab and field conditions. PREREQUISITES: DISL402, 404, 406, 408

**DISL420** 3 1 4 0 0  
**Air Conditioning** Voc/Tech

A course on basic air conditioning theory and design. Emphasis will be placed on various system controls and on service operations.

**DISL428** 6 1 10 0 0  
**Operation and Maintenance** Voc/Tech

Instruction in the proper methods of maintaining all equipment. Safety will be emphasized.

**DISL470** 4 1 6 0 0  
**Advanced Electricity** Voc/Tech

The electrical circuitry on diesel powered equipment is covered. Included are troubleshooting, diagnosing, and repair procedures. PREREQUISITE: DISL408

**DKTP401** 3 1 4 0 0  
**Intro To Desktop Publishing** Voc/Tech

Course introduces student to operating system of the Macintosh computer. Several industry standard electronic layout programs are used in introducing student to field of electronic desktop publishing. PREREQUISITES: OFFC301, OFFC329 or equivalent

**DMAS350** 1 1 0 0 0  
**Health Field** Voc/Tech

Roles of dietary personnel in health facilities, state and federal guidelines. Explore managerial aspects within facilities.

**DMAS351** 1 0 2 0 0  
**Food Preparation** Voc/Tech

Basic principles and development of techniques as they apply to preparation of each food group, criterion for evaluating product quality. Laboratory experience

**DMAS352** 2 2 0 0 0  
**Sanitation/Meal Service** Voc/Tech

Methods of efficiently serving safe, pleasing food. An awareness of sanitation will be created for all areas of food service.

**DMAS353** 1 1 0 0 0  
**Nutrition Life Cycle** Voc/Tech

An in-depth study (social, physiological and psychological need) of residents from infancy to geriatric. Explore the therapeutic role of food.

**DMAS354** 1 1 0 0 0  
**Modified Diets** Voc/Tech

Assessment of special diets, using approved diet manual, a review of food exchanges and hints for making modified diets more appetizing.

**DMAS355** 1 1 0 0 0  
**Food Production Management** Voc/Tech

Total production needs, equipment layout, work methods, food storage, food preparation, service, sanitation and use of computers in food service.

**DMAS356** 2 2 0 0 0  
**Food Service Management** Voc/Tech

The management functions required to organize and maintain an efficient quality dietary department are developed.

**DMAS361** 1 0 0 0 4  
**Food Prep Field Experience** Voc/Tech

Application and evaluation of food preparation in health care facility. Practical experience in selected health care facility supervised by a registered dietitian. (P/F)

**DMAS362** 1 0 0 0 4  
**Sanitation/Meal Service Field Exp** Voc/Tech

Application/evaluation of sanitation and meal service in health care facility. Practical experience in selected health care facility supervised by a registered dietitian. (P/F)

**DMAS363** 1 0 0 0 4  
**Nutrition Life Cycle Field Experience** Voc/Tech

Application/evaluation of nutritional aspects in health care facility. Practical experience in selected health care facility supervised by a registered dietitian. (P/F)

**DMAS364** 1 0 0 0 4  
**Modified Diet/Field Experience** Voc/Tech

Application/evaluation of modified diets in health care facility. Practical experience in selected health care facility supervised by a registered dietitian. (P/F)

**DMAS365** 1 0 0 0 4  
**Food Production Field Experience** Voc/Tech

Application/evaluation of food production in health care facility. Practical experience in selected health care facility supervised by a registered dietitian. (P/F)

**DMAS366** 1 0 0 0 4  
**Food Service Mgmt Field Experience** Voc/Tech

Application/evaluation of food service management in health care facility. Practical experience in selected health care facility supervised by a registered dietitian. (P/F)

**DRAM110** 3 3 0 0 0  
**Introduction to Theatre** Core

A survey of the elements and techniques of theatre with emphasis on acting, directing and playwrighting. Attendance at dramatic production encouraged.

**DRAM111** 3 3 0 0 0  
**Techniques of Acting** General

Training of the body, voice and mind as acting instruments. Course includes acting exercises, scene analysis, and performance.

# Course Descriptions

**DRAM113** 3 3 0 0 0  
**Creative Drama School/Rec** General  
 Elements of improvisational acting. Students will learn approaches for participating in as well as leading creative drama activities.

**DRAM114** 2 0 4 0 0  
**Theatre Production** General  
 Practical experience in acting, directing, and stage design. Students will be involved in all stages of production, from auditions to final performance. May be repeated for up to eight semester hours of credit.

**DRAM115** 3 0 6 0 0  
**Theatre Production** General  
 See DRAM114

**DRAM116** 4 0 8 0 0  
**Theatre Production** General  
 See DRAM114

**ECON101** 3 3 0 0 0  
**Principles of Macro-Economics** Core  
 An introduction to basic macro-economics' concepts and principles. Deals with problems of resource allocation, supply and demand, national income, employment, price levels, fiscal and monetary policy, money and banking systems, and elements of international finance.

**ECON102** 3 3 0 0 0  
**Principles of Micro-Economics** Core  
 Course covers survey of demand and supply conditions, cost structure, market structure, anti-trust laws, crucial court decisions, competition, and how these elements affect the individual firm.

**EDCR101** 3 3 0 0 0  
**Intro to Education** Open  
 Presents a broad overview of the field of education including foundations of American education, roles of teachers and students, history and philosophy, and curriculum. Students will complete a 40 hour practicum at the elementary, middle, or high school level.

**EDCR165** 3 3 0 0 0  
**Education of Exceptional Learners** Open  
 A survey of exceptional learners in the classroom will be explored. History, philosophy, current issues, trends, and mainstreaming will be discussed.

**EDCR207** 2 0 0 0 8  
**Internship Teaching Experiences** Open  
 Provides opportunity to assist in the school as a teacher aide or to assess one's potential and interest in teaching as a career. PREREQUISITE: EDCR101

**ELEM321** 3 3 0 0 0  
**Motor Control I** Voc/Tech  
 Trouble shoot motor controls, use meters for testing, and gain an understanding of schematics. Students should have basic knowledge of electricity to take this course.

**ELEM325** 3 3 0 0 0  
**General Electricity** Voc/Tech  
 For beginners, theory, controlling electricity, voltage, amps, resistance, wattage, series and parallel circuits, DC and AC, batteries, electric lighting, generators, and motors.

**ELEM450** 3 3 0 0 0  
**Related Math** Voc/Tech  
 Mathematics related to basic electronics. It includes basic algebra, right triangle trigonometry, scientific notation, with applications to DC and AC circuitry.

**ELEM451** 3 3 0 0 0  
**DC and AC Fundamentals** Voc/Tech  
 An introductory course in DC and AC fundamentals. Subject matter includes Ohm's law, series and parallel circuits, and measuring instruments.

**ELEM452** 3 0 6 0 0  
**DC and AC Fundamentals Lab** Voc/Tech  
 This laboratory will enable the student to analyze basic L-C-R circuitry. Basic test equipment usage will also be presented. PREREQUISITE: ELEM451  
 COREQUISITE: ELEM451

**ELEM453** 3 3 0 0 0  
**Basic Electrical Practices** Voc/Tech  
 An introduction to, and overview of, consumer products through block diagram analysis. Also included are the principles of soldering, mounting components and printed circuit board fabrication. COREQUISITE: ELEM454

**ELEM454** 3 0 6 0 0  
**Basic Electrical Practices Lab** Voc/Tech  
 This laboratory develops the manipulative skills of the student. Soldering, mounting components and printed circuit board fabrication are included. COREQUISITE: ELEM453

**ELEM460** 3 3 0 0 0  
**Applied Electronics** Voc/Tech  
 An introduction to the principles of transistors and other basic solid state devices. This course includes amplifiers, oscillators, etc. PREREQUISITES: ELEM450, 452

**ELEM461** 3 0 6 0 0  
**Applied Electronics Lab** Voc/Tech  
 This laboratory consists of experiments with transistors and other solid state devices. The use of related equipment is included. PREREQUISITE: ELEM460  
 COREQUISITE: ELEM460

**ELEM462** 3 3 0 0 0  
**Digital Electronics** Voc/Tech  
 An introduction to the principles of basic TTL and CMOS digital circuits. Included are basic gates, counters, registers, and multiplexer configurations. PREREQUISITES: ELEM450, 452

**ELEM463** 3 0 6 0 0  
**Digital Electronics Lab** Voc/Tech  
 This laboratory consists of experiments on basic TTL and CMOS circuits. Included are gates, counters, registers and multiplexer configurations. PREREQUISITE: ELEM462 COREQUISITE: ELEM462

**ELEM464** 3 3 0 0 0  
**Industrial Electronics** Voc/Tech  
 An introduction to the principles of basic industrial electronic devices. Included are OP amps, silicon controlled rectifiers, unijunction transistors and various types of trigger devices. PREREQUISITES: ELEM450, 452

**ELEM465** 3 0 6 0 0  
**Industrial Electronics Lab** Voc/Tech  
 This laboratory consists of experiments with basic industrial devices. Included are OP amps, SCRs, UJTs, and various types of trigger devices. PREREQUISITE: ELEM464 COREQUISITE: ELEM464

**ELEM470** 3 3 0 0 0  
**Communications** Voc/Tech  
 Familiarization with broadcast and stereo receivers. Included are circuit analysis and service techniques used in servicing consumer type radio receivers. PREREQUISITES: ELEM454, 461, 463, 465  
 COREQUISITE: ELEM471

**ELEM471** 2 0 4 0 0  
**Communications Lab** Voc/Tech  
 This laboratory consists of experiments in the stage-by-stage construction of a communications receiver. PREREQUISITE: ELEM465 COREQUISITE: ELEM470

**ELEM472** 3 3 0 0 0  
**Color Systems I** Voc/Tech  
 Instruction in the theory and operation of television receivers. Included are basic color theory, circuit analysis, and servicing techniques. PREREQUISITES: ELEM454, 461, 463, 465 COREQUISITE: ELEM474

**ELEM474** 1 0 2 0 0  
**Color Systems I Lab** Voc/Tech  
 Laboratory consists of experiments with TV receivers. Included are use of scopes, analyzers and generators to develop proper service techniques. COREQUISITE: ELEM472

**ELEM480** 6 6 0 0 0  
**Consumer Products** Voc/Tech  
 Instruction in the theory of consumer products such as VCRs, disc players, microwave ovens, and other consumer products. PREREQUISITE: ELEM471, 474  
 COREQUISITE: ELEM481

**ELEM481** 3 0 6 0 0  
**Consumer Products Lab** Voc/Tech  
 A practical laboratory course in troubleshooting and servicing all types of consumer electronic equipment. COREQUISITE: ELEM480

**ELEM482** 6 6 0 0 0  
**Color Systems II** Voc/Tech  
 Continuation of Color Systems I. In-depth study of the various circuits in color televisions. PREREQUISITES: ELEM471, 474 COREQUISITE: ELEM483

**ELEM483** 3 0 6 0 0  
**Color Systems II Lab** Voc/Tech  
 A continuation of Color Systems I Lab. Included is practical troubleshooting/ servicing of consumer electronic products. COREQUISITE: ELEM482

**ELHT313** 3 3 0 0 0  
**Technical Math I** Voc/Tech  
 Introduction to mathematical skills needed by electronics technician with emphasis on algebra and its application to electronics. Topics include algebra, conversion of units, powers of 10, using electronic calculators and solving equations.

**ELHT314** 5 5 0 0 0  
**Circuit Analysis I** Voc/Tech  
 An analytical introduction to direct and alternating current fundamentals essential in all phases of electricity and electronics. Topics covered include, Ohm's law, Kirchoff's law, Thevenin-Norton-Millman's theorems, impedance, resonance, series and parallel circuits, resistors, capacitors, inductors, batteries and meters. COREQUISITES: ELHT316, 313

**ELHT315** 3 1 4 0 0  
**Fabrication Techniques** Voc/Tech  
 Rendering of isometric and orthographic projection drawings. Also soldering techniques, fabrication of sheet metal enclosures, production of printed circuit boards using photographic and etching methods.

**ELHT316** 3 0 6 0 0  
**Circuit Analysis I Lab** Voc/Tech  
 Basic experiments in AC & DC circuit analysis including familiarization with basic test instruments, series and parallel circuits (using resistors, capacitors, inductors, batteries and power supplies) and applications of electrical laws and theorems. COREQUISITES: ELHT314, 313

**ELHT323** 3 3 0 0 0  
**Technical Math II** Voc/Tech  
 Continuation of Technical Math I. Topics include exponents, radicals, quadratic equations, simultaneous equations, trigonometry, graphing, phasor algebra and logarithms. PREREQUISITE: ELHT313

**ELHT324** 3 3 0 0 0  
**Computer Programming** Voc/Tech  
 Basic programming techniques such as writing algorithms, drawing of flow charts, and developing programs that include loops and subroutines. PREREQUISITE: ELHT313

**ELHT330** 2 2 0 0 0  
**Digital Circuits I** Voc/Tech  
 An analysis of those circuits which form basic building blocks for a digital system. To include logical gates, such as OR, NOR, AND, and NAND, storage registers, and counters. COREQUISITE: ELHT362

**ELHT331** 3 3 0 0 0  
**Circuit Analysis II** Voc/Tech  
 Deals with principles and electrical properties of semi-conductor diodes, transistors, integrated circuits, and integrated circuit amplifiers complete with mathematical analysis of equivalent circuits and their evaluation. PREREQUISITES: ELHT314, 316, 313 COREQUISITE: ELHT363

# Course Descriptions

**ELHT340** 3 3 0 0 0  
**Digital Circuits II** Voc/Tech  
 This course covers two major areas of microprocessors. The first is an investigation of the specific architecture of the microprocessor. The second area is software and is concerned with the specific machine and assembly level instruction as well as using these instructions for common routines. PREREQUISITES: ELHT330, 362 COREQUISITE: ELHT341

**ELHT341** 5 0 10 0 0  
**Digital Circuits II Lab** Voc/Tech  
 Continuation of Digital I. Included are experiments in microprocessor architecture and timing. Methods of generating device select pulses, latching data, and interrupt techniques examined. PREREQUISITES: ELHT330, 362 COREQUISITE: ELHT340

**ELHT345** 2 2 0 0 0  
**Operating Systems** Voc/Tech  
 An introduction to the disk operating system and Windows. Objectives are to enable the user to load and execute programs, maintain an orderly system of files on the disk and to coordinate input or output devices.

**ELHT362** 2 0 4 0 0  
**Digital Circuits Lab** Voc/Tech  
 Laboratory evaluation of small-scale integrated circuits and medium-scale integrated circuits. In addition to basic and/or gates, it includes comparators, decoders, multiplexors, and arithmetic units. COREQUISITES: ELHT330

**ELHT363** 3 0 6 0 0  
**Circuit Analysis II Lab** Voc/Tech  
 Analysis of solid state circuitry. Includes transistor and integrated circuit experiments. Linear amplifiers and active filters are evaluated. PREREQUISITES: ELHT314, 316, 313 COREQUISITE: ELHT331

**ENGL070\*\*\*** 3 3 0 0 0  
**Basic Writing** Adaptor  
 Introduces students to the writing process of planning, drafting and revising. Covers basic sentence and paragraph structure, grammar, punctuation, spelling and proofreading techniques. Students will compose 3-4 essays, learning to develop main ideas with specific support. Preparation for ENGL071 & 117. Cannot be used to fulfill degree requirements

**ENGL071\*\*\*** 3 3 0 0 0  
**Writing Skills Review** Adaptor  
 An introductory course, prepares students for college-level writing. Confidence & skills are built as students write and revise 4-6 essays, learning to develop & organize material to support main ideas. Students review sentence & punctuation patterns & how to proofread. For students who have taken ENGL070 or meet that course's objectives.

**ENGL081\*\*\*- ADJUNCT** 3 2 2 0 0  
**Acculturation Seminar for ESL** Adaptor  
 This course will familiarize the non-native students of English with the various cultural aspects of life in the United States through readings and field trips.

**ENGL082\*\*\*- ADJUNCT** 3 2 2 0 0  
**ESL Listening/Conversation Skills I** Adaptor  
 For intermediate level students to improve the accuracy of their pronunciation and to develop the listening and speaking skills needed to communicate in diverse settings. Classroom activities are supplemented by individualized listening and pronunciation exercises.

**ENGL083\*\*\*- ADJUNCT** 3 2 2 0 0  
**ESL Listening/Conversation Skills II** Adaptor  
 For advanced students to develop fluency in English and to improve the listening and conversation skills needed for careers and academic study. Classroom activities are supplemented by individualized listening and pronunciation exercises.

**ENGL084\*\*\*** 3 2 2 0 0  
**Communicative Grammar for ESL** Adaptor  
 This course provides nonnative students of English with intensive practice in advanced English grammar while promoting the development of communicative skills. Areas of instruction include tenses, passive voice, reported speech, conditions, etc. PREREQUISITES: Minimum scores on the TOEFL or Michigan Test.

**ENGL085\*\*\*** 3 2 2 0 0  
**Reading English as Second Language** Adaptor  
 This course is designed for nonnative speakers of English. Reading comprehension skills are developed through the use of vocabulary work, guided reading activities and discussion. Reading material is intellectually stimulating but not beyond the students' level of comprehension. PREREQUISITE: Minimum scores on the TOEFL or Michigan Test.

**ENGL089\*\*\*- ADJUNCT** 3 3 0 0 0  
**Introduction to Writing Skills-ESL** Adaptor  
 An introduction to the mechanics of word order and sentence patterns of English writing skills designed to meet the needs of ESL students preparing to take basic writing.

**ENGL117** 3 3 0 0 0  
**Composition I** Core  
 Designed to help students read and write effectively. Exploration of relationship of audience to writer and material. Emphasis on developing concrete detail to support main ideas. PREREQUISITE: Satisfactory writing skills

**ENGL118** 3 3 0 0 0  
**Composition II** Core  
 Expository and persuasive writing developed through critical reading. The course explores structure, style, research, and documentation. PREREQUISITE: ENGL117

**ENGL119** 3 3 0 0 0  
**Technical & Business Writing** Core  
 A study of technical/business communication with emphasis on writing in the workplace. Course material includes written and oral communication to a variety of audiences in different situations. There will be special focus on individual career goals. PREREQUISITE: ENGL117

**ENGL121** 3 3 0 0 0  
**Creative Writing** General  
 An introduction to the techniques of writing poetry and fiction. Students will read the works of professional writers and apply the principles of imaginative writing to their own work.

**ENGL124- ADJUNCT** 3 3 0 0 0  
**Fiction Writing** General  
 A course devoted to the advanced study and writing of fiction, emphasizing the development of narrative techniques and an expanded understanding of contemporary fiction writers and their work. PREREQUISITE: ENGL121 or permission of instructor

**ENGL125- ADJUNCT** 3 3 0 0 0  
**Poetry Writing** General  
 A course devoted to the advanced study and writing of poetry, emphasizing the development of poetic techniques and an expanded understanding of contemporary poets and their work. PREREQUISITE: ENGL121 or permission of instructor

**ENGL410** 3 3 0 0 0  
**Communication Skills** Voc/Tech  
 Reading, writing, speaking, and listening are studied as methods of exploring and evaluating technological advances in trades and industry. Adapting communication for different audiences, evaluating industry-related literature, and basic business writing are emphasized.

**ENGR155** 2 2 0 0 0  
**Engineering Computations** Open  
 This course includes the organization, solution and presentation of engineering problems. Topics include S.I. units and selected engineering topics. PREREQUISITE: MATH123 or equivalent

**ENGR160** 2 2 0 0 0  
**Engineering FORTRAN** Open  
 The FORTRAN language in batch and interactive modes with an emphasis on solutions to engineering problems. PREREQUISITE: MATH123 or equivalent

**ENGR165** 4 2 4 0 0  
**Engr Graphics/Conceptual Design** Open  
 An integration of conceptual design, engineering graphics and computer aided design. This course includes orthographic projection applied to three dimensional geometry and engineering drawing. Instrument and free hand application to an open ended project that includes a formal engineering report.

