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Des Moines Area
Community College

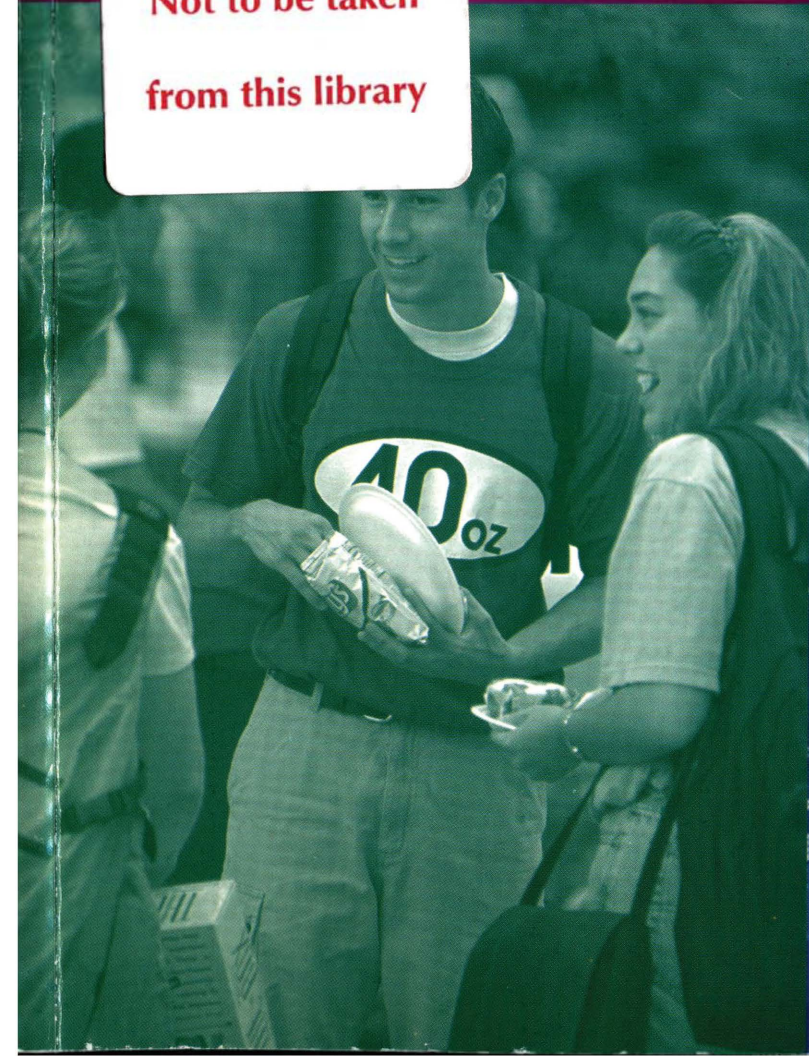
College Catalog

2000-2001

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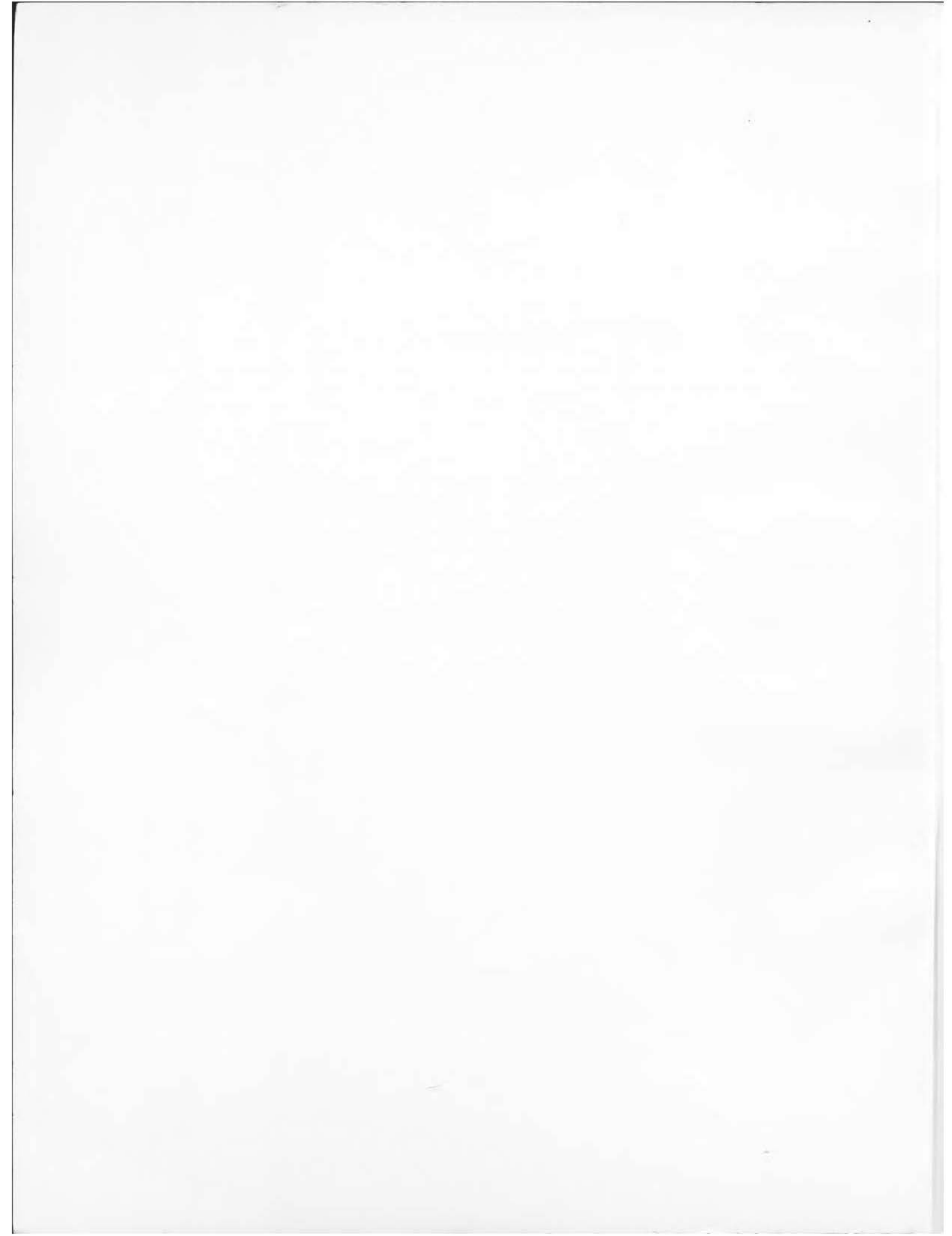


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The Des Moines Area Community College Catalog is a general catalog of information regarding fees, curricula, and related policies and procedures. Every effort has been made to make the catalog accurate as of the date of publication, however, the catalog 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.