**ENGR175** 3 3 0 0 0  
**Engineering Statics** Open  
 This course includes the vector and scalar analysis of coplanar and non-coplanar force systems, equilibrium concepts, friction, centroids, moments and products of inertia. Mohr's circle, radius of gyration, internal forces, shear and bending moment diagram. PREREQUISITE: PHYL121 COREQUISITE: MATH130

**FIRE241** 3 3 0 0 0  
**Fire Behavior and Investigation** Open  
 Covers the behavior of fire in confined structures and the methods used to determine point of origin, cause and travel of fire within a structure.

**FIRE242** 3 3 0 0 0  
**Property Insurance-Fraud Investigation** Open  
 Covers principles of property insurance and investigation of incendiary fires with an emphasis on the investigation of the insurance fire fraud.

**FIRE243** 3 3 0 0 0  
**Building Construction** Open  
 Study of building materials, components, and design features with regard to their reactions under fire conditions. Course also includes interpretation of Life Safety Code and its application to proposed and existing structures. PREREQUISITE: FIRE241

**FIRE244** 3 3 0 0 0  
**Fire Protection Systems** Open  
 An examination of devices and systems installed and utilized to support the fire service in the detection and suppression of fire. PREREQUISITE: FIRE241

**FIRE245** 3 3 0 0 0  
**Hazardous Materials** Open  
 This course concentrates on principles of response planning for incidents involving the manufacture, transportation, storage, and use of hazardous materials, with the objective of minimizing harm to people, property, and the environment. PREREQUISITES: CHEM131, FIRE241

**FIRE247** 3 3 0 0 0  
**Planning for Fire Protection** Open  
 This course is designed to help develop strategic plans for fire protection of an area, community, multiple building complex, and single building. Through the use of data collection systems and other management tools, the student will be able to identify and analyze fire problems and develop alternative solutions.

**FIRE248** 3 3 0 0 0  
**Emergency Scene Management** Open  
 Covers emergencies and incident command systems to maintain control in emergencies of fire suppression, mass casualty and hazardous materials. Information, logistics, press, finance, other areas are addressed in incident command system.

**FNSR203** 3 3 0 0 0  
**Real Estate Finance** Open  
 This course provides a background in the varied real estate mortgage credit operations of commercial banks. It addresses the manner in which funds are channeled into mortgage markets, the financing of residential and special purpose property, and administrative tasks common to most mortgage departments.

# Course Descriptions

**FNSR205** 3 3 0 0 0  
**Money and Banking** Open  
 The course presents basic principles as they relate to banking. It emphasizes the practical aspects of money and banking with an emphasis on basic monetary theory.

**FNSR237** 3 3 0 0 0  
**Consumer Lending** Open  
 Overview of the consumer credit operation. This course examines the role of consumer credit in overall banking operations. Not a how-to training program. It offers an improved understanding of the consumer credit function within a bank.

**FREN101** 4 4 0 0 0  
**Elementary French I** Core  
 An introduction to the basic skills in understanding, speaking, reading and writing French. Grammar analysis, classroom conversational practice, and some exploration of French culture.

**FREN102** 4 4 0 0 0  
**Elementary French II** Core  
 Continued practice of the four basic skills and grammar analysis begun in French 101. Introduction to short prose selections with conversational emphasis. PREREQUISITE: FREN101

**FREN103** 4 4 0 0 0  
**Intermediate French I** Core  
 Review of essential grammatical constructions emphasizing major areas of difficulty for English speakers. Use of cultural and literary materials to develop conversational skills. PREREQUISITE: FREN102

**FREN104** 4 4 0 0 0  
**Intermediate French II** Core  
 Continued review of grammatical constructions using cultural materials. Reading, writing, and conversation will be emphasized in the context of cultural issues and current events. PREREQUISITE: FREN103

**GEOG141** 3 3 0 0 0  
**Intro to Geography** Core  
 Course utilizes basic concepts of cultural geography (area, landscape, ecology, diffusion and integration) in a systematic examination of the contemporary world. Course is intended to provide elementary acquaintance with field of geography.

**GEOG147** 3 3 0 0 0  
**Developed World** Core  
 This course systematically surveys the peoples, cultures, resources, and problems of the cultural realms commonly designated as the developed world (Anglo-America, Europe, Russia, Japan and Australia).

**GEOG148** 3 3 0 0 0  
**Third World** Core  
 This course systematically surveys the peoples, cultures, resources, and problems of the cultural realms commonly designated as the Third World (Latin America, Black Africa, the Islamic World, India and China).

**GLOS199** 2 2 0 0 0  
**Japan: The Changing Tradition** General  
 Focuses on history and changing cultural traditions of Japan's modern era and the brief period during which Japan has developed its own distinctive urbanized, industrialized, and democratic society.

**GRPH400** 4 2 4 0 0  
**Graphic Arts Orientation** Voc/Tech  
 A prerequisite for all graphic arts courses as an introduction to graphic arts technology, terminology and related graphic areas. Course will involve lecture and lab work in offset printing, process camera, film assembly and bindery.

**GRPH401** 3 3 0 0 0  
**Methods of Graphic Arts** Voc/Tech  
 Introduction to the various chemicals used in the graphic arts industry. Safety, environmental concerns and basic chemistry and physics from pH to how silver reacts to light.

**GRPH406** 4 2 4 0 0  
**Graphic Arts Design I** Voc/Tech  
 Introduces the beginning student to the basic fundamentals and techniques in preparing camera ready artwork for production. The function and purpose of design will be studied closely as will basic principles of design.

**GRPH410** 4 2 4 0 0  
**Press I** Voc/Tech  
 Introduction to basic offset principles and practices. This course will involve the student in small press operations covering ink and water balance, single side and two side printing. PREREQUISITES: GRPH400, 401

**GRPH412** 4 2 4 0 0  
**Graphic Prepress I** Voc/Tech  
 Introduction to the prepress. Students will receive hands on training in basic camera procedures as well as film assembly and plate exposures.

**GRPH413** 4 2 4 0 0  
**Graphic Prepress II** Voc/Tech  
 Introduction to film assembly and contacting techniques. This course will involve the student in spot color film assembly, work and turn, step and repeat. Contacting and various plates and platemaking techniques will be reviewed. PREREQUISITES: GRPH400, 401

**GRPH416** 3 1 4 0 0  
**Desktop Publishing II** Voc/Tech  
 This intermediate level desktop publishing course will stress creation of complex multiple page documents using Quark Xpress software. Typesetting and graphic formats relative to page layout, importing and exporting files.

**GRPH420** 4 2 4 0 0  
**Press II** Voc/Tech  
 A specialization course in offset lithography. The student will do advance press work in two, three, and process color printing. This class will also cover all bindery operation from folding, cutting and stitching. PREREQUISITES: GRPH410, 412, 413

**GRPH421** 4 2 4 0 0  
**Electronic Prepress I** Voc/Tech  
 An in-depth study of the electronic prepress area. Students will study trapping, screen frequency and calibrating monitors, hands on scanning operations. PREREQUISITES: GRPH410, 412, 413

**GRPH425** 4 2 4 0 0  
**Electronic Image Control** Voc/Tech  
 This introductory course will acquaint the student with electronic scanning and prepress technologies. Industry standard software will be used with special emphasis on how it handles color prepress technology.

**GRPH426** 4 2 4 0 0  
**Graphic Arts Design II** Voc/Tech  
 Continuation of Graphic Arts Design I. This course will develop advanced skills in layout and design. Students will explore various techniques used for multiple color layouts, new advances in equipment used for page and product layout. PREREQUISITE: GRPH406

**GRPH431** 4 2 4 0 0  
**Electronic Prepress II** Voc/Tech  
 The course will focus on the basic principles of black and white photo scanning as well as basic darkroom procedures. PREREQUISITES: GRPH400, 401, 410, 412, 413

**GRPH454** 4 2 4 0 0  
**Graphic Arts Production Methods** Voc/Tech  
 A management based course designed to actively involve the student in all phases of the graphic arts production process. PREREQUISITES: GRPH400, 401, 410, 412, 413

**GRPH456** 3 3 0 0 0  
**Cost Estimating** Voc/Tech  
 This course is designed to give the student an overview of information on processes used in estimating production costs, budgets for departments within company. PREREQUISITES: GRPH400, 401, 410, 412, 413

**HCAD227** 4 4 0 0 0  
**Integrating Comm Service-MH/MR/DD** Open  
 Emphasis will be placed on physical, psychosocial and cultural dynamics of mental health, mental retardation, and developmental disabilities and the various disciplinary perspectives that may be encountered. Special attention will be given to the integration of community based services.

**HCAD237** 3 3 0 0 0  
**Long-Term Care Financial Mgt.** Open  
 Emphasis on financial practices in the long-term care facility. Cost and labor hour controls, third-party payment, evaluation of profit/loss and fiscal reports will be addressed. PREREQUISITE: ACCT301 or ACCT101

**HCAD248 - ADJUNCT** 3 3 0 0 0  
**Quality Improvement in Health Care** Open  
 The basis for this course is to provide an understanding of TQM and the principles and concepts of continuing quality improvement in health care organizations. Team concepts, the basic tools of quality improvement, and implementation strategies are included.

**HCAD251** 1 0 0 0 4  
**Practicum: Social Services** Open  
 Focus on the social services in the long-term care facility. Emphasis on residents needs, services and rights.

**HCAD252** 1 0 0 0 4  
**Practicum: Dietary** Open  
 Focus on the dietary department in the long-term care facility. Food ordering, inventory processes, food preparation, serving and staffing patterns are explored.

**HCAD253** 1 0 0 0 4  
**Practicum: Legal Aspects/Govt Organ** Open  
 Emphasis on the legal aspects and government organizations affecting long-term care facilities.

**HCAD254** 1 0 0 0 4  
**Practicum: Nursing** Open  
 Nursing services in the long-term care facility. The relationship of nursing services to administration.

**HCAD255** 1 0 0 0 4  
**Practicum: Environmental Services** Open  
 Emphasis on the administrator's responsibilities in the housekeeping, laundry, and maintenance departments.

**HCAD256** 1 0 0 0 4  
**Pract: Activities/Community Resources** Open  
 Activity and volunteer programs in the long-term care facility. The use of community resources will be explored.

**HCAD257** 1 0 0 0 4  
**Practicum: Business Administration** Open  
 Emphasis on business practices in the long-term care facility.

**HCAD258** 1 0 0 0 4  
**Practicum: Administrative Organization** Open  
 Emphasis on concepts and practices involved in the administration of a long-term care facility.

**HCAD259** 1 0 0 0 4  
**Pract: Human Resource Management** Open  
 Emphasis on theories and practices in human resource management in the long-term care facility.

**HCAD264** 2 2 0 0 0  
**Practicum: Seminar** Open  
 Practicum experience and problems will be discussed. Additional information and topics relating to long-term care will be addressed. Classes will be held in a variety of long-term care facilities. (May be repeated a maximum of 2 times.)

**HCAD271** 5 5 0 0 0  
**Administration of Long-Term Care** Open  
 Relates fundamental management principles to special challenges and concerns of long-term care. Includes study of long-term care organizations, the management process, organizational behavior, human resource management and quality assurance.

# Course Descriptions

<b>HCAD272</b> <b>Services for Long Term Care</b> Relates physical, psychological and sociological needs of residents to services provided in the long term care setting. Includes processes of normal aging, residents of long-term care facilities, services in the therapeutic milieu, nursing services, environmental services, and quality assurance.	5 5 0 0 0 Open	<b>HIST139</b> <b>African-American History</b> A survey of the history of the African-American community with emphasis on the role of individuals, institutions, and ideas in the development of the community from its origins in West Africa to the present.	3 3 0 0 0 General	<b>HRMT330</b> <b>Intro to Hospitality Industry</b> Course introduces students to the broad world of hospitality while preparing them for careers in the field. Discussed will be the three primary areas of hospitality - food and beverage, lodging and tourism, along with an introduction to business basics.	2 2 0 0 0 Voc/Tech
<b>HCAD273</b> <b>Law and Long-Term Care</b> An introduction to law and how it relates to the long-term care industry. A study of case law, court structure and procedures, torts and litigation. Additional topics include labor law, liability, licensure, certification, resident rights, reimbursement and living wills.	4 4 0 0 0 Open	<b>HLRC307</b> <b>Emergency Medical Tech Basic</b> Prepares rescue personnel for the role and responsibilities of an EMT-B. Includes specific patient assessment and emergency treatment procedures. Students should be 18 years of age prior to course completion. State Health Department Certification Exam after successful course completion.	6 4 4 0 0 Voc/Tech	<b>HRMT334</b> <b>Human Nutrition</b> Understanding and implementing present day knowledge of nutrition; the use of food for health and satisfaction of the individual and the family.	3 3 0 0 0 General
<b>HCAD277</b> <b>Service Delivery Systems-MH/MR/DD</b> Provides a comprehensive overview of MH/MR/DD resident needs and presents an interdisciplinary approach to developing, implementing and evaluating services. Reviews behavior modification techniques and addresses future trends.	5 5 0 0 0 Open	<b>HLRC314</b> <b>Emergency Care</b> Learn to perform care for medical emergencies: fractures, burns, resuscitation, basic CPR (Cardio-Pulmonary Resuscitation, American Heart Level II standards) certification.	1 1 0 0 0 Voc/Tech	<b>HRMT335</b> <b>Restaurant Management</b> Students will plan menus and meal service in actual restaurant experience. Emphasis is on using sound management techniques for producing high quality food and service to the public. PREREQUISITES: BSAD223, HRMT326, 328 COREQUISITE: HRMT357	2 2 0 0 0 Voc/Tech
<b>HCAD281</b> <b>Seminar in Health Care</b> Emphasis on principles and practices involved in long-term care administration and resident services with special attention to the review of federal and state regulations. Students take this course in the final semester of the program.	3 3 0 0 0 Open	<b>HLSC202 - ADJUNCT</b> <b>Introduction to Health Careers</b> Students will discover the many options available, including roles and responsibilities, in health career options. This course is designed to provide the student with the information necessary to make their health career choice.	3 3 0 0 0 Voc/Tech	<b>HRMT347</b> <b>Work Experience</b> An approved program of experience in one of the many hospitality areas: restaurant, hospital, club, school food service, hotel, or motel. (P/F)	3 0 0 0 12 Voc/Tech
<b>HCAD293 - ADJUNCT</b> <b>Job Coaching</b> Covers issues related to working as a job coach with adults who have disabilities in supported employment settings. Students will complete independent projects. PREREQUISITE: One year of experience working with people with disabilities.	3 3 0 0 0 Open	<b>HNRS100</b> <b>Honors Seminar</b> Discussion seminar whose topics will include a range of subjects determined by students' interest. Students will write in preparation for and response to in-class discussions. May be repeated up to eight semester hours.	2 2 0 0 0 General	<b>HRMT348</b> <b>Food Service Purchasing</b> Principles and methods of food purchasing with emphasis on specifications and grading of various food products. Includes financial procedures and controls used in the food service industry. PREREQUISITE: BSAD223	2 2 0 0 0 Voc/Tech
<b>HCAD294 - ADJUNCT</b> <b>Job Coaching Field Experience</b> Places the student in a supported employment setting working as a job coach. Students develop specific objectives related to program competencies. Biweekly seminars are held to assess progress and student experiences. PREREQUISITE: HCAD293	3 0 0 0 12 Open	<b>HRMT315</b> <b>Sanitation and Equipment</b> Principles and methods of sanitation safety and equipment. Equipment selection and facilities planning. Also includes preventive maintenance.	2 2 0 0 0 Voc/Tech	<b>HRMT350</b> <b>Nutrition</b> An overview of nutrition-related topics including the psychology of eating and evaluation of food intake.	2 2 0 0 0 Voc/Tech
<b>HIST121</b> <b>Western Civ Beg to 1715</b> The student surveys the great civilizations from Greece and Rome through the rise of Christianity, to Europe in the Middle Ages, the Renaissance and Reformation, the modern state, the new science and the secular outlook, parliamentary government in England, and political absolutism in France and eastern Europe.	4 4 0 0 0 Core	<b>HRMT316</b> <b>Food Preparation I</b> 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. COREQUISITE: HRMT320	3 3 0 0 0 Voc/Tech	<b>HRMT351</b> <b>Menu Planning</b> Course applies the principles of menu planning & layout to the development of menus for a variety of types of facilities and service.	2 2 0 0 0 Voc/Tech
<b>HIST122</b> <b>Western Civ 1715 to Present</b> Survey of political, economic, social, and intellectual developments from the 18th century to the present. Enlightenment, revolutions and reactions, national unifications, national rivalries, world wars, and post-war developments.	4 4 0 0 0 Core	<b>HRMT319</b> <b>Sanitation and Equipment Lab</b> The lab consists of sanitation practices. The student will carry out the practice of table service for international cuisine dinners and apply sanitation measures. (P/F) COREQUISITE: HRMT315	1 0 2 0 0 Voc/Tech	<b>HRMT357</b> <b>Culinary Skill Development</b> Students produce and serve meals for the public in an actual restaurant experience. Emphasis is on the various management functions required to serve quality foods efficiently. PREREQUISITES: HRMT326, 328 COREQUISITE: HRMT335	3 0 6 0 0 Voc/Tech
<b>HIST124</b> <b>American History 1492 To 1877</b> A survey of main themes of American history from 1492 to 1877 with emphasis on the political, social, economic, religious, and intellectual aspects of the presettlement, Colonial, Revolutionary, Antebellum Civil War and Reconstruction eras.	4 4 0 0 0 Core	<b>HRMT320</b> <b>Food Preparation I Lab</b> 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. COREQUISITE: HRMT316	3 0 6 0 0 Voc/Tech	<b>HRMT364</b> <b>Hotel Administration</b> A management course which introduces the student to advanced studies of property management, catering, sales, legal aspects, security, and maintenance of all departments of the hotel. PREREQUISITE: HRMT330 COREQUISITE: HRMT366	2 2 0 0 0 Voc/Tech
<b>HIST125</b> <b>American History 1877 To Present</b> A survey of main themes of American history from 1877 to the present with emphasis on political, social, economic, religious and intellectual aspects of the Gilded Age, the Progressive Era, WWI, the Roaring Twenties, the Great Depression, WWII and post WWII era.	4 4 0 0 0 Core	<b>HRMT321</b> <b>Dining Room Fundamentals</b> A dining room service course in an actual restaurant experience with emphasis on using sound management techniques and quality customer service.	2 0 4 0 0 Voc/Tech	<b>HRMT366</b> <b>Hotel Services Internship</b> An approved program of work experience in one of the many hotel/motel properties in the area. PREREQUISITE: HRMT330 COREQUISITE: HRMT368	5 0 0 0 20 Voc/Tech
<b>HIST126</b> <b>Iowa History</b> A broad survey of Iowa history from Indian cultures and pioneer farming through modern agriculture, gradual social changes and long-term political trends.	3 3 0 0 0 General	<b>HRMT326</b> <b>Food Preparation II</b> The study of the principles and procedures of quantity food production as they apply to salads, soups, vegetables, entrees, and desserts. Emphasis is on organization and recipe standardization. PREREQUISITES: HRMT316, 320 COREQUISITE: HRMT328	2 2 0 0 0 Voc/Tech	<b>HRMT367</b> <b>Beverage Seminar</b> Course will familiarize the students with all aspects of beverage service including wine & alcohol laws. Basic mechanics of beverage preparation, sales and promotion will be covered.	2 2 0 0 0 Voc/Tech
		<b>HRMT328</b> <b>Food Preparation II Lab</b> The production of quick breads, desserts, salads, vegetables, soups, and main entrees to be sold to the public. Time is spent on an individual recipe production project. PREREQUISITES: HRMT316, 320 COREQUISITE: HRMT326	2 0 4 0 0 Voc/Tech	<b>HRMT368</b> <b>Hotel Services</b> An in-depth look at the management and operations of key services within hotel properties. Included are guest services, housekeeping, maintenance & security. Course will examine the intricacies of these services from a management perspective.	2 2 0 0 0 Voc/Tech

\*\*\* Adaptor Courses cannot be used to fulfill degree requirements

# Course Descriptions

**HTBM353** 3 3 0 0 0  
**Biomed Instrumentation I** Voc/Tech  
 This course trains the biomedical student in the repair, calibration, and preventative maintenance of patient monitoring equipment such as ECG, blood pressure, defibrillators, ICU and CCU central monitoring stations, respiratory instrumentation, and electrical safety testing. PREREQUISITES: instructor permission or ELHT340, 341, COREQUISITE: HTBM354

**HTBM354** 5 0 10 0 0  
**Biomed Instrumentation I Lab** Voc/Tech  
 Experiments in basic instrumentation. It includes experiments in maintenance and repair of patient monitoring equipment central monitoring stations. Electrical safety testing and preventative maintenance are also covered. PREREQUISITES: ELHT340, 341, COREQUISITE: HTBM353

**HTBM355** 2 2 0 0 0  
**Electro-Mechanical Systems I** Voc/Tech  
 The basic theories and concepts of various types of transducers, active and passive, used in biomedical instrumentation are presented. Additionally, the basic principles of mechanical relationships, and fluid power instrumentation are considered. PREREQUISITES: ELHT340, 341, COREQUISITE: HTBM356

**HTBM356** 2 0 4 0 0  
**Electro-Mechanical Systems I Lab** Voc/Tech  
 Basic transducer principles are evaluated including experiments in pressure, flow, velocity, and mechanical relationships. Gears, levers, and linkages are examined. PREREQUISITES: instructor permission or ELHT340, 341, COREQUISITE: HTBM355

**HTBM358** 1 0 0 0 4  
**Biomed Internship** Voc/Tech  
 A supervised hands-on experience in a hospital. Work on a wide range of medical equipment under the supervision of a biomedical engineer or technician. PREREQUISITES: Complete the 4th semester of the High Tech Biomedical program or instructor permission

**HTBM362** 2 2 0 0 0  
**Health Care Delivery** Voc/Tech  
 Students acquire knowledge of the practices and trends within the health care delivery system. The student will have the opportunity in a highly structured environment to communicate with other members of the health team and observe and assist the health worker in the safe delivery of health care of related functions.

**HTBM363** 2 2 0 0 0  
**Biomed Instrumentation II** Voc/Tech  
 Continuation of Biomed I. Includes laboratory instrumentation such as spectrophotometers, blood gas analyzers, and cell counters. In addition, electro-surgery, infusion pumps, x-ray, ultrasound and the use of the computer in biomedical instrumentation are covered. PREREQUISITES: HTBM353, 354 COREQUISITE: HTBM364

**HTBM364** 2 0 4 0 0  
**Biomed Instrumentation II Lab** Voc/Tech  
 A continuation of Biomed I lab. It includes experiments in maintenance and repair of laboratory instrumentation, blood gas, x-ray, ultra-sound, electro-surgery and infusion pumps. Includes use of micro-processor in biomedical instrumentation. PREREQUISITES: HTBM353, 354 COREQUISITE: HTBM363

**HTCT353** 3 3 0 0 0  
**Microprocessors** Voc/Tech  
 An introduction to microprocessor interface methods. It includes UART and USART interface techniques, programmable peripheral interface using 8255 and interface techniques using A/D and D/A converters. PREREQUISITE: ELHT340, 341, COREQUISITE: HTCT354

**HTCT354** 4 0 8 0 0  
**Microprocessors Lab** Voc/Tech  
 An evaluation of microprocessor interface techniques. The experiments include serial interface using UARTs, parallel interface using PIA's and A/D and D/A conversion techniques. PREREQUISITES: ELHT340, 341, COREQUISITE: HTCT353

**HTCT355** 2 2 0 0 0  
**UNIX Operating System** Voc/Tech  
 Concepts of the UNIX operating system commands. Use of shells, shell scripts, facilities and management commands. COREQUISITE: HTCT356

**HTCT356** 1 0 2 0 0  
**UNIX Operating System Lab** Voc/Tech  
 Course includes working with UNIX commands. Students will work with shells, write shell scripts, run facilities, work with management commands. COREQUISITE: HTCT355

**HTCT360** 4 4 0 0 0  
**Network Compatibility Products** Voc/Tech  
 Concepts of the software and hardware used to link various computers and operating systems. PREREQUISITE: HTCT355, 356 COREQUISITE: HTCT363

**HTCT363** 2 0 4 0 0  
**Network Compatibility Products Lab** Voc/Tech  
 Installing and configuring compatibility software and hardware. Use of the software to share data between dissimilar system types. PREREQUISITE: HTCT355, 356 COREQUISITE: HTCT360

**HTCT364** 3 0 6 0 0  
**Microcomputer Systems** Voc/Tech  
 An evaluation of microcomputer systems. Includes computer diagnostics and repair. Also includes peripheral troubleshooting. PREREQUISITES: ELHT340, 341

**HTCT366** 3 3 0 0 0  
**TCP/IP Networking** Voc/Tech  
 Concepts of the TCP/IP protocol suite. Includes protocol formats, usage and network commands. Concepts of design, installation and management are introduced. PREREQUISITE: HTCT355, 356 COREQUISITE: HTCT367

**HTCT367** 1 0 2 0 0  
**TCP/IP Networking Lab** Voc/Tech  
 Hands on command manipulation of a TCP/IP network. Also includes installation and management. PREREQUISITE: HTCT355, 356 COREQUISITE: HTCT366

**HTCT371** 2 2 0 0 0  
**Netware 3.x Administration** Voc/Tech  
 Course is designed to prepare students to function competently as a Netware system manager. Topics covered correspond to the responsibilities of a system manager.

**HTCT372** 2 2 0 0 0  
**Netware 3.1x Adv Administration** Voc/Tech  
 Designed to provide higher-level training for Novell Netware v3.1x system manager. Provides instructions that will enable student to follow basic management strategies, monitor network usage and perform software-oriented maintenance and prevention procedures. PREREQUISITE: HTCT371

**HTCT373** 2 2 0 0 0  
**Networking Technologies** Voc/Tech  
 Provides a technical level of understanding in the areas of mainframe networking connectivity, data communications concepts and protocol communication concepts.

**HTCT374** 2 2 0 0 0  
**Netware 4.x Administration** Voc/Tech  
 Course covers the knowledge and skills needed to perform Netware 4.x network administration or system management tasks effectively.

**HTCT375** 2 2 0 0 0  
**Service and Support** Voc/Tech  
 Provides a technical level of competence installing network interface cards, replacing hard drives, installing communications software and hardware and troubleshooting 3.1x and 4.x systems. PREREQUISITES: HTCT371 OR 374

**HTPC351** 3 3 0 0 0  
**Hydraulics and Pneumatics** Voc/Tech  
 The basic principles of fluid power and the operation and application of fluid power components are introduced. Devices such as valves, linear and rotary actuator are evaluated in the laboratory. In addition, pneumatic position control servomechanisms are evaluated. PREREQUISITE: ELHT313 COREQUISITE: HTPC352

**HTPC352** 2 0 4 0 0  
**Hydraulics and Pneumatics Lab** Voc/Tech  
 The basic principles of fluid power and the operation and application of fluid power components are introduced. Devices such as valves, linear, and rotary activators are evaluated in the lab. PREREQUISITES: ELHT313, COREQUISITE: HTPC351

**HTPC355** 3 3 0 0 0  
**Process Control Instrumentation** Voc/Tech  
 A comprehensive study of process control characteristics such as elements, modes, and stability along with detailed knowledge of measurement technique, control mode implementation, and final control element functions. In keeping with modern trends, the digital aspects of process control technology are stressed. PREREQUISITE: ELHT340, 341, 345, COREQUISITE: HTPC357

**HTPC357** 2 0 4 0 0  
**Process Control Instrumentation Lab** Voc/Tech  
 This lab includes experiments on transducers used in process control as well as experiments on proportional, integral, and derivative control. PREREQUISITE: ELHT340, 341, 345, COREQUISITE: HTPC355

**HTPC358** 3 2 2 0 0  
**Motor Controls** Voc/Tech  
 An introduction to industrial motor controls. During this course students will use ladder diagrams and control devices to implement practical control systems. PREREQUISITE: ELHT330

**HTPC359** 3 2 2 0 0  
**Programmable Logic Controllers** Voc/Tech  
 This course covers PLC operation and programming techniques to include relay logic, timers, counters, sequencers, discrete I/O, analog I/O, networking, remote I/O, workstations, advanced programming techniques and interfacing with personal computers. PREREQUISITE: HTPC358

**HTPC360** 2 2 0 0 0  
**Industrial Electronics** Voc/Tech  
 The devices and circuits used in thyristor control of machines are presented. It includes phase control of DC motors, triac control of AC motors as well as various speed control circuits. PREREQUISITES: HTPC358

**HTPC363** 2 2 0 0 0  
**Mechanisms** Voc/Tech  
 Introductory course covers linear and angular displacement, velocities, and accelerations of linkages, gear trains, and belt and friction drives. Topics are vectors, simple and complex machines, and toggle and intermittent motions mechanisms. PREREQUISITE: ELHT313 COREQUISITE: HTPC364

**HTPC364** 2 0 4 0 0  
**Mechanisms Lab** Voc/Tech  
 The principles of drives and linkages discussed in HTPC 363 are evaluated using precision components. Major principles evaluated are speed ratios, torque, power and efficiency. Lab projects are applications of principles of process control & robotics interfacing mechanical motion & energy requirements with programmable control concepts. PREREQUISITE: ELHT313, COREQUISITE: HTPC363

**HUMN115** 3 2 2 0 0  
**Introduction to Films** Core  
 An introduction to the conventions, scope, purposes, and techniques of films. Includes viewing and writing about a variety of films.

# Course Descriptions

**HUMN131** 3 3 0 0 0  
**Humanities Through Arts** Core  
 An interdisciplinary course exploring the human condition through literature, painting, sculpture, architecture, music and dance. The course examines the cultural context of individual works and movements, the thematic relationships between the arts, and the relevance of the arts in our lives today.

**HUMN133** 3 2 2 0 0  
**America in the Movies** Core  
 An interdisciplinary course that combines the insights of history and literature by examining popular American movies. The course explores the social, cultural, and ethical questions raised in such films.

**HUMN137** 3 3 0 0 0  
**Mythology** General  
 An introduction to world mythology. The course explores classical, Nordic, Eastern, African, and American/British myths.

**HUMS101** 3 3 0 0 0  
**Introduction to Human Services** General  
 History and introduction to the social welfare institution. Theoretical perspectives, concepts, values, and intervention strategies are examined. Systems theory is used to explore legislation and services designed to meet client needs.

**HUMS104** 3 3 0 0 0  
**Community Organization** Open  
 A study of various theories, methods, and techniques to bring about needed and desirable changes in political, economic, social, and bureaucratic structures and processes. Emphasis is placed upon application of learned skills. PREREQUISITE: 6 hours of social sciences

**HUMS109** 3 3 0 0 0  
**Survey Mental Health Treatment** Open  
 Introduction to major counseling theories including psychoanalysis, gestalt, transactional analysis, family therapy, reality therapy, behavior therapy, and person centered therapy. Applications in mental health and social services settings are considered.

**HUMS202** 3 3 0 0 0  
**Interviewing/Interpersonal Relations** Open  
 Study of interviewing theories including roles and relationships between the interviewer and the interviewee. Methodology of developing questions, conducting interviews, recording data and analyzing it, and writing assessments and histories are emphasized.

**HUMS205** 3 3 0 0 0  
**Intervention Theories/Practice I** Open  
 Study of several management and planning theories and practices which are used to assess client needs, establish goals, identify resources, and make appropriate referrals. Community resources are explored. PREREQUISITES: HUMS101, 202

**HUMS206** 3 3 0 0 0  
**Intervention Theories/Practice II** Open  
 Theories and values of the social sciences, including human services, are used to interpret and respond to client behaviors. Written analysis is emphasized. Evaluation theory and its applications are also stressed. PREREQUISITES: HUMS202, 205 COREQUISITES: HUMS208 or volunteer services work

**HUMS208** 3 0 0 0 13  
**Field Experience** Open  
 Supervised experience in a human services agency enables students to apply their skills and knowledge by working directly with clients. PREREQUISITES: HUMS202, 205 COREQUISITE: HUMS206

**HUMS210** 3 3 0 0 0  
**Counseling Techniques** Open  
 Several counseling models are considered. The theories, methods, and applications of client-centered and directive counseling are emphasized. PREREQUISITE: HUMS202

**HUMS211** 3 3 0 0 0  
**Counseling with Women** Open  
 This course explores selected concerns that women are likely to bring into a counseling situation. Topics include sex roles, gender and socialization, and their impact on women's lives.

**HUMS213** 6 0 0 0 27  
**Pract:Chemical Depend Counsel I** Open  
 Supervised experience in three of these treatment programs for chemically dependent people: inpatient, outpatient, follow-up care, halfway house, and family therapy. PREREQUISITES: Admission-Powell CDC at Iowa Lutheran Hospital

**HUMS214** 6 0 0 0 27  
**Pract:Chemical Depend Counsel II** Open  
 See HUMS213.

**HUMS216** 3 3 0 0 0  
**Survey of Addictive Disease** Open  
 A historical and theoretical background to current concepts of addiction. A variety of addictive behaviors are examined with special focus on psychoactive drug dependency.

**HUMS217 - ADJUNCT** 3 3 0 0 0  
**Psychosocial Rehabilitation** Open  
*The course will emphasize the rehabilitation model, values and techniques for direct service delivery to persons with severe mental disabilities. The student will develop the knowledge and basic skills necessary for rehabilitation goal planning, functional assessment, and direct skills teaching along with job development, analysis, matching and retention.*

**JNAD120** 3 3 0 0 0  
**Intro to Mass Communication** Open  
 A non-technical introduction to mass communication in a global market place. Emphasizes print and electronic media, advertising and public relations, ethics and new technology.

**JNAD121** 3 3 0 0 0  
**Basic Reporting Principles** Open  
 Designed to provide students with experiences in gathering, organizing, and writing news stories.

**JNAD122** 3 3 0 0 0  
**Advanced Reporting** Open  
 Study of various story types, including consumer, feature, review/editorial and investigative. Further development of news elements, interviewing techniques, and legal and ethical considerations in journalism. PREREQUISITE: JNAD121

**JNAD123** 3 1 4 0 0  
**Publications Production** Open  
 Special work in journalism. Students will produce a DMACC newspaper, the Challenger (Ankeny) or the Bear Facts (Boone), and will gain experience in writing, copy-editing, layout and design. May be repeated for three additional semesters.

**JNAD125** 3 3 0 0 0  
**Principles of Advertising** Open  
 Course explores advertising as a tool and socio-economic force.

**LABS220** 3 3 0 0 0  
**Survey of Labor Studies** Open  
 A survey course designed to explain the field of labor history, labor law, contract negotiations and administration, and the future of the labor movement.

**LABS221** 3 3 0 0 0  
**Grievance Handling/Arbitration** Open  
 A practical study of contract terminology and administration, all aspects of arbitration and grievance handling. Responsibilities, tactics and strategies are analyzed through a simulated grievance arbitration case.

**LABS222** 3 3 0 0 0  
**History/Dev of Labor Movement** Open  
 Development of American Labor Movement is analyzed in successive time frames, from colonial era to the present. While tracing the nature and conditions of labor in historical sequence, some attention is also devoted to exploring the meaning of work, the rise of trade unionism, and contemporary labor issues.

**LABS223** 3 3 0 0 0  
**Protective Labor Relations Legis** Open  
 A survey of legislation designed to provide economic security against industrial accidents, disability, illness, old age, unemployment, and the laws governing labor relations, with an introduction of the legal system and constitutional problems of governmental regulations.

**LABS224** 3 3 0 0 0  
**Publ Sect Labor Leg/Col Bargaining** Open  
 Reviews the development of legal framework, surveys the law governing labor relations in the public sector and an overview of the process of collective bargaining in the public sector. Responsibilities, tactics and strategies are analyzed through public sector mock bargaining sessions.

**LABS225** 3 3 0 0 0  
**Union Psychology/Indust Sociology** Open  
 This course deals with the relations between the individual and the organization. It describes & examines the individual as a formal & informal group leader as it relates to the structure of the labor movement. It also is an examination of the way industry, unions and the economy relate to other social institutions in America's society.

**LABS226** 3 3 0 0 0  
**Labor Economics/Collective Bargaining** Open  
 This course first studies the economic sources of union bargaining strength and union preparation for economic bargaining and then looks at the overview of the process of collective bargaining and what it might be in the future. Responsibilities, tactics and strategies are analyzed through mock bargaining sessions.

**LABS227** 3 3 0 0 0  
**Union Administration** Open  
 American unions in theory and practice on local, state and national levels. A study of structure and roles on different levels of the organizations.

**LABS228** 3 3 0 0 0  
**Unions/Politics/Comp Labor Movement** Open  
 Examination of party structure of American politics, legislative processes, formation of public opinion, and analysis of the history and development of various labor movements throughout the world.

**LABS229** 3 3 0 0 0  
**Labor Studies Problems** Open  
 An individual study of special problems in labor studies, and an opportunity for a student to apply knowledge and experience to actual special labor problems. PREREQUISITE: 18 hours of LABS courses

**LABS230** 3 3 0 0 0  
**Union Counseling** Open  
 The purpose of the community services counseling course is to acquaint students with the services available in the community and teach them the fundamentals of referral work and counseling.

**LABS231** 3 3 0 0 0  
**Advanced Union Counseling** Open  
 The purpose of the advanced class is to provide the local union counselor with sufficient information and the basic skills to enjoy being an effective, productive community board or committee member.

**LEGA240** 3 3 0 0 0  
**Introduction to Law** Open  
 A general introduction to the American legal system including case briefing, court structure, and civil, criminal and administrative procedure. An examination of ethical and professional practice standards applicable to the legal profession. Understanding of the roles of the judge, jury, attorney, and legal assistant.