Programs Available

Program	Award	Campus	Program	Award	Campus
Arts and Sciences and Pre-Professional Emphasis					
Arts & Sciences	AA/AS	All			
Pre-professional Emphasis - Programs available at selected campuses					
Accounting			Early Childhood Education	AS, Diploma	A,U*
Architecture			Emergency Med Tech Basic	Certificate	A
Business Administration			Entrepreneurship	Dipl, Cert	A,N*,U*
Chiropractic			Electronic Systems Servicing Technology	AAS	A
Computer Science			Exercise Science	AS	B*
Dentistry			Fashion	Certificate	A
Education			Fashion/Design	AAS, Dipl,	A
Engineering			Fire Science Technology	AS	A,U*
Law			Fire Specialist	Certificate	A,U*
Medicine			Graphic Arts	AAS, Dipl, Cert	A
Nursing			Greenhouse Production	Certificate	A
Optometry			Health Care Administration	AS	A
Pharmacy			Health Services Management	Certificate	A
Physician's Assistant			Heating, AC, Refrigeration Technology	AAS, Diploma	A
Social Work			High Tech - Automation/Robotics	AAS	A
Veterinary Medicine			Hospitality Business	Diploma	A
			Hotel & Restaurant Management	AAS	A
Associate in General Studies	AGS	All	Human Services	AS	A,N*,U
Vocational and Para-Professional Programs			Information Processing Support	Certificate	A,B,C,N*,U
ASEP - General Motors	AAS	A	Information Technology Network Administrator	AAS	A
ASSET - Ford	AAS	A	Integrated Manufacturing Technology (John Deere)	AAS	A
Accounting Certificate I	Certificate	B,U,N*	Interior Design Consultant	Certificate	A
Accounting Certificate II	Certificate	B,U	Job Shop Machinist	Diploma	A
Accounting & Bookkeeping	Diploma	B,U	(see Tool & Die Making)		
Accounting Information Systems	AS	A*,B,U	Legal Assistant	AS, Certificate	U
Accounting ParaProfessional	AS	A,B,C,N,U	Long Term Care Administrator	Certificate	A
Accounting Specialist	AAS	B,U	Management	AAS, Certificate	A,N,B*,U*
Administrative Assistant	AAS	A,B,C,N*,U	Management Information Systems (MIS)	AS	A,B,N*,U*
Agri-Business	AAS	A	Manufacturing Technology	AAS	A,N
Agri-Business - Agronomy	Certificate	A	Marketing	AAS	A
Agri-Business - Animal Science	Certificate	A	Medical Administrative Assistant	AAS, Diploma	A
Agri-Business - Farm Management	Certificate	A	(see Secretarial Careers)		
Agri-Business - Sales/Service	Certificate	A	Medical Assistant	Diploma	A
Agri-Business - Veterinary Technology I	Certificate	A	Medical Laboratory Technology	AAS	A
Agri-Business - Veterinary Technology II	Certificate	A	Medical Transcriptionist	Certificate	A,B,C,U
Airbrush Art	Certificate	A	Microcomputers	Certificate	A,N*,U*
Architectural Millwork	Diploma	A	Microsoft Certified Professional	Certificate	A
Architectural Technologies	Diploma	A	Novell Education Certification Program	Certificate	A
Auto Collision Technology	AAS, Dipl	A	Nurse Aide	Certificate	A,B,C
Auto Mechanics Technology	AAS	A	Nursing - Associate Degree	AAS	A,B
Auto Chassis & Power Train	Diploma	A			(Carroll Terms 1,2,3)
Auto Engines & Tune-up	Diploma	A	Nursing - Practical	Diploma	A,B,C
BSEP - GM	AAS	A	Office Assistant	Diploma	A,B,C,N*,U
Biotechnology	AS	A	Office Specialist	Certificate	A,B,C,N*,U
Building Maintenance	Certificate	A	Personal Financial Planning	Certificate	A
Building Trades	Diploma	A	Phlebotomy	Certificate	A
Business Administration	AS	A,B,C,N,U	Production Art	Certificate	A
Business Information Systems	AAS	A,B*,C*,N*,U*	Purchasing Management	Certificate	A
Chemical Dependency Counseling	Certificate	A	Purchasing Operations, Advanced	Certificate	A
CIM- Manufacturing Resource Planning	Certificate	A	Quality Technician	AAS, Dipl, Cert	A
CIM- Product Engineering	Certificate	A	Residential Care Facility Adm.	Certificate	A
CIM- Shop Floor Control	Certificate	A	Respiratory Therapy	AAS	A
Civil Engineering Technology	AAS	B	Retailing	Diploma, Cert	A
Commercial Art	AAS	A	Safety Science	AAS, Certificate	A,N*
Commercial Horticulture	AAS	A	Sales	Certificate	A
Greenhouse Production	Certificate	A	Sales & Management	Diploma	A
Turf Maintenance	Certificate	A	Secretarial Careers:		
Computer Aided Design Technology	AAS, Dipl	A	Administrative Assistant	AAS	A,B,C,N*,U
Computer Applications	Certificate	A,B,N,U	Medical Administrative Assistant	AAS, Diploma	A
Computer Languages	Certificate	A,U*	Office Assistant	Diploma	A,B,C,N*,U
Computer Programming	AAS	AU*	Office Specialist	Certificate	A,B,C,N*,U
Criminal Justice	AS or AA	A,N*,U*	Supervision	Certificate	A,B,N,U
Culinary Arts	AAS, Dipl	A	Technical Management	Certificate	A
Data Entry I	Certificate	A,B,C,N,U	Telecommunications Technology	AAS	A
Database Specialist	Certificate	A	Tool & Die Making	AAS	A
Dental Assistant	Diploma	A	Turf Maintenance	Certificate	A
Dental Hygiene	AAS	A	Welding	Diploma	A
Diemaking (See Tool & Die Making)	Diploma	A	Welding - Blueprint Reading	Certificate	A
Diesel Technology	AAS, Dipl	A	Welding - Gas Metal Arc	Certificate	A
Dietary Manager	Certificate	A	Welding - Gas Tungsten Arc	Certificate	A
			Welding - Oxy-acetylene	Certificate	A
			Welding - Pipewelding	Certificate	A
			Welding - Shielded Metal Arc	Certificate	A
			Welding - Structural Welding	Certificate	A

* = Selected courses in this program are offered at this campus AA = Associate in Arts Degree AS = Associate in Science Degree AAS = Associate in Applied Science Degree AGS = Associate in General Studies

Profile of DMACC

This section contains information on . . .