**LEGA242** 3 3 0 0 0  
**Torts and Litigation I** Open  
 A study of the basic law relating to personal and property damage. Topics include intentional torts, negligence, nuisance, strict liability and automobile law. Principles of trial practice including drafting basic pleadings, gathering and organization of materials for trial. PREREQUISITES: instructor permission or LEGA240, 260

# Course Descriptions

<b>LEGA243</b> <b>Torts and Litigation II</b> A continuation of Torts and Litigation I. Areas of concentration will be premise liability, family torts, defamation, governmental immunity, malpractice, and wrongful death. Advanced trial practice including drafting of pleadings and discovery documents. PREREQUISITE: LEGA242	3 3 0 0 0 Open	<b>LEGA258</b> <b>Computerized Legal Research</b> Introduction to computer assisted legal research. Training in legal research search strategies using both the Lexis and Westlaw systems. PREREQUISITE: LEGA260	1 1 0 0 0 Open	<b>LITR130</b> <b>Science Fiction</b> A brief survey of the fiction dealing with the impact of science on man. The short story is used primarily to see how speculative writers (Poe to Vonnegut) deal with basic issues, such as truth, evil and compassion.	3 3 0 0 0 Core
<b>LEGA244</b> <b>Family Law</b> Legal aspects of the family relationship. Rights and duties of the parties in marriage, annulment, divorce, child custody, and adoption. The course will emphasize the use of domestic law forms. PREREQUISITES: instructor permission or LEGA240, 260	3 3 0 0 0 Open	<b>LEGA259</b> <b>Adv Legal Research and Writing</b> Research and analysis of complex and multiple factual and legal issues. Preparation of legal documents using analysis and application of legal research. Use of specialized research sources. PREREQUISITE: LEGA261	3 3 0 0 0 Open	<b>LITR131</b> <b>Detective Fiction</b> Introduction to the study and appreciation of detective fiction. A literary investigation of the components of detective fiction and basic critical approaches are emphasized.	3 3 0 0 0 Core
<b>LEGA246</b> <b>Business &amp; Corporate Law I</b> Study of fundamentals of law of contracts, uniform commercial code and rights of creditors in transactions.	3 3 0 0 0 Open	<b>LEGA260</b> <b>Legal Research and Writing I</b> The nature of legal authority and tools and techniques of basic legal research and writing. Emphasis will be on Iowa law.	3 3 0 0 0 Open	<b>LITR132</b> <b>Humor</b> Introduction to the study and appreciation of humor as literary genre. An investigation of origins, types, techniques and purposes of humor and basic critical approaches are emphasized.	3 3 0 0 0 Core
<b>LEGA247</b> <b>Business &amp; Corporate Law II</b> Continuation of Business and Corporate Law I. Survey of rights of debtors and creditors in collections and bankruptcy. Formation of proprietorships, partnerships, and corporations and a survey of the law applicable to each. Preparation of documents necessary to the organization and operation of each. PREREQUISITE: LEGA246	3 3 0 0 0 Open	<b>LEGA261</b> <b>Legal Research and Writing II</b> Advanced application of principles of legal research. Preparation of interoffice memorandums and demand letters. Out of state and federal law. PREREQUISITES: LEGA240, 260	3 3 0 0 0 Open	<b>LITR133</b> <b>Black American Literature</b> Introduction to the study and appreciation of literature written by African-American writers. A broad range of Black American authors will be presented.	3 3 0 0 0 Core
<b>LEGA248</b> <b>Real Estate Law</b> Study of law of real property and a survey of more common types of real estate transactions. Emphasis is on the preparation of the instruments necessary to complete various real estate transactions. PREREQUISITES: instructor permission or LEGA240, 260	3 3 0 0 0 Open	<b>LEGA270</b> <b>Legal Interviewing/Clinical Exper</b> Classroom study of techniques of legal interviewing and recording and reporting interviews. Students will work 100 hours in an agency applying interviewing techniques. PREREQUISITES: LEGA240, 260	3 1 0 0 6 Open	<b>LITR134</b> <b>Women's Literature</b> Introduction to the study and appreciation of literature written by women writers, primarily of the twentieth century. A broad range of female authors from a variety of cultural and ethnic groups is presented.	3 3 0 0 0 Core
<b>LEGA249</b> <b>Probate Procedure</b> A study of wills including validity requirements, modification, and revocation. Formation of trusts and the characteristics and requirements of each type. Laws of testate and intestate succession. Forms and procedures for probating an estate. PREREQUISITES: instructor permission or LEGA240, 260	3 3 0 0 0 Open	<b>LIBS120</b> <b>Library Instruction</b> Study of classification systems, use of library resources and the compilation of bibliographies.	1 1 0 0 0 General	<b>LRST141</b> <b>Recreation Leadership</b> The course is designed to provide the student with a knowledge of human dynamics, leadership abilities, and the identification of types of groups. Leadership applications in this course deal with the obtaining of a practical knowledge of group situations and the principles necessary for effective leadership.	3 3 0 0 0 Open
<b>LEGA250</b> <b>Legal Internship and Ethics</b> Application of the theoretical knowledge gained in the classroom by interning in a private law office, governmental agency, or private business which utilizes attorneys. Students will participate in seminars concerning their internship experience and legal ethics. Total internship requirement is 225 hours. (P/F) PREREQUISITES: Min of "C" in all LEGA courses & complete min 8 LEGA classes	4 1 0 0 15 Open	<b>LIBS123</b> <b>Internet Research Techniques</b> Students will learn how information resources are organized on the Internet, how to reference and evaluate information on particular topics. PREREQUISITES: Basic computer literacy	1 1 0 0 0 General	<b>LRST142</b> <b>Supervised Field Experience I</b> This course is designed to acquaint the student with the variety of recreation services available in the recreation field. The student will be required to observe and evaluate ongoing recreation programs in public agencies, private agencies, commercial agencies, voluntary agencies and health facilities.	1 0 0 0 4 Open
<b>LEGA251</b> <b>Wills, Estate Planning and Taxation</b> Basic principles of estate planning in order to minimize estate and gift tax consequences. Preparation of federal estate, gift tax returns and Iowa inheritance tax returns. Drafting of wills designed to carry out estate plans. PREREQUISITE: LEGA249	3 3 0 0 0 Open	<b>LITR120</b> <b>Intro to Literature</b> Introduction to the study and appreciation of poetry, fiction and drama. Basic critical approaches are emphasized, and a broad range of authors from a variety of cultural and ethnic groups and a wide span of historical periods is presented.	3 3 0 0 0 Core	<b>LRST144</b> <b>Prog Planning/Organization</b> Underlying principles for effective recreational programming. Overview of the variety of program areas associated with recreation. Attention given to recreation interests and the needs of participants. Emphasis on steps in programming including formation of leagues/tournaments, research tools, evaluation and marketing.	3 3 0 0 0 Open
<b>LEGA252</b> <b>Administrative Practice</b> A study of administrative law and procedures for administrative hearings in various governmental agencies. Drafting and researching administrative rules and regulations will be covered. PREREQUISITES: instructor permission or LEGA240, 260	3 3 0 0 0 Open	<b>LITR121</b> <b>Major British Writers</b> Introduction to the study and appreciation of major British writers particularly from the post-Renaissance through the contemporary period. Basic critical approaches are emphasized.	3 3 0 0 0 Core	<b>LRST146</b> <b>Intro/Therapeutic Recreation</b> Basic concepts of the role of recreation in rehabilitation. Emphasis will be placed on a review of the recipients of therapeutic recreation services, the settings in which it takes place and developing recreation programs for special groups.	3 3 0 0 0 Open
<b>LEGA254</b> <b>Evidence: Theory and Practice</b> Study of substantive and procedural laws of evidence. Introduction to Rules of Evidence. Methods of discovering, preserving, and presenting evidence in civil and criminal trials. PREREQUISITES: instructor permission or LEGA242	3 3 0 0 0 Open	<b>LITR122</b> <b>Major American Writers I</b> Study of works of selected major writers (including Native American) particularly from Puritan times to 1865. Basic critical approaches are emphasized.	3 3 0 0 0 Core	<b>LRST149</b> <b>Supervised Field Experience II</b> A program designed to provide experience in working with and directing specific programs in a recreation setting. The student is expected to work in a chosen agency under the direct supervision of a recreation professional for 660 clock hours. PREREQUISITES: Complete a minimum of 9 credits of LRST courses	11 0 0 0 44 Open
<b>LEGA256</b> <b>Debtor/Creditor Law</b> Procedures in non-bankruptcy debt collection. Fundamentals of bankruptcy law and bankruptcy procedure. Examination of alternatives to formal bankruptcy proceedings. PREREQUISITES: instructor permission or LEGA240, 260	3 3 0 0 0 Open	<b>LITR123</b> <b>Major American Writers II</b> Examines American literature from early 20th Century through contemporary America. Emphasizes major literary works and their social and cultural contexts.	3 3 0 0 0 Core	<b>LITR124</b> <b>Children's Literature</b> Study historical, socio-cultural contexts surrounding children's literature; examine current trends and issues in the field; analyze and evaluate children's literature; and develop an awareness and appreciation for the variety of literature available.	2 2 0 0 0 Open
		<b>LITR125</b> <b>Contemporary Literature</b> Introduction to the study and appreciation of significant contemporary writers and literary movements since 1945. The relationship of current literature to society and basic critical approaches are emphasized.	3 3 0 0 0 Core		

\*\*\* Adaptor Courses cannot be used to fulfill degree requirements



# Course Descriptions

**LRST152** 3 3 0 0 0  
**Recreation/Special Populations** Open

This course is designed to explore the total scope of a barrier-free environment. Current trends and issues shaping society and the potential impact on existing and future recreation services will be explained.

**MATH091\*\*\*** 3 3 0 0 0  
**Arithmetic** Adaptor

A review of the fundamental operations of arithmetic including addition, subtraction, multiplication and division of whole numbers, decimals and fractions. This is an adaptor course designed for those students who need to review and improve their knowledge of the fundamentals of mathematics.

**MATH092\*\*\*** 4 4 0 0 0  
**Introductory Algebra** Adaptor

A beginning algebra course covering most elementary topics of algebra. This includes the real number system, solving equations and inequalities, polynomials, fractional equations, and radical expressions. This is an adaptor course designed for students with no algebra background or for students who need review.

**MATH094\*\*\*** 4 4 0 0 0  
**Intermediate Algebra** Adaptor

A review of elementary algebra along with the new topics including exponents and radicals, functions and graphs, quadratic equations, inequalities and systems of equations. PREREQUISITES: 1 year H.S. algebra, department permission or MATH092

**MATH115** 4 4 0 0 0  
**Finite Mathematics** Core

General education course in practical mathematics for students not majoring in mathematics or science. Include such topics as set operations and applications, methods of counting, probability, systems of linear equations, matrices, geometric linear programming and an introduction to Markov chains. PREREQUISITES: 1 year H.S. algebra or MATH092

**MATH118** 4 4 0 0 0  
**Math for Elementary Educators** Core

Provides future elementary teachers a modern approach to mathematics. Sets, relations, number systems, nature of proof, algorithms, elements of algebra and geometry, basic computational skills and problem solving. This course is for students in education fields and is not appropriate for students in other majors. This is not a methods course. PREREQUISITES: 1 year H.S. algebra, department permission or MATH092

**MATH121** 4 4 0 0 0  
**Elementary Statistics** Core

Tabular and graphical presentation, measures of central tendency and variability, standard elementary procedures involving the binomial, normal, student's t, chi-square and f distributions, correlation, regression, analysis of variance, and several nonparametric procedures. PREREQUISITES: 2 years H.S. algebra, department permission or MATH094

**MATH122** 4 4 0 0 0  
**Calculus for Business/Social Science** Core

Functions, graphs, differential calculus, integral calculus, introduction to max-min theory for functions of two variables. Emphasis on application of calculus to business problems. Not a substitute for MATH129 and MATH130. PREREQUISITES: 2 years H.S. algebra and MATH115, or MATH094 and MATH115

**MATH123** 3 3 0 0 0  
**Trigonometry** Core

Circular functions and their inverses, trigonometric identities, trigonometric equations, solving triangles and graphing. PREREQUISITES: 2 years H.S. algebra, department permission or MATH094

**MATH124** 5 5 0 0 0  
**Precalculus** Core

Real and complex number systems, inequalities, exponential and logarithmic functions, mathematical induction, limits, sequences, elementary theory of equations, linear systems, matrices, vectors and topics of analytic geometry. PREREQUISITES: MATH 123 or equivalent or department permission

**MATH129** 5 5 0 0 0  
**Calculus I** Core

Absolute values, inequalities, functions, limits, continuity, differentiation, definite integral, exponential and logarithmic functions. PREREQUISITES: MATH124 or equivalent or department permission

**MATH130** 5 5 0 0 0  
**Calculus II** Core

Continuation of MATH129. Techniques of integration, hyperbolic functions, polar coordinates, indeterminate forms, improper integrals, infinite series, partial derivatives, multiple integrals. PREREQUISITE: MATH129

**MATH132** 4 4 0 0 0  
**Differential Equat/Laplace Trans** Core

Ordinary differential equations, systems of ordinary differential equations, Laplace transforms, numerical methods and applications. PREREQUISITE: MATH130 COREQUISITE: MATH130

**MATH410** 3 3 0 0 0  
**Mathematics for Technicians I** Voc/Tech

A course in elementary mathematical skills for technicians. Topics covered include fundamental operations with whole numbers, fractions, decimals, and signed numbers; percents; geometric figures and basic constructions; area and volume formulas; English/Metric systems; measurements; and the interpretation of graphs and charts.

**MATH411** 3 3 0 0 0  
**Mathematics for Technicians II** Voc/Tech

A course in algebra and trigonometry for technicians. Topics covered include polynomials, equations, systems of linear equations, factoring, quadratic equations, trigonometry, powers, roots and logarithms. PREREQUISITE: MATH410 or equivalent

**MEDA461** 4 4 0 0 0  
**Human Body-Health and Disease I** Voc/Tech

Basic biological concepts, structure and function of the body. Interrelationship of body systems in the healthy individual is stressed. Symptoms of disease, diagnostic aids used by the physician, possible methods of treatment, and prognosis are presented. PREREQUISITE: H.S. biology or equivalent

**MEDA462** 1 0 2 0 0  
**Medical Terminology** Voc/Tech

Designed to help logically understand medical terms. Basic prefixes, suffixes and root words are emphasized as a method of acquiring and retaining knowledge. Exercises stressing the spelling, pronunciation and use of medical terms are included.

**MEDA464** 4 3 2 0 0  
**Medical Laboratory Procedures I** Voc/Tech

Introduction to medical laboratory procedures, ethics, laboratory personnel and OSHA regulations. Includes use of basic lab equipment, and application of basic microbiological principles. Routine urinalysis: physical, chemical and microscopic examination. Quality control is emphasized. COREQUISITE: MEDA465

**MEDA465** 3 2 2 0 0  
**Medical Office Procedures I** Voc/Tech

Designed as a basis for understanding and performing clinical skills including vital signs and patient exam preparation. Experience in taking patient histories, charting and patient education. Introduction to medical asepsis and emphasis on OSHA regulations. COREQUISITE: MEDA464

**MEDA466** 2 1 2 0 0  
**Medical Office Management I** Voc/Tech

Emphasizes administrative responsibilities of the medical assistant. Includes classroom work in records management, banking and payroll. Introduction to the computer with practical application in word processing.

**MEDA467** 3 3 0 0 0  
**Professional Development I** Voc/Tech

Emphasizes professional opportunities and responsibilities of the Medical Assistant. Medical specialties are studied. Study of first aid procedures prepares the student to cope with emergency situations in the office as well as in the community. Medical ethics and law are studied as they affect the practice of medicine.

**MEDA471** 4 4 0 0 0  
**Human Body-Health and Disease II** Voc/Tech

The study of the body systems is completed. PREREQUISITES: Grade of "C" or better in MEDA461

**MEDA472** 2 2 0 0 0  
**Diagnostic Radiography I** Voc/Tech

This course includes radiological principles, film evaluation, processing and techniques, positioning of patients, and radiation protection of patients and workers. This course partially meets the requirements for a "limited diagnostic radiographer" set by the Radiologic Division of the Iowa Department of Health. PREREQUISITE: MEDA461

**MEDA473** 4 3 2 0 0  
**Medical Office Management II** Voc/Tech

Study of health insurance, HMOs, workers' compensation, Medicare and Medicaid, proper use of telephone, appointment scheduling, pegboard recordkeeping. Through computer applications and practice sets, the student keeps patients' medical and financial records and transcribes medical dictation. PREREQUISITES: Grade of "C" or better in MEDA466

**MEDA474** 3 2 2 0 0  
**Medical Laboratory Procedures II** Voc/Tech

Blood collection by venipuncture and finger puncture. Pregnancy tests, mono tests and EKGs performed. Practical experience performing complete blood counts, differentials and blood chemistries. Emphasis on OSHA regulations and quality control in medical laboratory. PREREQUISITES: Grade of "C" or better in MEDA464 COREQUISITE: MEDA475

**MEDA475** 3 2 2 0 0  
**Medical Office Procedures II** Voc/Tech

Student learns how to assist with examinations, tests and treatments and how to care for and use medical and surgical equipment used in the examining room. Includes principles of pharmacology, administration of injections, sterile procedures and patient education. PREREQUISITES: Grade "C" or better in MEDA465 COREQUISITE: MEDA474

**MEDA480** 1 0 2 0 0  
**Professional Development III** Voc/Tech

Provides an opportunity for the student to discuss situations that arise in the clinical experience. Oral reports by students are supplemented by a review of weekly clinical evaluations. In addition, the student is made aware of community health service available to the patient. COREQUISITE: MEDA485

**MEDA482** 2 2 0 0 0  
**Diagnostic Radiography II** Voc/Tech

A continuation of Diagnostic Radiology I with emphasis on evaluation of films exposed by the student under supervision in a physician's office. PREREQUISITES: Grade of "C" or better in MEDA472 COREQUISITE: MEDA485

**MEDA483** 1 0 2 0 0  
**Medical Office Management III** Voc/Tech

Provides an opportunity for the student to become adept in using dictation transcription equipment. Case histories, consultations, physical examinations and surgical reports on prepared tapes are used to provide material that is of immediate practical use. PREREQUISITES: Grade of "C" or better in MEDA473

# Course Descriptions

**MEDA485** 5 0 0 0 21  
**Practicum** Voc/Tech  
 A course designed especially for the preparation of students involving supervised practical application of previously studied theory and in which new material is integrated as the student progresses. The student receives experience in a physician's office working under the direct supervision of the physician and office staff. PREREQUISITES: Satisfactory completion of all courses in first 2 terms. COREQUISITE: MEDA482

**MGMT101** 3 3 0 0 0  
**Personnel Supervision** Open  
 A unique view of organizational structure, the managerial function, and the role of the supervisor/leader. Stresses facilitation of teams that execute organizational goals.

**MGMT102** 3 3 0 0 0  
**Introduction to Management** General  
 An introduction to the management concepts of planning, organizing, influencing and controlling. Identification and evaluation of alternative solutions to management problems are emphasized.

**MGMT103** 3 3 0 0 0  
**Sales Management** Open  
 Expands on the basic steps in the selling process. Explores the profession of sales management to include recruitment and selection of the salespeople, training and motivation, compensation plans, measurement of sales and performance evaluations.

**MGMT104** 3 3 0 0 0  
**Organizational Behavior** Voc/Tech  
 Course introduces the concepts, methodologies, and techniques used in the field of organizational development. Topics covered include: fundamental concepts, leadership, organizational environment, social environment, group process, and operating activities.

**MGMT153** 3 3 0 0 0  
**Office Management** Open  
 Introduces concepts of office management aimed at increasing efficiency and productivity in operation of the office. Areas covered include: planning and organizing, leadership and human relations, and controlling office operations.

**MGMT203** 3 3 0 0 0  
**Human Relations in Business** Open  
 Emphasizes the importance of the development of proper attitudes toward self, others, and organizational settings. Stresses the development of a good self image and the relationship this has to energy levels, emotions, defensiveness, verbal and nonverbal communication.

**MGMT229** 3 3 0 0 0  
**Small Business Management** Open  
 Examines the preparation and methods needed to start a business and the management functions needed to keep it operating on a sound basis.

**MGMT240** 3 3 0 0 0  
**Principles of Managerial Finance** Open  
 This course provides a general background in managerial finance through financial statement analysis, time values, long range investment strategy and cost analysis of alternative financial strategies. PREREQUISITES: ACCT101, 102

**MGMT241** 3 3 0 0 0  
**Production Management** Open  
 An introductory course in production management with emphasis on facilities layout and planning, forecasting, inventory systems, and quality control.

**MGMT242** 3 3 0 0 0  
**Human Resource Management** Voc/Tech  
 This course studies the role of human resource management as it applies to the challenges, problems, techniques, opportunities, ethical considerations and social dynamics in organizations. Emphasis on human resource activities of both managers and human resource specialists.

**MGMT243** 3 3 0 0 0  
**Management of Information** Voc/Tech  
 An introduction of managing information for decision-making. Planning what information to obtain, sources and methods of collecting information; interpreting and analyzing; presenting and using information for decisions.

**MGMT244** 3 3 0 0 0  
**Leadership Development** Voc/Tech  
 The central focus of this course is the development of leadership ability. The course provides a basic understanding of leadership and group dynamics theory, assists participants in developing a personal philosophy of leadership and an awareness of one's own ability and style of leadership.

**MGMT250** 3 3 0 0 0  
**Fundamentals of Purchasing Mgmt.** Voc/Tech  
 This course provides information on the basic functions, terminology and systems used in a modern purchasing department. Topics include supplier analysis, negotiation techniques, contracts and administration of a purchasing department for both service and manufacturing firms.