History
Philosophy and Purpose
Accreditation
The Campuses

Ankeny Campus

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

Boone Campus

1125 Hancock Drive
Boone, IA 50036
515-432-7203 or toll free in Iowa
800-362-2127, FAX: 515-432-6311

Carroll Campus

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

Newton Polytechnic

600 N. 2nd Avenue W.
Newton, IA 50208
641-791-3622 or toll free in Iowa
800-362-2127, FAX: 515-791-1728

Urban Campus

1100 7th Street
Des Moines, IA 50314
515-244-4226 or toll free in Iowa
800-362-2127, FAX: 515-248-7253

Visit our website, www.dmacc.cc.ia.us/

Board of Directors

- Harold Belken
- Dale Froehlich
- Steve Goodhue
- Naomi Neu
- Joe Pugel
- Dr. Wayne Rouse
- Doug Shull, President
- Madelyn Tursi
- Rena Wilson

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 Schools and is approved by the Iowa Department of Education.

Des Moines Area Community College shall not engage in nor allow discrimination which is covered by law, including harassment, based on race, color, national origin, creed, religion, gender, age, disability, and to the extent covered by law, veteran status 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



Joseph A. Borgen, President
Des Moines Area Community College

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. Michael Hupfer, Executive Director, Human Resources, (Bldg. 1, 515-964-6408.)

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 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

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.

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.
- provide counseling and other support services which improve a student's chances for success in their educational endeavors.
- provide learning experiences and co-curricular activities which promote personal, social, academic, and vocational development of students.

Profile of DMACC

- 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 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.

Access to Campus Facilities

The DMACC campuses are generally open to students and the public from 7:00 a.m. to 10:30 p.m., Monday through Friday and 7:00 a.m. to 12:00 p.m. on Saturday (Saturday hours may vary on some campuses.) The campuses are closed during other times and on holidays.

Academic Calendar 2000-2001

Fall Semester - September, 2000

August 28, 2000	Fall Semester Begins (first day of classes)
October 1, 2000	Application Deadline for Fall Graduates
October 20, 2000	MIDTERM
November 6, 2000	Last Day to Withdraw From Classes
November 23-26, 2000	Thanksgiving Holiday - No Classes, Offices Closed
December 15, 2000	Last Day of Fall Semester
December 25, 2000 to January 1, 2001 ..	Christmas and New Year's Holidays - Offices Closed

Spring Semester - January, 2001

January 8, 2001	Spring Semester Begins (first day of classes)
January 15, 2001	Martin Luther King Holiday - Offices Closed
February 1, 2001	Application deadline for Spring and Summer Graduates
March 2, 2001	MIDTERM
March 9, 2001	President's Day - No Classes, Offices Closed
March 19-24, 2001	Spring Break - No Classes, Offices Open
March 27, 2001	Last Day to Withdraw From Classes
May 3, 2001	Last Day of Spring Semester
May 3, 2001	7:00 p.m. Ankeny/Urban/Newton Graduation
May 4, 2001	10:00 a.m. Boone Graduation
May 7, 2001	Carroll Graduation

Summer Semester - June, 2001

May 30, 2001	Summer Semester Begins (first day of classes)
July 4, 2001	Independence Day Holiday - No Classes, Offices Closed
August 9, 2001	Last Day of Summer Semester

Important Phone Numbers

General College Information 515-964-6200

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

Advising & Counseling	515-964-6246
Career Resource Center	515-964-6474
Continuing Education	515-964-6648
Credentials/Evaluation/Graduation	515-964-6647 or 964-6507

Disabled Student Services	515-964-6268
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
Security (Ankeny)	515-964-6500
Security Cellular Phone	515-964-6500

Housing

Ankeny	515-964-7474
Boone	515-432-7203
Iowa College Aid Commission	515-281-3501
Job Placement	515-964-6215

Academic Achievement Centers

Ankeny	515-964-6255
Boone	515-432-5096
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 or 965-7084
Veterans' Services	515-964-6284
Vocational Rehabilitation	515-964-6366
Ankeny, Boone, Newton & Urban	1-800-362-2127
Carroll	1-800-622-3334

Admissions

This section contains information on . . .

Admissions Requirements & Procedures

- **New Students**
- **Guidelines for Required Assessment**
- **High School Students**
- **Guest Students**
- **International Students**
- **Residency Requirement**
- **Readmission**
- **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 stand-by 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. Complete required assessment. (As notified after completing steps #1 and #2.)
4. Complete any other program or course prerequisites for the specific program for which application has been made.

Applicants declare their programs/majors

on the "Application for Admissions." Undecided applicants 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 they have been placed on a stand-by status.

Guidelines for Required Assessment

DMACC requires assessment of all new full-time students who register for twelve (12) credit hours or more Fall and Spring semester or eight (8) credit hours or more Summer 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. **Complete COMPASS testing at any DMACC campus.** The COMPASS test in math, reading and writing is given to students who do not qualify under options 2 or 3. There is no charge for this service.
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 - COMPASS testing.
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 COMPASS test.

Students planning to enroll part-time 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 in a writing class.

- complete a reading assessment before enrolling in a third credit class.

If you need COMPASS testing, call the campus nearest you to make an appointment. If you need to take the COMPASS test with an accommodation because of a disability, you will need to provide documentation of the disability and make arrangements with the testing center.

Ankeny

515-964-6595 or 1-800-362-2127, ext 6595

Boone

515-432-5096 or 1-800-362-2127, ext 5096

Carroll

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

Newton

641-791-1730 or 1-800-362-2127, ext 1730

Urban

515-248-7218 or 1-800-362-2127, ext 7218

High School Students

- A. DMACC offers the opportunity for high school students to enroll in credit classes. Any student with less than junior status will be required to complete steps 1-4 and will be limited to enrollment in two courses. Juniors and seniors must complete steps 1-2. Step three is required if you plan to enroll full-time. Step four is optional, but encouraged.

Admission steps:

1. Submit a completed "Application for Admission".
 2. Submit written approval from a parent/guardian and the high school counselor or principal.
 3. Complete COMPASS testing or submit ACT scores. Course placement will be mandatory based on COMPASS or ACT scores.
 4. Meet with a DMACC advisor/counselor prior to registration.
- B. 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.

- C. **High School Articulated Courses** (Tech Prep) DMACC has entered into joint enrollment agreements with some of the high schools in the merged area. Specific courses are offered in the high schools under curriculum guidelines jointly ap-

Admissions

proved by DMACC and the high school. Credit earned through these agreements is recorded as articulated credit earning transfer (TRF) credit.

Articulated credit is recorded on the student's permanent record after the student has applied for admission, earned 12 credits at DMACC and paid the required fee for each class that has been articulated.

- D. 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 cannot be claimed for two consecutive terms. Students must submit a DMACC application accompanied by proof of acceptance at their primary college or a valid student ID.

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 of \$11,000 per year, while attending the College.
3. Provide official evidence of the English proficiency required by the College by sending one of the following:
 - OFFICIAL TOEFL score (Test of English as a Foreign Language/offered worldwide). A score of 173 or 500 is required to enroll in credit classes. The DMACC code is #6177.
 - 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.
 - Official transcript showing successful completion of Freshman level English at an accredited U.S. college or university.
4. Submit an International Student Data sheet.
5. Deposit \$2,000 (U.S. dollars) for the first semester to cover admission and educational costs while attending the College. This includes a \$100 International Student Processing Fee.

6. 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.
7. It is recommended that all international students have sufficient health insurance to meet any emergency need. New F-1 regulations may soon require that this be mandatory.

It is the responsibility of the student to maintain his/her Visa status while enrolled at DMACC. Failure to do so could result in deportation.

Other conditions are similar to those of American students. Upon acceptance and payment of the Processing fee, the College will issue an I-20 (Certificate of Eligibility for Non-Immigrant "F-1" student status) which is for applying for an F-1 student Visa.

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.

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 complete 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 ninety (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/Enrollment Services Office at (515)-964-6320.

Readmission

Students who have withdrawn and who wish to be readmitted should apply to the Admission Processing Office.

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 Vice President of Student Services (Accommodation Officer) at (515)964-6513 as soon as possible, but no later than one full business day in advance.