**MGMT301** 3 3 0 0 0  
**Small Business Finance and Law** Voc/Tech  
 Provides basic information on developing a financial plan, taxes, funding sources, cash flow analysis, financial projections, and credit analysis. Presents basic principles of the legal system as applied to small business finance.

**MGMT302** 3 3 0 0 0  
**Small Business Mgmt Development** Voc/Tech  
 Emphasizes how the potential of the mind can be developed to improve decision making in business. The importance of quality which results from people thinking and working together with common goals and good relationships is stressed.

**MGMT303** 3 3 0 0 0  
**Small Business Marketing** Voc/Tech  
 Marketing as viewed by an entrepreneur is stressed in this course. Emphasis on a marketing philosophy, writing a small business marketing plan, and developing a marketing strategy for a small business are discussed.

**MGMT341** 6 0 0 0 24  
**Business Internship I** Voc/Tech  
 One semester of full-time successful introductory on-the-job training in a cooperating training station. Emphasis is placed on customer service and sales promotion strategies. (P/F)

**MGMT342** 2 1 2 0 0  
**Internship Seminar I** Voc/Tech  
 Field experience problems will be discussed, new occupational information will be presented, and business people will speak on the functions, institutions, and products found in the field of sales promotion. COREQUISITE: MGMT341

**MGMT344** 2 1 2 0 0  
**Field Experience I Seminar** Voc/Tech  
 Field experience problems will be discussed, new occupational information will be presented, and business people will speak on the functions, institutions, and products found in the field of management. COREQUISITE: MGMT345

**MGMT345** 6 0 0 0 24  
**Field Experience I** Voc/Tech  
 Consists of one term of full-time successful introductory on-the-job management training in a cooperating training station. Development and supervision of a training plan will be made by a teacher-coordinator. (P/F) PREREQUISITE: COOP220

**MGMT353** 4 0 0 0 16  
**Business Internship II** Voc/Tech  
 Sales promotion training of the level prescribed in the individual training plan. Exposure will be given to merchandising techniques. The training will be scheduled in an approved cooperating training station. Supervision of the training plan will be made by a teacher/coordinator. (P/F)

**MGMT356** 1 1 0 0 0  
**Field Experience II Seminar** Voc/Tech  
 Field experience problems will be discussed, new occupational information will be presented, and topics relating to supervision and management will be discussed. COREQUISITE: MGMT363

**MGMT358** 1 1 0 0 0  
**Internship Seminar II** Voc/Tech  
 Students are exposed to areas of sales promotion through guest speakers, visual aids and discussion of business. COREQUISITE: MGMT353

**MGMT361** 6 0 0 0 24  
**Retail Merchandise Internship I** Voc/Tech  
 Retail training of the level prescribed in the individual training plan. Exposure will be given to merchandising techniques. The training will be scheduled in an approved cooperating training station. Supervision of the training plan will be made by a teacher/coordinator. (P/F)

**MGMT362** 4 0 0 0 16  
**Business Internship III** Voc/Tech  
 Consists of one term of part-time on-the-job training of the level prescribed in the individual training plan. Exposure will be given to merchandising control and supervision. Supervision of the training plan will be made by a teacher/coordinator. (P/F)

**MGMT363** 4 0 0 0 16  
**Field Experience II** Voc/Tech  
 Consists of field training of the level prescribed in the individual training plan. The training is scheduled in an approved cooperating management training station. The training plan will be supervised by a teacher/coordinator. (P/F)

**MGMT364** 4 0 0 0 16  
**Field Experience III** Voc/Tech  
 Consists of continued field training of the level scheduled in the individual field training plan. The training is scheduled for a half day. The training plan will be supervised by a teacher/coordinator. (P/F) PREREQUISITE: MGMT363

**MGMT367** 1 1 0 0 0  
**Internship Seminar III** Voc/Tech  
 Students are exposed to areas of marketing through guest speakers, visual aids, and discussion of business internship experiences. COREQUISITE: MGMT362

**MGMT369** 1 1 0 0 0  
**Field Experience III Seminar** Voc/Tech  
 Field experience problems will be discussed. New occupational information will be presented and topics relating to management will be discussed. COREQUISITE: MGMT364

**MGMT406** 2 2 0 0 0  
**Human Potential** Voc/Tech  
 Covers development of I'm OK, You're OK, The Organization Is OK, approach to life. Includes awareness of communication styles and how to manage successful interpersonal and organizational relationships.

**MGMT407** 1 1 0 0 0  
**Professional Development Seminar** Voc/Tech  
 Presents insights into how individuals with the right insights sense and fit into organizations. A researched set of organizational values used by excellent companies will be presented and used as a model for development of individual career values.

**MKTG102** 3 3 0 0 0  
**Principles of Marketing** General  
 Examines marketing's role in the economy and in the company, what effect it has on a company's products, prices, types of promotion, and forms of distribution. Also studies the impact consumers have on these activities.

**MKTG103** 3 3 0 0 0  
**Principles of Selling** Open  
 Emphasizes the "consultative style" of personal selling. Covers the importance of establishing good relationships, finding prospect needs, providing a solution to these needs, and closing a high percentage of sales interviews.

# Course Descriptions

**MKTG104** 3 3 0 0 0  
**Advertising/Sales Promotion** Open  
 The area of promotional communication is studied to achieve an understanding of the market place, the various advertising media and the development of an effective promotional campaign.

**MKTG211** 3 3 0 0 0  
**Industrial Marketing** Open  
 Presents functional methods of industrial marketing. Examines all forms of wholesaler and manufacturer type marketing activities.

**MKTG231** 3 3 0 0 0  
**Fashion Analysis & Design** Voc/Tech  
 Emphasis is placed on all phases of the clothing industry from production to consumption; on an introductory level, applying art principles to clothing selection and design, analyzing fashion trends and studying modern designers and their contributions of fashion.

**MKTG232** 3 3 0 0 0  
**Selling Strategies** Voc/Tech  
 Students will enhance their basic selling skills by learning and practicing the selling process, territory management, presentation planning, creating sales proposals, and group selling techniques. PREREQUISITES: MKTG103 or equivalent field selling experience

**MKTG233** 3 3 0 0 0  
**Design Concepts** Voc/Tech  
 Course examines the physical and social aspects of clothing design, explores the visual illusions clothing can create and analyzes the interaction of form and function of garments. Design elements and principles and their relationship to create desired illusions and affects are studied; as well as fashion changes throughout history.

**MKTG321** 3 3 0 0 0  
**Retail Management I** Voc/Tech  
 Course examines developments in retailing, organization of retail institutions, merchandise handling processes, understanding retail customers, and future directions in retailing.

**MKTG322** 3 3 0 0 0  
**Retail Management II** Voc/Tech  
 A problem-solving approach to the operating principles and methods in the retail field. Management decision making is emphasized. PREREQUISITE: MKTG321

**MKTG323** 2 1 2 0 0  
**Visual Merchandising/Design** Voc/Tech  
 Includes design/display planning activities, store fixturing and the total merchandise presentation in a store. Emphasis is placed on actual design of window and interior displays by students.

**MKTG324** 3 3 0 0 0  
**Fashion Buying** Voc/Tech  
 The technical procedures of merchandising are studied, including consumer buying habits, a study of current trends, vendor relations, and buying and pricing of goods. Emphasis is also placed on how to maintain a merchandise control system in maximizing profits.

**MKTG331** 3 3 0 0 0  
**Fashion Coordination/Promotion** Voc/Tech  
 Students learn to research, analyze and forecast fashion trends. The information gathered is then presented and discussed through written projects. Students visually present their ideas and knowledge through a fashion show production at the end of the term. PREREQUISITE: MKTG231

**MKTG332** 3 3 0 0 0  
**Textiles** Voc/Tech  
 To develop a skill and knowledge of characteristics of natural and man-made fibers; the qualities, cost, and weaves in manufacturing and finishing processes of textiles, fibers, yarns, and fabrics; and a knowledge of appropriate fabrics for various uses.

**MKTG345** 1 0 2 0 0  
**Fashion Study Tour** Voc/Tech  
 The student will participate in a supervised study tour, location to be announced, in which a concentrated time will be spent touring a market center and researching a variety of fashion businesses from manufacturing and marketing to merchandising, promoting and selling apparel. PREREQUISITES: MKTG231 or instructor permission

**MLTS400** 6 4 4 0 0  
**Intro to Medical Laboratory** Open  
 A course designed to acquaint the student with the field of laboratory medicine, laboratory structure, and staffing. Instrumentation, medical terminology, clinical chemistry assays, kidney function tests, and basic hematology procedures are presented. PREREQUISITES: H.S. biology or chemistry or equivalent

**MLTS411** 6 4 4 0 0  
**Hematology** Open  
 A review of basic procedures, followed by a study of normal and abnormal blood smears as they relate to anemia and leukemia. Hematology instrumentation, quality control and coagulation are studied. PREREQUISITE: MLTS400

**MLTS422** 8 6 4 0 0  
**Clinical Chemistry** Open  
 Study and analysis of electrolytes, protein, lipids, enzymes, hormones, and drugs. Test results related to the patient's condition. PREREQUISITE: MLTS400

**MLTS431** 6 4 4 0 0  
**Clinical Microbiology** Open  
 A study of clinically important microorganisms. Techniques used to isolate and identify pathogenic bacteria, parasites and fungus. PREREQUISITE: BIOL132

**MLTS442** 5 3 4 0 0  
**Immunohematology** Open  
 Principles of immunohematology with the practices of blood banking are presented. ABO and RH typing and transfusing testing procedures are performed. Blood group antigens and antibodies are studied. PREREQUISITE: MLTS411

**MLTS450** 2 0 0 0 8  
**Clinical Practicum I** Open  
 Students report to a local hospital to join the phlebotomy team to practice patient approach and to draw blood specimens. PREREQUISITE: MLTS400

**MLTS455** 12 0 0 0 48  
**Clinical Practicum II** Open  
 Students rotate through the various departments (hematology, chemistry, microbiology, blood bank, and urinalysis) of the hospital laboratory applying the knowledge and skills learned in the classroom. PREREQUISITES: Completion of first four terms of MLTS curriculum

**MLTS460** 1 1 0 0 0  
**Clinical Seminar** Open  
 Students share their experience in the clinical area and present topics of interest. Case studies are presented for knowledge and review. PREREQUISITE: MLTS455

**MLTS461** 1 1 0 0 0  
**Medical Laboratory Review** Open  
 Medical laboratory subjects are reviewed; a mock registry examination is given. COREQUISITE: MLTS463

**MLTS463** 1 1 0 0 0  
**Professional Development** Open  
 The student studies human relations, job seeking skills, continuing education opportunities, legal responsibilities, and professional organizations. PREREQUISITE: MLTS455

**MUSI130** 3 3 0 0 0  
**Music Appreciation** Core  
 A survey of the development of western art music through study of representative compositions of many periods and styles. Includes definitions of musical terminology.

**MUSI131** 3 3 0 0 0  
**Introduction to Music** Core  
 This course introduces students to the elements of music theory through performance on recorder and piano.

**MUSI136** 1 0 2 0 0  
**Voice** General  
 Individual instruction in voice. Weekly half-hour lessons in tone production, breath control, diction, literature, and stage presence. May be repeated for a maximum of four credits.

**MUSI137** 1 0 2 0 0  
**Piano** General  
 Individual instruction in piano. Weekly half hour lessons. Beginning, intermediate, and advanced students accepted. May be repeated for a maximum of four credits.

**MUSI139** 1 0 2 0 0  
**Instrumental Music** General  
 Individual instruction in all instruments. Weekly one half-hour lessons. May be repeated for a maximum of four credits.

**MUSI143** 2 1 2 0 0  
**Introduction to Piano** General  
 This course is especially for the beginner in piano. Students will be introduced to the fundamentals of piano playing, including beginning note reading for the keyboard, technical development and appropriate repertoire.

**MUSI144** 2 1 2 0 0  
**Concert Choir** General  
 The concert choir is open to all students. Varied literature is chosen. May be repeated for a maximum of eight credits.

**MUSI145** 1 0 2 0 0  
**Chamber Choir** General  
 Course is open to members of the Concert Choir who are selected by auditioning with the director. Chamber Choir sings a variety of musical styles, and the music is generally more difficult than the music in Concert Choir. Prior choir experience is most helpful. May be repeated for a maximum of four credits. COREQUISITES: MUSI 144/audition with director.

**MUSI147** 4 3 2 0 0  
**Materials of Music I** General  
 All aspects of music theory will be introduced and explored with the experienced music student. Activities will include ear training, sight singing, keyboard training and written theory assignments.

**MUSI148** 4 3 2 0 0  
**Materials of Music II** General  
 As a sequel to Materials of Music I, this course will examine music theory in greater complexity and will emphasize the harmonic aspects of music. Activities will include ear training, sight singing, keyboard skills and written theory assignments.

**MUSI149** 2 1 2 0 0  
**Instrumental Ensembles** General  
 This course is open to any student with an instrumental music background. It will provide an opportunity for the rehearsal and possible performance of music in groups with students having similar levels of technical skill. May be taken for a maximum of eight credits. PREREQUISITE: At least one year of participation in a high school instrumental program or by audition, or MUSI131

**NURS261** 5 3 4 0 0  
**Nursing I** Open  
 Focus is nursing knowledge to support client's present position on the health continuum. Safety, communication and data collection are stressed. Provides fundamental skills for safe care for clients of all ages with basic human needs of sleep/comfort, activity/sensory, nutrition/elimination.

# Course Descriptions

**NURS262** 5 3 0 6 0  
**Nursing II** Open  
 Focus is nursing knowledge with practicum application to support client's present position on the health continuum. Data collection, pharmacology, health promotion/issues in health care are stressed. Provides fundamental skills for safe care for clients of all ages with basic needs of self concept/sexuality, oxygenation/circulation. PREREQUISITE: NURS261

**NURS263** 10 5 2 12 0  
**Nursing III** Open  
 Focus is nursing knowledge with practicum application to support and restore client to optimum position on the health continuum. Emphasis is on guided use of nursing process in caring for clients of all ages with predictable needs. Career planning is introduced. PREREQUISITES: BIOL133, PSCH101, NURS262

**NURS266** 2 1 2 0 0  
**Nursing Transition** Voc/Tech  
 Assists students in developing a core of nursing knowledge so that transition to the second year of the program can occur. Includes curriculum design/framework; role expectations; nursing process skills; pharmacology and diagnostic tests. (P/F) PREREQUISITES: NURS261, 262, 263, or equivalent

**OFFC204** 3 2 2 0 0  
**Office Procedures** Voc/Tech  
 Course is the integration of knowledge and skills needed to function in an office environment. Topics include receptionist and telephone techniques, records management, and the various roles of the office professional. PREREQUISITES: OFFC205, 337

**OFFC205** 3 3 0 0 0  
**Business English** Voc/Tech  
 The fundamentals of proofreading grammar, spelling, punctuation, word usage, capitalization, abbreviations, and number usage.

**OFFC206** 3 3 0 0 0  
**Correspondence Techniques** Voc/Tech  
 The principles and procedures of effective business writing/formatting utilizing a keyboard and oral communication for the office. Dictation skills are developed using dictation equipment. PREREQUISITE: OFFC205

**OFFC221** 3 3 0 0 0  
**Medical Terminology I** Voc/Tech  
 Builds a medical vocabulary through an understanding of anatomic roots for words denoting body structures, prefixes, suffixes, and Greek and Latin verbal adjectival derivatives.

**OFFC222** 3 3 0 0 0  
**Medical Terminology II** Voc/Tech  
 Continues to build a medical language vocabulary by studying body systems such as musculoskeletal, endocrine and integumentary systems. PREREQUISITE: OFFC221

**OFFC223** 3 2 2 0 0  
**Medical Transcription III** Voc/Tech  
 A continuation of Medical Transcription II. Concentrates on transcription of case histories and physicals, discharge summaries and operative reports from English-speaking foreigners. PREREQUISITE: OFFC431

**OFFC301** 2 1 2 0 0  
**Typing Skill Development I** Voc/Tech  
 Learn/review alphabetic and numeric keyboard reaches using a computer. Develop a strong keyboarding foundation using the touch method while utilizing correct techniques. May include formatting of business documents.

**OFFC302** 2 1 2 0 0  
**Typing Skill Development II** Voc/Tech  
 Continued development of speed and accuracy is emphasized. May include formatting of business documents. PREREQUISITE: OFFC301 or equivalent

**OFFC304** 3 2 2 0 0  
**Legal Typing** Voc/Tech  
 Preparation of a wide range of legal documents with continuing emphasis on increasing production rates. PREREQUISITE: OFFC 302 or equivalent

**OFFC312** 3 0 6 0 0  
**Data Entry** Voc/Tech  
 Competency based course to give students an introduction to current practices, equipment and various job related applications in data entry. The main focus is on speed and accuracy in entering data in a terminal. PREREQUISITES: Must key at 30 nwpm for 5 minutes or OFFC301

**OFFC320** 3 3 0 0 0  
**Human Body-Health and Disease** Voc/Tech  
 Designed to provide specialized knowledge of the human body relating to disease processes and possible methods of treatment. Includes CPR and emergency treatment training. Drug terminology is added to give students basic knowledge of symbols and abbreviations. PREREQUISITE: OFFC221

**OFFC324** 1 0 2 0 0  
**Office Calculators** Voc/Tech  
 Electronic calculator operations. Emphasis on speed and accuracy. Includes topics in addition, subtraction, multiplication and division; also the use of constants, chain computations and prorations.

**OFFC325** 3 2 2 0 0  
**Medical Word Processing** Voc/Tech  
 This course presents basic and practical word processing language and techniques required in various medical facilities. Theory and hands-on experience via examples of materials in operation will be studied. PREREQUISITE: OFFC221

**OFFC326** 3 3 0 0 0  
**Medical Insurance** Voc/Tech  
 Course provides a practical approach in medical insurance billing. Emphasis placed on current procedural codes (CPT-4) and international classification of diseases codes (ICD-9-CM) used to facilitate proper coding in submitting claims. Pertinent billing tips will be offered for each type of insurance. PREREQUISITES: instructor permission or OFFC221

**OFFC328** 4 0 0 0 16  
**Internship for Medical Secretaries** Voc/Tech  
 Work in a medical facility to learn the many office procedures and policies as they exist in a situation. (P/F) PREREQUISITES: OFFC222, 320, 431, 433

**OFFC329** 1 0 2 0 0  
**Keyboarding I** Voc/Tech  
 Basic instruction on a personal computer to learn the touch system for the alphabetic keyboard, number keyboard and ten key numeric pad.

**OFFC331** 3 3 0 0 0  
**Legal Terminology** Voc/Tech  
 Provides training in spelling, defining and pronouncing terms common in the legal field. PREREQUISITE: OFFC301 or equivalent

**OFFC332** 3 2 2 0 0  
**Legal Office Transcription** Voc/Tech  
 Designed to prepare the student to transcribe legal dictation using realistic office-style dictation. The correct formatting for various legal documents will be incorporated. Emphasis will be on English skills, formatting decisions and the application of reference materials to produce mailable business documents. PREREQUISITES: OFFC205, 302, 331

**OFFC333** 3 3 0 0 0  
**Citations and Legal Procedure** Voc/Tech  
 Study of proper citation forms used in legal writing. Students develop a working knowledge of universally accepted methods of referring to federal, state and local law including statutes, cases and administrative materials. Procedures and sequencing of document filing discussed. PREREQUISITE: OFFC331

**OFFC334** 3 3 0 0 0  
**Legal Office Overview** Voc/Tech  
 An overview of substantive areas of law and applicable procedure. Topics include criminal practice, domestic relations, income tax, probate, wills, trust and estate planning, real estate, business organization and torts. PREREQUISITE: OFFC331

**OFFC335 - ADJUNCT** 3 2 2 0 0  
**Introductory Shorthand** Voc/Tech  
 Covers the principles of shorthand theory. Emphasis is on the correct writing of the shorthand outline with instant recall.