Tuition & Fees

Resident Student Tuition Rate for Credit Offerings

Full or part-time enrollment (per credit)	\$ 61.00
Audit (per credit)	\$ 61.00
Career Supplemental non-credit courses (per contact hour)	\$ 4.00
Continuing and General Adult Ed - Local schools (per contact hour)	\$ 2.00

New Legislation: Congress has passed new legislation concerning potential income tax credits called the Hope Scholarship and Lifetime Learning Credit. These tax credits go into effect in 1998. Please consult the IRS or your tax preparer for further information concerning these credits. More details are available on the internet at <http://www.ed.gov/inits/hope/>

English as a Second Language	
Level 4- 6 (per course)	\$ 75.00
High School - Diploma (per course)	\$ 75.00
- Correspondence fee	\$ 85.00

Non-resident tuition is 200% of resident rate

Fees

Service & Technology Fee (per credit)	\$ 8.40
Service fee - non-credit courses (per contact hour)	\$.20
Music fee (piano/instrumental per course)	Market Rate
Correspondence course fee	\$ 15.00
Convenience fee (TV classes - per course)	\$ 30.00
Convenience fee (Internet classes - per credit hour)	\$ 20.00
Lab fees for Advanced Technology Center and computer application courses (per course)	Market Rate
Deferred payment fee	\$ 25.00
International student processing fee	\$ 100.00
GED - Testing/Diploma fee	\$ 50.00
- Instruction fee	\$ 50.00

Transcript Fees

Overnight request	\$ NA
On demand request	\$ 5.00
FAX requests	\$ 5.00

Des Moines Area Community College reserves the right to change tuition and fees.

Traffic Fines

Parking in handicapped stall	\$ 100.00
Illegal Parking	\$ 5.00
Back-in parking (only head-in parking allowed)	\$ 1.00
Improper permit display	\$ 5.00
No permit displayed	\$ 10.00
Driving in unauthorized area	\$ 25.00
Moving violation	\$ 25.00

Des Moines Area Community College shall not engage in nor allow discrimination which is covered by law, including harassment, based on race, color, national origin, creed, religion, gender, age, disability, and to the extent covered by law, veteran status.

Financial Aid

This section contains information on . . .
Free Application for Federal Student Aid Grants & Scholarships
Loans
Employment
Satisfactory Academic Progress
Veterans Educational Benefits
Iowa National Guard

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 April 1 prior to the fall term. It is necessary to reapply each year.

Grants and Scholarships

Federal Pell Grants are based on financial need and are available if the student has applied, shows financial need, and does not have a bachelor's degree. Students should contact the Financial Aid Office regarding their eligibility.

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

Iowa Vocational-Technical Tuition Grant (IVTTG): IVTTG is available for students enrolled in a vocational-technical program. IVTTG awards are made by the Iowa College Student Aid Commission through notification to DMACC. The maximum amount is \$650.

Iowa Grant: is available to undergraduate 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. Students should see their 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 fundraising 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 Direct Student Loan - Subsidized and Unsubsidized: 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 six 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. The subsidized/unsubsidized Direct Loan amounts are \$2,625 for freshmen and \$3,500 for sophomores. Independent students may be eligible to receive additional unsubsidized loans. 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. Parents can borrow the cost of the dependent student's education minus any financial aid the student receives. Parents apply through the Financial Aid Office.

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.

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 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 program of 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 2.0. 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.

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 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, 515-964-6284 or 1-800-362-2127 extension 6284.

Iowa National Guard: The Iowa National Guard Tuition Aid Program (INGTAP) may pay up to \$1,800 per year for undergraduate tuition for active members of the Iowa Army and Air National Guard. Eligibility for this tuition assistance program is determined by the Adjutant General of Iowa and funding for the program is determined on an annual basis by the Iowa General Assembly. Individuals must apply for this grant through their Unit Commander to apply for this program. The Adjutant General determines eligibility and then notifies the Iowa College Student Aid Commission (ICSAC) of approved applications. The College is notified by the Iowa College Student Aid Commission of the student's eligibility.

Registration/Student Accounts

This section contains information on...

Registration Procedures

- New Students
- Part-time Students
- Returning Students

Cross-enrollment

Student Accounts

- Indebtedness Policy
- Payment of Charges
- Important Information
- Refund Policy and Schedule
- Financial Aid Recipients

Registration Procedures

New Students

Full-time

Registration for all new full-time students (12 credits or more fall and spring semester or 8 or more credits summer semester) 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.