**OFFC336 - ADJUNCT** 3 2 2 0 0  
**Advanced Shorthand & Transcription** Voc/Tech  
 Uses the principles of shorthand theory to build speed in taking dictation and producing a typed transcript. Includes the integration of grammar skills with shorthand to produce mailable copy. PREREQUISITE: OFFC335

**OFFC337** 3 2 2 0 0  
**Word Processing I** Voc/Tech  
 Introduces fundamental word processing functions. Instruction covers word processing concepts, terminology, features and other related skills. Basic keyboarding skills required.

**OFFC338** 3 2 2 0 0  
**Word Processing II** Voc/Tech  
 Continuation of Word Processing I. Emphasis on developing speed, accuracy and proofreading techniques in preparation of business documents using computer and word processing software. Students develop a broader understanding of software capabilities as they study concepts, vocabulary and additional features. PREREQUISITE: OFFC337

**OFFC340** 3 2 2 0 0  
**Intro to Office Computer App** Voc/Tech  
 General introduction to personal and business computer systems. Includes terminology, fundamental concepts of information systems, hardware, and software. Also includes introduction to the following application software: wordprocessing, spreadsheet and database.

**OFFC341** 3 2 2 0 0  
**Adv Office Computer App** Voc/Tech  
 To develop a high skill of decision-making using computer applications. Emphasizes taking real business simulations or office jobs and using the available software to produce final documents by intergrating files management, graphs and charts, database, DOS, desktop publishing, electronic mail, management support, calendaring, etc. PREREQUISITES: COMS181, OFFC340 or instructor permission

**OFFC344** 3 2 2 0 0  
**Machine Transcription** Voc/Tech  
 Teaches the proper machine transcription techniques using realistic office-style dictation. Emphasizes English skills, formatting decision, and application of reference materials to produce mailable business documents. PREREQUISITES: OFFC205, 301, 337

**OFFC345** 3 2 2 0 0  
**Adv Word Processing Applications** Voc/Tech  
 Emphasis is on utilizing word processing software features involving advanced formatting techniques, math, macros, and desktop publishing. Also included is the importing of files from spreadsheets, database, and graphic files into word processing documents. PREREQUISITES: OFFC338 and OFFC340, or permission of instructor

**OFFC346 - ADJUNCT** 1 0 2 0 0  
**WordPerfect** Voc/Tech  
 Hands-on instruction using WordPerfect. Special features include speller, Thesaurus, macros, merge and math. PREREQUISITES: OFFC301 or OFFC329

**OFFC347 - ADJUNCT** 1 0 2 0 0  
**Advanced WordPerfect** Voc/Tech  
 Advanced topics on WordPerfect including special print features, advanced macros, creating styles, tables and advanced tables, desktop publishing, graphic boxes, lines and images. PREREQUISITES: DATA343

**OFFC348 - ADJUNCT** 1 0 2 0 0  
**WordPerfect for Windows** Voc/Tech  
 Hands-on instruction using WordPerfect in the Windows environment. Special features include working with Windows, speller, Thesaurus, merge, macros and sort. PREREQUISITES: OFFC301 or OFFC329

\*\*\* Adaptor Courses cannot be used to fulfill degree requirements

# Course Descriptions

**OFFC349- ADJUNCT WORD** 1 0 2 0 0  
Voc/Tech  
Hands-on instruction using WORD in the Windows environment. Special features include working with windows, speller, Thesaurus, merge and sort. PREREQUISITES: OFFC301 or OFFC329

**OFFC403 Professionalism I** 1 1 0 0 0  
Voc/Tech  
To promote the development of professional characteristics associated with job success through class activities, industry visits and/or guest speakers. (P/F)

**OFFC404 Professionalism II** 1 1 0 0 0  
Voc/Tech  
To promote the development of professional characteristics associated with job success through class activities, industry visits, and/or guest speakers. (P/F)

**OFFC409 Internship/Seminar** 4 1 0 0 12  
Voc/Tech  
Practical experience through on-the-job training in an approved business setting. The course will also include a weekly seminar on topics relevant to the internship experience and how to have a successful work experience. (P/F)

**OFFC414 Travel Personnel I** 3 3 0 0 0  
Voc/Tech  
Introduction to terminology, use of reference materials, itinerary preparation and reservation procedures. Study of the skills and knowledge travel personnel need to perform successfully on the job.

**OFFC415 Travel Personnel II** 3 3 0 0 0  
Voc/Tech  
Building upon the knowledge and skills learned in OFFC 414, the student will learn to develop international itineraries and to make arrangements for group and charter travel. The student will also learn computer applications in ticketing and reservations. PREREQUISITE: OFFC414

**OFFC416 Selling for Travel Personnel** 3 3 0 0 0  
Voc/Tech  
Focuses on the principles of selling as they apply to the travel industry. Covers the importance of establishing relationships, addressing clients' needs, problem solving and bringing closure to the sale.

**OFFC417 Geography for Travel** 3 3 0 0 0  
Voc/Tech  
Provides agents, sales representatives and those employed in travel related fields with a broader perspective on geography. COREQUISITES: May be taken concurrently with OFFC414 or OFFC415

**OFFC421 Legal Internship** 4 0 0 0 16  
Voc/Tech  
Part-time placement in a legal environment working with an employer and under the supervision of legal teaching coordinators. (P/F) PREREQUISITES: OFFC338, COOP220

**OFFC430 Medical Transcription I** 3 2 2 0 0  
Voc/Tech  
Designed to prepare the student to take medical dictation from transcription tapes. The course covers the various medical specialties and introduces the student to a variety of typing forms for medical materials. PREREQUISITES: OFFC 205, 302, 221, 325 or equivalent COREQUISITES: OFFC205, 325, 221

**OFFC431 Medical Transcription II** 3 2 2 0 0  
Voc/Tech  
A continuation of Medical Transcription I. PREREQUISITE: OFFC430

**OFFC433 Medical Techniques** 3 3 0 0 0  
Voc/Tech  
A study of medical science, ethics and medical law. Various management duties and responsibilities, such as filing, insurance processing, mail schedules, pegboard accounting and telephone procedures. PREREQUISITES: OFFC221, 301

**PHIL110 Introduction to Philosophy** 3 3 0 0 0  
Core  
Exploration of basic questions in epistemology, metaphysics and ethics. Emphasis on western philosophy tradition.

**PHIL111 Introduction to Logic** 3 3 0 0 0  
Core  
Learn to recognize and construct good arguments. Study of deduction including categorical and truth functional arguments. Study of induction. Examination of informal fallacies.

**PHIL112 Ethical Problems** 3 3 0 0 0  
Core  
Comparative study of different traditional moral theories. Application of moral theories to different contemporary moral problems.

**PHIL113 Comparative Religions** 3 3 0 0 0  
Core  
Study of major living religions; commonalities and contrasts. How these religions enrich human lives.

**PHLE310 Phlebotomy with Practicum** 4 2 2 0 6  
Voc/Tech  
Student learns to perform techniques of blood collection, venipuncture and finger puncture. Practicum takes place at a local hospital with phlebotomy staff, drawing blood from patients. Applicable communication skills, terminology, ethics and safety precautions are taught.

**PHOT105 Principles of Photography** 3 2 2 0 0  
Open  
Photography as a communication medium. Principles of picture-taking, printing, and dry mounting of finished prints.

**PHOT106 Advanced Photography** 3 2 2 0 0  
Open  
For students who have mastered basic photographic principles and processes. Topics will include photographic lighting and filtration, photographic approaches, advanced darkroom techniques, and print finishing and display. PREREQUISITE: PHOT105

**PHOT407 Studio Photography** 3 2 2 0 0  
Voc/Tech  
Students learn to arrange and compose a photograph in a deliberate process. Students learn to analyze the elements in a scene, arrange them and artificially light them for the desired effect. Projects test student imagination, creativity, technical skills and willingness to experiment while improving their photographic expertise. PREREQUISITE: PHOT106

**PHYE128 Lifeguard Train/Water Safety Inst** 3 1 4 0 0  
Open  
Provides the student with the practical, cognitive, behavioral and decision making skills needed for lifeguarding and the necessary skills to conduct/instruct all levels of Red Cross swimming and water safety lesson programs. Upon satisfactory completion, student will receive Red Cross certification in lifeguarding and water safety instructor.

**PHYE129 Advanced Lifesaving** 1 0 2 0 0  
Open  
Purpose is to provide the student with the skills/techniques to successfully rescue a person in need. Focus on water safety, personal and self rescue, swimming rescues, and artificial resuscitation. Upon satisfactory completion, the student will receive Red Cross certification. PREREQUISITE: Students must pass a swim test

**PHYE130 Physical Fitness** 1 0 2 0 0  
Open  
Various exercises and activities to improve physical fitness.

**PHYE132 Flag Football and Basketball** 1 0 2 0 0  
Open  
Beginning skills only.

**PHYE133 Bowling** 1 0 2 0 0  
Open  
Beginning skills only

**PHYE135 Cheerleading** 1 0 2 0 0  
Open  
Men and women desiring to be basketball cheerleaders for Varsity Basketball season.

**PHYE136 Weight Training** 1 0 2 0 0  
Open  
Introduction to basics of weight training. Emphasizes increasing physical capacity, that is increased muscular strength and power.

**PHYE137 Recreational Swimming** 1 0 2 0 0  
Open  
No instruction. Recreational swimming at Boone County "Y".

**PHYE138 Varsity Men's Basketball** 1 0 2 0 0  
Open  
For students on Varsity Men's Basketball team only.

**PHYE139 Varsity Women's Basketball** 1 0 2 0 0  
Open  
For students on Varsity Women's Basketball team only.

**PHYE140 Sports Officiating** 3 3 0 0 0  
Open  
Study of the rules and official's mechanics for high school football, basketball and baseball. Provides guidelines for students to become licensed officials in Iowa for these sports.

**PHYE142 Varsity Baseball** 1 0 2 0 0  
Open  
For students on Varsity Baseball team only.

**PHYE143 Varsity Women's Softball** 1 0 2 0 0  
Open  
For students on Varsity Women's Softball team only.

**PHYE144 Intro to Physical Education** 3 3 0 0 0  
Open  
History of physical education. Careers and professional leadership in physical education, with emphasis on teaching. Examines the four areas of most vital concern to the physical educator: recreation and leisure, sports, curriculum, and research and evaluation.

**PHYE145 First Aid** 2 2 0 0 0  
Open  
First aid training with an emphasis in standard first aid and cardiopulmonary resuscitation. Red Cross certification will be awarded to those who qualify.

**PHYE146 Personal/Community Health** 3 3 0 0 0  
Open  
Physical, emotional, and social factors as they relate to our state of personal health. To better understand and aid in alleviation of communicable and chronic diseases, drug use, and environmental problems.

**PHYE149 Wellness Prog/Planning/Organization** 3 3 0 0 0  
Open  
The purpose of this course is to familiarize the student with wellness programs in the workplace. Emphasis will be on program design, health assessment, corporate management issues and promotion.

**PHYE150 Fitness Testing/Programming** 3 3 0 0 0  
Open  
The purpose of this course is to prepare the student to be able to organize and implement fitness programs for employees in agencies and organizations. Emphasis will be on introduction/recruitment of employees, fitness testing, prescription of individual and group fitness programs, and fitness retesting procedures.

**PHYE157 Introduction to Athletic Training** 2 1 2 0 0  
Open  
Entry level course designed to introduce the potential coach or athletic trainer to the field of athletic training. Basic care and prevention of athletic injuries will be dealt with in order to equip the coach or trainer with the knowledge to make intelligent decisions regarding common athletic injuries.

**PHYE158 Golf** 1 0 2 0 0  
Open  
Beginning skills only.

**PHYE159 Jokari** 1 0 2 0 0  
Open  
Racketball without walls. An introduction to the game of racketball without the use of walls.

# Course Descriptions

**PHYE160** 1 0 2 0 0  
**Volleyball** Open  
 Beginning skills only.

**PHYE161** 1 0 2 0 0  
**Aerobics** Open  
 Introduces aerobic concept of physical fitness. Includes aerobic activities, aerobic exercising, and aerobic dance. Course designed for men and women.

**PHYE162** 1 0 2 0 0  
**Tennis I** Open  
 Introduction to basic skills (forehand, backhand, service, and volley) and basic knowledge of game play.

**PHYE163** 1 0 2 0 0  
**Badminton I** Open  
 Introduction to basic skills (serve, clear, drop, drive and smash) and basic knowledge of game play.

**PHYL106** 4 3 2 0 0  
**Survey of Physical Science** Core  
 Student is exposed to scientific method with an emphasis on elementary problem solving. Review of basic mathematics, the topics of weights and measures, mechanics, heat, gas laws, electricity, magnetism, sound, light and modern physics are covered.

**PHYL111** 4 3 2 0 0  
**College Physics I** Core  
 This course is the first semester of a two semester sequence in non-calculus physics. Topics include forces, linear and rotational motion, energy, momentum, fluids, gases, and heat. PREREQUISITE: MATH123 or trigonometry

**PHYL112** 4 3 2 0 0  
**College Physics II** Core  
 Course is second semester of a two semester sequence in non-calculus physics. Topics include wave motion, sound, electricity, magnetism, optics and modern physics. PREREQUISITES: PHYL111 or instructor permission

**PHYL121** 6 5 2 0 0  
**Classical Physics I** Core  
 Course is calculus based and intended for engineering and science majors. Topics include statics, dynamics, kinematics, fluid behavior, wave motion, vibrating systems, heat and thermodynamics. COREQUISITE: MATH129

**PHYL122** 6 5 2 0 0  
**Classical Physics II** Core  
 This course is a continuation of Classical Physics I. Topics covered include static electricity, electrical circuits magnetism, time-dependent electric and magnetic fields, optics, and modern physics. PREREQUISITES: PHYL121 or instructor permission COREQUISITE: MATH130

**PHYL401** 3 2 2 0 0  
**Physics for Technicians** Voc/Tech  
 A physics course for students of technology. Topics include: forces, work, energy, heat, electricity and magnetism with a strong emphasis on practical applications. PREREQUISITE: MATH410 or equivalent

**PLSC111** 3 3 0 0 0  
**American National Government** Core  
 A study of the American political system and how and why the citizenry relate to the government as they do. Emphasis is placed upon the organization and functioning of the presidential, legislative and judicial subsystems.

**PLSC112** 3 3 0 0 0  
**State and Local Government** Core  
 Study of organization, operations and politics of state and local governments. Emphasis on an analysis of legislative, executive and judicial roles and processes.

**PLSC121** 3 3 0 0 0  
**World Politics** Core  
 International system is examined from several perspectives including United States, Russia, and China. Emphasis upon ideology, national interest, the use of power, international law and organization.

**PLSC122** 3 3 0 0 0  
**Comparative Political Systems** Core  
 Examination of the government and politics of such countries as Great Britain, Mexico, Germany, and Russia. Each nation is viewed in terms of its political culture, party system, executive, legislative, and legal organization.

**PLSC126** 3 3 0 0 0  
**Intro to Public Administration** Core  
 Study of the theory & practice of public administration examining alternate organizational theories & practices, personnel administration, problems of communications within organizations, and styles of leadership. Course emphasizes the interrelationships of professional and political influences on decision making

**PSCH101** 3 3 0 0 0  
**General Psychology** Core  
 A survey of psychology including theoretical and experimental findings and applications from areas such as physiological, learning, memory, personality, social, abnormal, and therapy.

**PSCH103** 3 3 0 0 0  
**Developmental Psychology** Core  
 The study of factors that affect human development from conception to death, with emphasis on topics such as physical, cognitive, and social changes, methods of study and current issues. PREREQUISITE: PSCH101 recommended

**PSCH104** 3 3 0 0 0  
**Abnormal Psychology** Core  
 An introduction to the study of abnormal behavior, with emphasis on abnormal behaviors such as anxiety, depression, schizophrenia and personality disorders. Includes dynamics of mental disorder and biopsychosocial factors involved in the etiology and treatment of disorders. PREREQUISITE: PSCH101 recommended

**PSCH105** 3 3 0 0 0  
**Social Psychology** Core  
 This course surveys selected topics in social psychology including social perception, social influence, attraction, altruism aggression, persuasion, attitude formation, group processes, and applications of research to everyday situations. PREREQUISITE: PSCH101 recommended

**PSCH106** 3 3 0 0 0  
**Psych of Human Relations and Adj** General  
 Emphasizes awareness of factors inherent in human relationships and psychological adjustment patterns of individuals and groups. Effort is made to develop techniques of interpersonal relations and coping.

**PSCH107** 3 3 0 0 0  
**Principles of Behavior Modification** General  
 The principles of learning theory with a major emphasis on operant conditioning will be studied. Emphasis will be on the practical application of these principles to the areas of mental health, mental retardation and education. PREREQUISITE: PSCH101 recommended

**PSCH108** 3 3 0 0 0  
**Human Sexuality and Gender Roles** Core  
 This course provides students with definitive and precise information about the nature of human sexuality and gender roles. An interdisciplinary approach will be used to present a more comprehensive view, stressing the biological, social, and psychological aspects of sexuality and gender roles.

**PSCH109** 3 3 0 0 0  
**Educational Psychology** General  
 The principles of psychology applied to classroom teaching, with emphasis on such topics as development, learning, motivation, evaluation, adjustment, and educational techniques and innovations.

**PSCH110** 3 3 0 0 0  
**Stress and Stress Management** General  
 Basic instruction in understanding stress reactions, their causes and effects and theory and application of stress management techniques. Includes theories of stress and stress reduction, psychological/psychological reactions to stress, measurement of stress reactions, and application of stress reduction.

**RCEL401** 1 1 0 0 0  
**Basic Electricity and Magnetism** Voc/Tech  
 This course will provide instruction in the basics of electricity and magnetism. It is designed as a foundation course for the student who wishes to become familiar with electrical systems.

**READ087\*\*\*** 3 3 0 0 0  
**Developmental Reading I** Adaptor  
 The first in a series of two courses designed to help students succeed with college-level reading assignments. Emphasis will be placed on vocabulary development and basic comprehension skills, particularly the skill of recognizing the main idea and supporting details.

**READ088\*\*\*** 3 3 0 0 0  
**Developmental Reading II** Adaptor  
 For students who want to improve reading and reasoning skills for college work. Reading material includes newspaper and magazine articles as well as textbook passages. Emphasis is on strengthening comprehension and vocabulary. PREREQUISITES: READ087 or equivalent score on reading skills test.

**READ116** 3 3 0 0 0  
**Speed Reading** General  
 An advanced reading course designed to improve reading speed and comprehension. Emphasis on adapting to varying content and levels of difficulty. PREREQUISITE: READ088 or equivalent

**RESP300** 3 3 0 0 0  
**Fundamentals of Respiratory Therapy** Open  
 This is the initial course for the student in the Respiratory Therapy program. Major topics are history of the profession, medical specialties, communication, terminology and the evaluation of the patient. Students will become skilled in evaluating vital signs and clinical data. PREREQUISITES: H.S. biology and chemistry or equivalent

**RESP302** 4 3 2 0 0  
**Gas, Humidity and Aerosol Therapy** Open  
 This course introduces the student to basic therapeutic techniques utilized in respiratory care. Major topics include medical gas therapy, humidity and aerosol, cylinder systems and physical principles of gases and liquids. Students will be required to demonstrate competence in the techniques to receive a passing grade in the course. PREREQUISITES: 1 year H.S. biology and algebra or equiv with min grade "C"

**RESP304** 3 2 2 0 0  
**Cardiopulmonary Therapeutics** Open  
 This course will teach the basic patient care techniques of Positive Pressure Breathing, Incentive Spirometry, Postural Drainage, Airway Care, Pulmonary Rehabilitation and home care. Students will be required to demonstrate competence in the techniques to pass. COREQUISITE: RESP302

**RESP310** 5 5 0 0 0  
**Cardiopulmonary Renal Pathophys** Open  
 An in-depth study of the normal functioning of the cardiovascular, pulmonary and renal systems emphasizing their interactions is presented. Progresses to study of the common adolescent and adult diseases affecting the three systems. Interpretation of the results of arterial blood gas data will be taught. PREREQUISITES: RESP302, 304, BIOL133 COREQUISITE: BIOL134

**RESP315** 3 3 0 0 0  
**Respiratory Therapy Pharmacology** Open  
 Course provides a study of actions and interactions of drugs with and within the body. Theories of drug action, pharmacodynamics and methods for drug administration will be taught. Drugs affecting the cardiovascular, pulmonary and renal systems will be emphasized. PREREQUISITES: BIOL133, MATH115, RESP300, 302, 304 COREQUISITE: BIOL134

# Course Descriptions

**RESP320** 5 4 2 0 0  
**Advanced Respiratory Therapy** Open  
 Overview of analysis of arterial blood gas samples and basic electrocardiography will be presented. Use of adjuncts in the treatment of cardiorespiratory arrest will be taught. Principles of mechanical ventilation along with techniques of PEEP, CPAP, SIMV and initiation and maintenance of ventilation will be taught. PREREQUISITES: BIOL134, MATH115, PHYL106, RESP310

**RESP325** 3 3 0 0 0  
**Neonatal/Pediatric Respiratory Therapy** Open  
 Embryonic development of the respiratory and cardiovascular systems will begin this course which progresses to the teaching of normal function and a consideration of the common neonatal and pediatric diseases. Therapeutic techniques and monitoring of the patients will be taught. PREREQUISITES: BIOL134, MATH115, RESP310

**RESP330** 3 3 0 0 0  
**Cardiopulmonary Diagnostics** Open  
 Principles and techniques of testing of cardiovascular and pulmonary function will be taught with an emphasis on the evaluation and interpretation of the results of the tests. Integration of test results with clinical picture with emphasis on therapeutics, and principles of polysomnography will be taught. PREREQUISITES: BIOL134, MATH115, PHYL106, RESP310, 315

**RESP335** 3 3 0 0 0  
**Respiratory Therapy Mgmt and Ethics** Open  
 Begins with study of the organization and management of a respiratory therapy department. Consideration of issues of jurisprudence and medicolegal aspects of health care. Tactful interactions and ethical practices will be emphasized. Will also serve to review much of what has been assimilated in the program. PREREQUISITE: RESP372

**RESP352** 3 1 0 8 0  
**Respiratory Therapy Practicum I** Open  
 This is the initial hospital experience. Consists of supervised care of patients with respiratory disorders. Students will administer IPPB, aerosol, postural drainage and incentive breathing therapies. Other therapeutic modalities which have been learned will be introduced as well. PREREQUISITE: RESP304 COREQUISITES: RESP310, 315

**RESP362** 5 2 0 10 0  
**Respiratory Therapy Practicum II** Open  
 This practicum will continue the supervised experience in provision of basic patient care techniques to therapies from practicum I. Arterial puncture, arterial line sampling and analysis of blood samples will be introduced. Suctioning of airways will be emphasized. PREREQUISITES: RESP310, 352 COREQUISITE: PHYL106

**RESP372** 6 1 0 16 0  
**Respiratory Therapy Practicum III** Open  
 This practicum continues supervised experience in basic therapeutic techniques with emphasis on increased speed and efficiency. Neonatal intensive care will be introduced. Students will continue development of skills in sampling and analyzing arterial blood. ECG and other cardiac diagnostic tests will be observed. PREREQUISITES: RESP325, 362

**RESP382** 7 2 0 16 0  
**Respiratory Therapy Practicum IV** Open  
 Hospital respiratory care with the addition of mechanical ventilation and care of patients in critical care units will complement the techniques from the prior practicums. Observation and performance of pulmonary function testing will be introduced. PREREQUISITES: RESP320, 372 COREQUISITE: RESP330

**RESP392** 7 2 0 16 0  
**Respiratory Therapy Practicum V** Open  
 The fourth clinical experience with emphasis on the care of patients in critical care areas of the hospital. All techniques and procedures previously performed will continue to be administered to patients. PREREQUISITES: RESP330, 382

**SOCY101** 3 3 0 0 0  
**Introduction to Sociology** Core  
 A scientific approach to the analysis of culture, socialization, social organization, the development of society, study of social processes, human groups, social institutions, and the effects of group relations on human behavior.

**SOCY102** 3 3 0 0 0  
**Social Issues** Core  
 This course is an analysis of the nature, dimensions, causes, and characteristics of selected social problems of major interest. Consideration is given to theories research and programs for prevention and treatment.

**SOCY103** 3 3 0 0 0  
**Courtship, Marriage and Family** Core  
 This course analyzes the sociological, physical, psychological, legal and economic aspects of the American family. Included are investigations of courtship and marriage relationships, preparation for marriage, family, parenthood, interpersonal relationships, and marital adjustment.

**SOCY105** 3 3 0 0 0  
**Race, Ethnic and Gender Relations** Core  
 This course is the study of the relations between racial, ethnic and gender categories. Focus on stereotypes, prejudices, discrimination and exploitation. Major emphasis upon group relations in the United States. PREREQUISITE: SOCY101 is recommended

**SOCY106** 3 3 0 0 0  
**Juvenile Delinquency** General  
 An investigation of juvenile delinquency in American society, sociological theories and research of delinquency, impact of groups, juvenile justice system, and prevention programs. PREREQUISITES: SOCY101 or instructor permission

**SOCY107** 3 3 0 0 0  
**Criminology** General  
 The nature and extent of crime and criminality, society's efforts to control crime, theories of causation, emphasis on social processes, systems and methods of correction. PREREQUISITES: SOCY101 or instructor permission

**SOCY204** 4 4 0 0 0  
**Social Gerontology/Applications** Open  
 Societal aspects of aging as they relate to the delivery of services to the aging. Students will develop a project which serves a specific community need.

**SPAN101** 4 4 0 0 0  
**Elementary Spanish I** Core  
 Development of the basic skills of understanding, speaking, reading, and writing Spanish. Grammar analysis, classroom conversational practice, and some exploration of the Hispanic culture.

**SPAN102** 4 4 0 0 0  
**Elementary Spanish II** Core  
 Continued practice of the four basic skills and grammar analysis. Introduction of short prose selections with conversational emphasis. PREREQUISITE: SPAN101

**SPAN103** 4 4 0 0 0  
**Intermediate Spanish I** Core  
 Review of essential grammatical constructions emphasizing major areas of difficulty for English speakers. Use of Hispanic cultural and literary materials to develop conversational skills. PREREQUISITE: SPAN102

**SPAN104** 4 4 0 0 0  
**Intermediate Spanish II** Core  
 Continued review of grammatical constructions using Hispanic cultural materials. Reading, writing and conversation will be emphasized in the context of cultural issues and current events. PREREQUISITE: SPAN103

**SPCH110** 3 3 0 0 0  
**Fundamentals of Speech** Core  
 Explores the fundamentals of speech-communication through the study and practice of interpersonal and small group communication and the composition and delivery of short speeches.

**SPCH111** 3 3 0 0 0  
**Public Communication** Core  
 Analysis, preparation and practice of forms of public address, with emphasis on critical thinking, audience analysis, speech composition and style, and nonverbal communication. PREREQUISITE: SPCH110

**SPCH117** 3 3 0 0 0  
**Interpersonal and Small Group Comm** Core  
 An introduction to interpersonal and group communication theories and their application in relationship development, conflict resolution, group problem solving, and group presentations.

**TELE311** 3 3 0 0 0  
**Basic Electricity/Electronic I** Voc/Tech  
 For beginners to solve basic electronic problems involving voltage, resistance and power. Relationship between electricity and magnetism, operation of resistors, meters, switches, relays, capacitors, inductors and batteries will be explained.

**TELE312** 2 2 0 0 0  
**Basic Electricity/Electronic II** Voc/Tech  
 For those who have an understanding of volts, Ohms, amps and series parallel circuits. Explain the difference between alternating current (AC) and direct current (DC), the AC generator; analyze simple AC currents, transformer action, series and parallel resonant circuits. May also be taken as a study course.

**TELE316** 2 2 0 0 0  
**Electronic Circuits** Voc/Tech  
 Basic and operational amplifiers, power supplies, oscillators, pulse circuits, and modulation. Must have prior knowledge in electricity/electronics. PREREQUISITE: TELE312

**TELE318** 3 3 0 0 0  
**Semiconductor Devices** Voc/Tech  
 N-type, P-type, PN junctions, diodes, zener diode, transistors, bipolar characteristics, field effect, thyristors, integrated circuits and opto electronics. Should have knowledge in AC/DC electronics.

**TELE410** 3 3 0 0 0  
**Telephony I** Voc/Tech  
 Provides an overview of telecommunications and covers basic telecommunications circuits, equipment and diagnostic procedures for lines, basic key systems, station carrier and associated equipment. COREQUISITE: TELE411

**TELE411** 6 0 12 0 0  
**Telephony Experience I** Voc/Tech  
 Provides hands-on experience in installation and fault isolation of lines and basic key systems, access and station data modification for a digital multiplex switch, basic cable counts and splicing procedures. COREQUISITE: TELE410

**TELE420** 4 4 0 0 0  
**Telephony II** Voc/Tech  
 Covers basic telecommunications equipment used by businesses and its connection to a switched public or private network. Covered subjects include advanced key systems, private branch exchange systems (PBX), trunks and associated equipment. Analog and digital communications and associated equipment are also covered. PREREQUISITES: TELE410, 411 COREQUISITE: TELE421

**TELE421** 7 0 14 0 0  
**Telephony Experience II** Voc/Tech  
 Provides hands-on training on a private branch exchange system, and user data modification for a digital central office; switch, 1A2 and electronic key systems and associated equipment. Experiences include wiring, call routing, fault isolation, and modular splicing. COREQUISITE: TELE420

**TELE430** 3 3 0 0 0  
**Telephony III** Voc/Tech  
 Covers advanced digital switching principles and practices, system configuration, and diagnostic procedures common to digital central office switching systems and private branch exchanges. PREREQUISITE: TELE421 COREQUISITE: TELE431

# Course Descriptions

**TELE431** 6 0 12 0 0  
**Telephony Experience III** Voc/Tech  
 Provides hands-on learning experience in system configuration, operation & diagnostic procedures using a digital central office switching system, a private branch exchange, and associated equipment. Point to point and switched data circuits are installed and tested. COREQUISITE: TELE430

**TELE432** 3 3 0 0 0  
**Data Communications** Voc/Tech  
 An introduction to data communications and networks. It includes digital communications, analog communications and interfaces. Networks including both LAN operation and common test techniques. PREREQUISITES: TELE420, 421

**TELE440** 3 3 0 0 0  
**Telephony IV** Voc/Tech  
 Covers digital carrier equipment, SONET, fiber optics, LAN and WAN basics, satellite transmission, and new technologies. PREREQUISITES: TELE431, 432, ELEM462, 463

**TELE441** 3 0 6 0 0  
**Telephony Experience IV** Voc/Tech  
 Provides hands-on learning experiences on digital carrier, fiber optics and local area networks.

**TOOL480** 2 0 4 0 0  
**Blueprint Reading I** Voc/Tech  
 A beginning and intermediate blueprint reading course covering basic visualization of shapes and sizes, and freehand sketching of objects. Includes section lining, print alterations and projections.

**TOOL481** 3 1 4 0 0  
**Blueprint Reading II** Voc/Tech  
 An advanced blueprint reading course involving study of industrial metal work drawings as they apply to planning and laying out of jigs and fixtures. PREREQUISITE: TOOL480

**TOOL482** 2 1 2 0 0  
**Machine Shop Measurements I** Voc/Tech  
 A study of measurements as used in industry. Units of instruction include tools, gauges, comparators, gauge blocks, and inspection practices.

**TOOL484** 3 3 0 0 0  
**Machine Tool Operations I** Voc/Tech  
 Machine shop procedures beginning with hand tools and benchwork. Lecture on safety, layout, and tool grinding operations on saws, drill press, grinders and lathes.

**TOOL485** 4 4 0 0 0  
**Machine Tool Operations II** Voc/Tech  
 Theoretical procedures of the vertical and horizontal milling machines. PREREQUISITE: TOOL484

**TOOL486** 5 0 10 0 0  
**Machine Tool Operations Lab I** Voc/Tech  
 Machine shop procedures beginning with hand tool and benchwork. Lab activities in safety, layout and tool grinding operations on saws, drill press, grinders and lathes.

**TOOL487** 7 0 14 0 0  
**Machine Tool Operations Lab II** Voc/Tech  
 Practical experience with the following machine shop equipment: vertical and horizontal milling machines. PREREQUISITE: TOOL486 COREQUISITE: TOOL485

**TOOL489** 2 1 2 0 0  
**Heat Treatment of Materials** Voc/Tech  
 Introduction to physical and mechanical characteristics of metals directly associated with area of heat treatment. Also structure and composition of metals, testing, hardening, tempering and annealing.

**TOOL490** 7 0 14 0 0  
**Machine Tool Operations Lab III** Voc/Tech  
 Practical experience with surface grinders. Writing programs for and running CNC Mill and CNC Lathe. PREREQUISITE: TOOL487 COREQUISITE: TOOL491

**TOOL491** 4 4 0 0 0  
**Machine Tool Operations III** Voc/Tech  
 Theoretical explanation of procedures in surface grinding, CNC lathe and milling and manual programming of CNC mill. PREREQUISITE: TOOL485

**UPHL433** 3 0 6 0 0  
**Auto Upholstery Installation** Voc/Tech  
 Automobile upholstery and interior trim must be removed and replaced to facilitate access for auto collision repairers. Types of interior and exterior upholstery and trim and their removal, repair and replacement will be studied in the lab. Also removal, replacement and adjustment of outer automobile panels, to include proper fit and wind noise and water leak testing. PREREQUISITES: AUTC403, HLCR314, WELD468

**UPHL460** 2 0 4 0 0  
**Basic Upholstery** Voc/Tech  
 Instruction on the correct operation of the sewing machine. Apply these skills by constructing a project.

**UPHL461** 2 0 4 0 0  
**Pattern Layout** Voc/Tech  
 In this course, you will identify measuring and layout principles for upholstery fabrics, and perform measurements and layout for a piece of furniture.

**UPHL462** 2 0 4 0 0  
**Cushion Construction** Voc/Tech  
 You will identify cushion construction procedures and complete basic cushion construction projects.

**UPHL463** 2 0 4 0 0  
**Padding Procedures** Voc/Tech  
 You will identify padding procedures and perform padding procedures on furniture.

**UPHL464** 1 0 2 0 0  
**Frame Preparation** Voc/Tech  
 You will identify the process for removing old fabric, identify wood types and reglue frames. You will prepare frames for recovering.

**UPHL465** 2 1 2 0 0  
**Technical Problems** Voc/Tech  
 Instruction will be provided in using graphic techniques to estimate job material needs and supply needs. PREREQUISITE: UPHL460

**UPHL466** 2 1 2 0 0  
**Business Problems** Voc/Tech  
 This course covers identification of basic business skills in upholstery-listing equipment needs, ordering procedures, meeting customers, locating facilities, identifying physical needs in shop construction, advertising needs, insurance needs, etc. PREREQUISITE: UPHL460, MATH410

**UPHL470** 2 0 4 0 0  
**Skirt/Attached Pillow Const** Voc/Tech  
 You will identify the procedure for constructing skirts for upholstered furniture, then make skirts with fabric. You will identify attached pillow construction procedures, then make attached pillows for furniture. PREREQUISITES: UPHL460, 461, 462

**UPHL471** 2 0 4 0 0  
**Nosing/Advanced Cushion Const.** Voc/Tech  
 In this course students will identify nosing construction procedures, then perform nosing construction on furniture. You will develop skills in making a pattern for a cushion by measuring and marking out a proper pattern to fit the frame of the chair. PREREQUISITES: UPHL460, 461, 462, 463

**UPHL472** 1 0 2 0 0  
**Overstuffed Chair Project** Voc/Tech  
 Students will identify the procedures in upholstering an overstuffed chair, then reupholster an overstuffed chair in fabric. COREQUISITE: UPHL471

**UPHL473** 2 0 4 0 0  
**Tufting Techniques** Voc/Tech  
 Students will identify tufting techniques, then perform tufting techniques on furniture. PREREQUISITES: UPHL465, 461

**UPHL474** 2 0 4 0 0  
**Pillow Back Chair Project** Voc/Tech  
 Students will identify the procedures in upholstering a pillow back chair, then reupholster a pillow back chair in fabric. PREREQUISITES: UPHL464, 465, 470, 471

**UPHL475** 2 0 4 0 0  
**Recliner Chair Project** Voc/Tech  
 Students will identify the procedures in upholstering a recliner chair, then reupholster a recliner chair in fabric. PREREQUISITES: UPHL464, 465, 470, 471

**UPHL476** 2 0 4 0 0  
**Large Sofa Project** Voc/Tech  
 Students will identify the procedures in upholstering a large sofa, then will reupholster a large sofa in fabric. PREREQUISITES: UPHL464, 465, 470, 471

**UPHL477** 1 0 2 0 0  
**Loveseat/Small Sofa Project** Voc/Tech  
 Students will identify the procedures in upholstering a loveseat, then will reupholster a loveseat in fabric. PREREQUISITES: UPHL464, 465, 470, 471

**UPHL480** 2 0 4 0 0  
**Installing Vinyl Tops** Voc/Tech  
 The student will identify procedures for installing vinyl tops, then install a vinyl top. PREREQUISITES: UPHL461, 463, 465

**UPHL481** 2 0 4 0 0  
**Auto Bench/Bucket Seat Project** Voc/Tech  
 The students will identify procedures for upholstering automotive bench/bucket seat, then perform upholstery of a bench/bucket seat. PREREQUISITES: UPHL461, 462, 463, 464, 465

**UPHL482** 1 0 2 0 0  
**Boat Seat Project** Voc/Tech  
 The student will identify the procedures for upholstering a boat seat, then perform upholstery of a boat seat. PREREQUISITES: UPHL461, 462, 463, 464, 465

**UPHL483** 2 0 4 0 0  
**Auto Pillow Back Seat** Voc/Tech  
 The student will identify procedures for upholstering a pillow back seat, then perform upholstery of a pillow back seat. PREREQUISITES: UPHL461, 462, 463, 464, 465

**UPHL484** 2 0 4 0 0  
**Auto Door Panel/Headliner Project** Voc/Tech  
 The student will identify procedures for upholstering door panels and headliners, then perform upholstery of door panels and headliners. PREREQUISITES: UPHL461, 462, 463, 464, 465

**UPHL485** 2 0 4 0 0  
**Auto Carpeting Project** Voc/Tech  
 The student will identify procedures for installing carpeting, then perform the installation of carpeting in automotive project. PREREQUISITES: UPHL461, 463, 465

**UPHL486** 2 0 4 0 0  
**Vinyl/Convertible Top Project** Voc/Tech  
 The student will identify procedures for upholstering vinyl and convertible tops, then perform upholstery of vinyl and convertible tops. PREREQUISITES: UPHL461, 465, 480

**UPHL487** 1 0 2 0 0  
**Boat/Tonneau Cover Project** Voc/Tech  
 The student will identify the procedures for installing boat/tonneau covers then perform the installation of boat/tonneau covers. PREREQUISITES: UPHL461, 465

**WELD467** 2 0 4 0 0  
**Related Weld-Transportation Trades** Voc/Tech  
 Skills will be developed in oxy-acetylene fusion and braze welding, shielded metallic arc welding as well as oxy-fuel flame cutting. Safety is emphasized and basic welding theory is discussed. Warnings concerning the danger and liability involved in welding high strength steels will be stressed (i.e. auto body and chassis, etc.).

**WELD468** 2 0 4 0 0  
**Related Welding/Auto Collision** Voc/Tech  
 Basic skills will be developed in oxygen-acetylene fusion welding and flame cutting. Gas Metal Arc (MIG) welding equipment; and attain basic understanding of procedures related to auto collision area.



# Course Descriptions

- WELD473** 2 0 4 0 0  
**Oxygen-Acetylene Weld/Cutting** Voc/Tech  
Skills will be developed in oxy-acetylene welding, cutting and repair. Safety is emphasized.
- WELD474** 2 0 4 0 0  
**Shielded Metal Arc Welding I** Voc/Tech  
Skills will be developed in welding beads and buildup surfacing in the flat position.
- WELD478** 3 0 6 0 0  
**Shielded Metal Arc Welding II** Voc/Tech  
Skills will be developed in welding multiple pass tee fillet welds in the flat position. PREREQUISITE: WELD474
- WELD479** 2 0 4 0 0  
**Shielded Metal Arc Welding III** Voc/Tech  
Skills will be developed in welding corner fillet joints, weld arounds, and sheet metal weldments in the flat position. PREREQUISITE: WELD478
- WELD481** 3 3 0 0 0  
**Blueprint Reading** Voc/Tech  
The basic skills needed to read shop drawings (including welding symbols) will be learned. PREREQUISITE: MATH410
- WELD483** 2 0 4 0 0  
**Gas Metal Arc Welding** Voc/Tech  
Practical application in the use of the gas metallic arc welding process (including submerged arc and flux cored arc).
- WELD486** 3 0 6 0 0  
**Shielded Metal Arc Welding IV** Voc/Tech  
Skills will be developed in welding beads, buildup surfacing, and fillet weldments in the horizontal position. PREREQUISITE: WELD479
- WELD487** 3 0 6 0 0  
**Shielded Metal Arc Welding V** Voc/Tech  
Skills will be developed in welding fillet joints in the vertical downhill and vertical uphill position. PREREQUISITE: WELD486
- WELD488** 2 0 4 0 0  
**Shielded Metal Arc Welding VI** Voc/Tech  
Skills will be developed in welding fillet joints in the overhead position. Air carbon arc gouging and plasma arc cutting will also be practiced. PREREQUISITE: WELD487
- WELD493** 2 0 4 0 0  
**Gas Tungsten Arc Welding** Voc/Tech  
A course to develop skills in the gas tungsten arc welding process using mild steel, stainless steel and aluminum.
- WELD497** 2 0 4 0 0  
**Adv Shielded Met Arc Welding I** Voc/Tech  
Skills will be developed in welding and testing vee groove joints in the flat and horizontal positions. PREREQUISITE: WELD488
- WELD498** 3 0 6 0 0  
**Adv Shielded Met Arc Welding II** Voc/Tech  
Skills will be developed in welding and testing in the vertical and overhead positions. PREREQUISITE: WELD497
- WELD499** 3 0 6 0 0  
**Intro-Shield Met Arc Pipe Welding** Voc/Tech  
Welding practice and testing on open groove plate weldments in the 1G, 2G, 3G, and 4G positions, and, as time permits, on pipe weldments in the 2G, 5G, and 6G positions. PREREQUISITE: WELD498

## Faculty/Staff

- Adhav, Jagdeesh, 1982**, *English as a Second Language*. B.A., University of Pona; M.A., Drake University
- Alberts, Mark, 1983**, *Mathematics*. B.S., Northwest Missouri State; M.S., Western Illinois University; Iowa State University
- Albertson, Marcia, 1974**, *P.C. Applications*. B.A., University of Northern Iowa
- Albrecht, L. Lynn, 1974**, *Dean, Student Records and Services*. B.S., M.A., University of Iowa
- Alexander, C. J., 1978**, *Chemistry*. B.Sc., M.Sc., Madras Christian College, South India; M.S., University of Minnesota; Ph.D., University of New Orleans
- Allbee, Dawn M., 1995**, *Child Development Specialist*. A.S., Des Moines Area Community College
- Alley, Louis W., 1974**, *Leisure Studies*. B.S., M.A., University of Iowa
- Amdahl, Maynard, 1978**, *Tool & Die*. Diploma, Dunwoody Industrial Institute; Certificate, U.S. Department of Labor Journeyman Tool & Diemaker
- Anderson, Larry J., 1981**, *Accounting*. C.M.A., A.S., Fort Dodge Community College; B.S., B.A., M.B.A., Drake University; University of Northern Iowa; Iowa State University; University of Iowa
- Anderson, Robert L., 1974**, *Hospitality Careers*. A.O.S., Culinary Institute of America; Mankato Area Vocational Technical Institute
- Arbuckle, John, 1969**, *Electronics*. A.A.S., B.S., M.S., Iowa State University
- Armbrrecht, Mark A., 1994**, *GM Project*. A.A.S., Hawkeye Institute of Technology
- Baer, Beverly, J., 1988**, *Instructional Assistant*. B.A., Wartburg College; Des Moines Area Community College; Grand View College
- Baker, Dorothy, 1986**, *Coordinator, Career Opportunities Program*. B.S., Upper Iowa University; M.S. Drake University
- Bailey, Pauline A., 1993**, *Mathematics*. A.A., Waldorf College; B.A., University of Northern Iowa; M.S.M., Iowa State University
- Barrett, Larry, 1988**, *Respiratory Therapy*. A.A.S., Des Moines Area Community College; B.S., Iowa State University
- Beck, Thomas, 1970**, *Political Science*. B.A., M.A., Wartburg College; University of Northern Iowa
- Bell, Deborah P., 1987**, *Dental Assistant*. A.A., A.S., Des Moines Area Community College
- Bennett, Carroll, 1967**, *Executive Dean*, (Newton Polytechnic Campus). B.S.C., M.A., University of Iowa; Iowa State University; University of Northern Iowa
- Bennett, James, 1980**, *Data Processing*. B.S., Northwest Missouri State University; A.A., Des Moines Area Community College; Iowa State University
- Bennett, Virginia, 1984**, *Music*. B.M.E., M.M.E., Drake University; Ph.D., University of Iowa
- Beyer, Darlene, 1990**, *Mathematics/Science*. B.S., Buena Vista College
- Bigalk, Kris, 1994**, *English*. B.A., Drake University; M.A.T., Mankato State University; M.A., Florida State University
- Bishop, Patick J., 1995**, *Diesel*. Diploma, Des Moines Area Community College
- Bittner, James W., 1990**, *English*. A.B., University Illinois; M.A., Southern Illinois University; Ph. D., University of Wisconsin
- Black, J. Winston, Jr., 1984**, *Director, Career Opportunities Program*. B.S., Arkansas State University; M.S.E., Drake University
- Blanchfield, Sylvia Louise, 1988**, *Nursing*. B.S., Walla Walla College; M.S.N., Drake University
- Blewett-Dickson, Valree M., 1992**, *Nursing*. Diploma, Marshalltown Community School of Nursing; B.S.N., Grand View College
- Boldt, Eugene, 1969**, *Executive Director, Human Resources*. B.A., University of Iowa; M.B.A., Drake University
- Booth, Connie, 1982**, *Nursing*. B.S.N., Creighton University; M.S.N., University of Nebraska Medical Center
- Borgen, Joseph, 1981**, *President*. B.S., M.S., Stout State University; Ph.D., University of Illinois
- Bova, Craig A., 1992**, *English/Volunteerism*. B.A., Wartburg College
- Bowdre, Leonard, 1984**, *Electronics Maintenance*. U.S. Army Signal Corps, Iowa State University
- Brand, Sonja K., 1995**, *Academic Achievement Center*. B.S., Northwest Missouri State University
- Brandmeyer, Vivian, 1974**, *Academic Dean (Business/Management)*. B.A., University of Northern Iowa; M.A., Viterbo College; Iowa State University
- Brewer, Robert C., 1988**, *Criminal Justice*. A.A.S., Central Piedmont Community College; B.S., University of North Carolina; M.C.J., University of South Carolina; South Carolina State College; University of Iowa; Iowa State University; Drake University
- Brobst, Lisa., 1993**, *Physical Sciences*. A.A., Des Moines Area Community College; B.A., University of Northern Iowa; M.A., Drake University
- Brockelsby, John W., 1987**, *Business Administration*. B.G.S., University of Nebraska at Omaha; M.A., Webster University
- Brown, Georgia K., 1971**, *Academic Achievement Center*. B.A., Simpson; M.S.E., Drake University
- Brown, Joyce, 1970**, *Counselor*. B.A., M.S.E., Drake University
- Burdick, Marilyn, 1971**, *Counselor*. B.S., M.S., Iowa State University; Drake University; University of Iowa
- Butin, Patricia, 1992**, *Coordinator, Foundation*. A.A., Des Moines Area Community College; B.A., Drake University
- Calkin, Jeffrey B., 1988**, *Automotive Technology*.
- Campos, Kyle Ann, 1988**, *Psychology*. B.F.A., M.S., Drake University
- Carson, Linda A., 1972**, *Child Development*. B.S., M.S. Iowa State University
- Cash-Wiese, Lisa, 1990**, *Educational Advisor*. B.A., University of Northern Iowa
- Chacko, Sandra J., 1980**, *Nursing*. R.N., Iowa Lutheran Hospital School of Nursing; B.S.N., M.A., University of Iowa; Ph.D., Iowa State University
- Chapman, Richard, 1970**, *English*. B.A., M.A., University of Iowa
- Chase, Hal S., 1989**, *History*. Ph.D., University of Pennsylvania; M.A., Stanford University; B.A., Washington & Lee University
- Chopard, Lois, 1987**, *Educational Advisor*. B.A., University of Northern Iowa
- Christman, Rick L., 1989**, *English*. B.A., University of Wisconsin-Madison; M.A., Mankato State University; D.A., Drake University
- Claassen, Alan D., 1983**, *Academic Achievement Center*. B.A., University of Northern Iowa
- Clark, Jean, 1971**, *Office Technology*. B.A., Parsons College; M.A., Northeast Missouri University; University of Northern Iowa
- Clark, Kenneth, 1971**, *Counselor*. B.S.E., M.S.E., Drake University; Montana University; Iowa State University
- Clauson, Kathleen M., 1993**, *Educational Advisor*. B.A., Coe College; M.A., University of Iowa
- Clauson, Larry, 1974**, *Counselor*. B.A., University of Northern Iowa; M.S., Drake University; University of Iowa; Iowa State University
- Clauson, Linda, 1987**, *Instructional Assistant*. B.A., Drake University
- Cleveland, Ole S., 1995**, *Agri-Business*. A.A., Waldorf College; B.S., Iowa State University
- Clinkenbeard, Theodore, 1969**, *Mathematics*. B.A., Yankton College; M.A., University of South Dakota
- Collier, Kenneth, 1971**, *Welding*. Des Moines Area Community College; Iowa State University
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- Daehler, Jeannette M., 1986**, *Medical Laboratory Technology*. M.T. (ASCP) B.S., Iowa State University
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- Dowie, Lori K., 1986**, *Hospitality Careers*. A.A.A., Des Moines Area Community College
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- Gilbert, Jr., Fred D., 1987**, *Vice President, Research and Development*. B.A., Dillard University; M.Ed., Loyola University; Ph.D., Iowa State University
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- Goode, Terry L., 1989**, *Diesel*. A.A.S., Des Moines Area Community College
- Gorman, William G., 1989**, *Diesel*. A.A.S., Des Moines Area Community College; Iowa State University; Drake University
- Granata, Michael, 1988**, *Sociology*. B.A., M.A., University of Miami; University of Southern California
- Grattan, Helen G., 1985**, *Office Technology*. M.A., Andrews University, Michigan
- Green, Brian, 1993**, *Learning Center*. B.A., University of Northern Iowa; M.A., University of Iowa
- Green, Mary Jane, 1985**, *Office Technology*. B.A., Buena Vista College, M.A., University of Northern Iowa
- Greta, Gordon D., 1993**, *Assistant to the President/General Counsel*. B.A., J.D., University of Iowa
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- Grimm, Carol, 1986**, *Counselor*. B.A., Quincy College; M.A., Iowa State University
- Halverson, Patricia, 1979**, *Director, Academic Achievement*. B.S., University of South Dakota; M.S., Illinois State University
- Hann, Bruce, 1969**, *English/Speech*. B.A., Simpson College; M.A., University of New Mexico; Ed.S., Drake University
- Hann, Sharon, 1983**, *Art*. B.A., University of Northern Iowa; M.A., University of New Mexico
- Hansen, Barbara A., 1994**, *Commercial Horticulture*. B.S., M.S., Iowa State University
- Hansen, Barbi N., 1994**, *STRIVE*. B.S., Iowa State University; M.A., University of Iowa; Drake University
- Hansen, Dennis, 1973**, *Business Administration*. B.B.A., University of Iowa
- Hansen, Paula, 1989**, *Business Administration*. B.S., University of South Dakota; M.A., Western Michigan University
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- Harstad, Ruthanne, 1989**, *English*. A.A., Kirkwood Community College; B.A., University Without Walls; M.A., Ed.S., University of Iowa
- Hausser, David W., 1992**, *Philosophy*. B.A., M.S., Iowa State University; M.A., University of Arizona; Ph.D., Duquesne University
- Hays, Mary, 1990**, *Social Studies/Health*. B.A. University of Northern Iowa; M.A., Mankato State University
- Hedlund, Rosemary, 1976**, *Hospitality Careers*. B.S., Iowa State University
- Heimbaugh, Nancy J., 1977**, *Educational Advisor*. B.S. Ed., Drake University
- Helgeson, A. Scott, 1994**, *Biology*. B.A., M.A., University of Nebraska
- Hemenway, Horace Eli, 1991**, *Biology*. A.A., Worthington State Junior College; B.S., Mankato State University; M.S., University of Minnesota
- Hendrick, William, 1979**, *Automotive Technology*. A.A.S., Des Moines Area Community College
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# Application for Admission

## SPAIDEN

SOCIAL SECURITY NUMBER										PERSONAL INFORMATION											
LEGAL LAST NAME										FIRST										MI	
ALL FORMER LEGAL LAST NAME(S)																					
CURRENT MAILING ADDRESS																					
NUMBER & STREET															APARTMENT NUMBER / LOT NUMBER ETC.						
CITY										STATE				ZIP CODE							
(AREA)			TELEPHONE NUMBER				COUNTY														

## SPAPERS

DATE OF BIRTH				SEX		RESIDENCY															
				<input type="checkbox"/> MALE <input type="checkbox"/> FEMALE		ARE YOU A U.S. CITIZEN? <input type="checkbox"/> YES <input type="checkbox"/> NO  IF NO, ARE YOU A PERMANENT RESIDENT OF THE U.S.? <input type="checkbox"/> YES <input type="checkbox"/> NO  IF NO, INDICATE TYPE OF VISA _____ IF YES, PRINT YOUR ALIEN REGISTRATION NUMBER _____  COUNTRY OF CITIZENSHIP _____															
ETHNIC INFORMATION (OPTIONAL)																					
1. <input type="checkbox"/> WHITE NON-HISPANIC 2. <input type="checkbox"/> BLACK NON-HISPANIC 3. <input type="checkbox"/> HISPANIC 4. <input type="checkbox"/> ASIAN/PACIFIC ISLANDER 5. <input type="checkbox"/> AMERICAN INDIAN/ALASKAN NATIVE 6. <input type="checkbox"/> RACE/ETHNICITY/UNKNOWN																					
RESIDENCY STATEMENT - TO BE COMPLETED BY U.S. CITIZENS AND PERMANENT RESIDENTS ONLY!																					
CHECK ONE <input type="checkbox"/> I HAVE BEEN A RESIDENT OF IOWA SINCE BIRTH																					
<input type="checkbox"/> I HAVE BEEN A PERMANENT RESIDENT OF IOWA SINCE _____ MONTH _____ YEAR																					
<input type="checkbox"/> I AM NOT A RESIDENT OF IOWA																					

## SAAADMS

SEMESTER YOU PLAN TO ENTER DMACC										CAMPUS YOU PLAN TO ATTEND											
1. <input type="checkbox"/> Fall 2. <input type="checkbox"/> Spring 3. <input type="checkbox"/> Summer Year: _____										<input type="checkbox"/> ANKENY <input type="checkbox"/> BOONE <input type="checkbox"/> CARROLL <input type="checkbox"/> NEWTON <input type="checkbox"/> URBAN <input type="checkbox"/> EXTENSION CENTER											
I PLAN TO ATTEND <input type="checkbox"/> (7 CREDITS OR MORE)										<input type="checkbox"/> (6 CREDITS OR LESS)											

**DMACC EDUCATIONAL GOALS**

(Please check the **ONE** that best describes your current goal at DMACC)

CC. <input type="checkbox"/> Prepare to change careers	IS. <input type="checkbox"/> Improve skills for present job	SI. <input type="checkbox"/> Self improvement/improve basic skills
CL. <input type="checkbox"/> Meet certification or licensure requirements	JM. <input type="checkbox"/> Prepare to enter job market	TA. <input type="checkbox"/> Transfer to another college or university
EX. <input type="checkbox"/> Explore courses to decide on career	PI. <input type="checkbox"/> Personal interest or self-improvement	UN. <input type="checkbox"/> Undecided/Unknown

**DMACC DEGREE AND MAJOR (see page 4 for programs available)**

MAJOR \_\_\_\_\_

AWARD YOU ARE SEEKING (CHECK ONE BOX)

<input type="checkbox"/> ASSOCIATE IN ARTS (AA) DEGREE	<input type="checkbox"/> ASSOCIATE IN APPLIED SCIENCE (AAS)	<input type="checkbox"/> DIPLOMA
<input type="checkbox"/> ASSOCIATE IN SCIENCE (AS) DEGREE	<input type="checkbox"/> ASSOCIATE IN GENERAL STUDIES (AGS)	<input type="checkbox"/> CERTIFICATE OF SPECIALIZATION



**SOAHSCH**

**EDUCATIONAL INFORMATION**

**HIGH SCHOOL**

NAME OF HIGH SCHOOL LAST ATTENDED		CITY	STATE						
ARE YOU CURRENTLY ATTENDING HIGH SCHOOL? <input type="checkbox"/> Yes If Yes, graduation month: ____ year: ____ <input type="checkbox"/> No		DID YOU GRADUATE FROM HIGH SCHOOL? 1. <input type="checkbox"/> Yes Month ____ Year ____ 2. <input type="checkbox"/> No		<input type="checkbox"/> HAVE YOU TAKEN THE GED? (High School Equivalency Test) YEAR _____ <input type="checkbox"/> DO YOU HAVE AN ADULT EDUCATION DIPLOMA? YEAR _____					

**SOAPCOL**

**PREVIOUS COLLEGE(S)**

LIST ALL COLLEGES INCLUDING DMACC PREVIOUSLY ATTENDED FOR CREDIT COURSES IN ORDER OF ATTENDANCE		FROM MONTH/YEAR	TO MONTH/YEAR	TYPE OF DEGREE EARNED
COLLEGE NAME	COLLEGE CITY, STATE			

**AN OFFICIAL TRANSCRIPT FROM EACH INSTITUTION ATTENDED MUST BE SUBMITTED DIRECTLY TO THE DMACC ANKENY ADMISSIONS OFFICE. ALL DOCUMENTS SUBMITTED BECOME THE PROPERTY OF DMACC AND CANNOT BE RETURNED OR SENT TO OTHER INSTITUTIONS.**

**SPAEMRG**

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NUMBER & STREET										APARTMENT NUMBER / LOT NUMBER ETC.									
CITY										STATE					ZIP CODE				
AREA		TELEPHONE NUMBER				RELATIONSHIP TO STUDENT													

**I CERTIFY THAT ALL STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.**  
**I AGREE TO ABIDE BY ALL APPROVED COLLEGE POLICIES AS OUTLINED IN THE CURRENT ISSUE OF THE COLLEGE CATALOG.**  
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**SIGNATURE OF APPLICANT** \_\_\_\_\_ **DATE** \_\_\_\_\_

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