Orientation to College

Classes at the college level are very different from high school classes. To help students make a successful transition, DMACC offers an Orientation to College course - CDEV100. The course uses short lectures, demonstrations, guest speakers, and practical exercises to help students understand the entire college experience from classroom expectations to resources.

CDEV100 - Orientation to College is required for students who fit these guidelines:

- enrolled in an arts and sciences, pre-professional or general education program.
- enrolled full-time
- have no previous college experience

For more information on maximizing the college experience, call 515-965-7004.

Part-time

Part-time students (11 or fewer credits fall and spring semester, 7 or fewer credits summer semester) may register in person, via telephone, mail, FAX, or on the WEB. Dates for registration services are listed in the registration schedules or contact the Student Development Office.

Returning Students

Returning Career Education students may register in person, by telephone, mail, FAX or on the WEB. Dates are listed in the registration schedules or contact the Student Development office of the campus you are attending.

Returning Arts & Science students are assigned registration dates according to the

number of DMACC credits earned plus accepted transfer credit. Dates are posted in the registration schedule, or contact the Student Development office of the campus you are attending.

Cross-enrollment

Under a special agreement, a limited number of students may enroll in one class at Drake University, Grand View College, or Iowa State University fall or spring semester, provided they are taking at least 12 semester hours at DMACC, have earned 12 semester credits (including transfer credit), and have a cumulative 2.0 GPA. This credit will be added to the DMACC transcript according to transfer credit guidelines. This agreement does not apply to summer session. For more information on Cross Enrollment, contact the DMACC 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.

Payment of Charges

Students are responsible for complete payment of tuition and related fees by the published due date. Students may establish a Payment Plan for CREDIT classes with the Students Accounts Office at the campus they attend. A plan may be established with a down payment of 1/3 the total tuition/fee costs due plus a \$25.00 non-refundable fee. Establishing a Payment Plan guarantees a student's enrollment for the term. (Classes will not be cancelled even if subsequent payments are not made). Failure to make subsequent payment(s) on the Plan may result in formal Collection proceedings.

Important Information:

1. Failure to make complete payment or establishing a Payment Plan by the published due date will result in the cancellation of credit class enrollment unless special arrangements have been made with the Students Accounts Office or the Financial Aid Office.
2. Payments are **not** deferred pending processing of VA records and/or checks
3. Payments may be made by cash, check, MasterCard, or VISA
4. Two-party checks will not be accepted.

Tuition Refund Policy

Refund Policy

All Campuses - Fall, Spring and Summer

Important considerations before dropping classes:

- Students should consider consulting with an advisor or counselor
- Students should consider insurance issues affected by dropping classes

- Students should consider a possible reduction of financial aid. See the Financial Aid Recipients section below.

Student refunds are computed by using:

1. The date the Student Registration Office receives a formal drop form from the student or
2. The date the Student Registration Office receives a phone call or fax from the student requesting a class drop or
3. The date the student initiates a drop via the Internet.

NOTE: Students eligible for a refund will receive a check in the mail or a refund adjustment to their previous MasterCard/VISA payment.

Refund Schedule - (normal/full length term classes only)

First Week	100%
Second Week	75%
Third Week	50%
After Third Week	No Refund

Refunds for classes other than the normal full term length will be prorated.

Refunds for TV classes are based on the class dates - NOT the viewing dates.

Financial Aid Recipients

If any amount of tuition is paid by a Title IV Program and the student withdraws during the established return period, the Title IV program funds will be returned in the following order; Loans: Federal Unsubsidized, Federal Subsidized and Federal Plus. Grants (& other): Federal Pell, Federal Supplemental Educational Opportunity Grant and Other Title IV funds. The institution must return the funds as soon as possible, but no later than 30 days after the institution determines the withdrawal date.

New Return of Title IV Aid

(Replaces Previous Refund Policy)

The law (section 485 of the Higher Education Amendments of 1998-P.L. 105-244) now specifies how DMACC must determine the amount of student financial aid program assistance that is earned if the student withdraws. DMACC will apply this new regulation beginning Fall semester 2000. The new law requires that when students withdraw during a payment period the amount of Student Financial Aid program assistance they have earned up to that point will be determined by a specific formula. If a student received (or DMACC received on their behalf) less assistance than the amount earned, the student will be able to receive those additional funds. If a student received more assistance than earned, the excess funds must be returned.

The amount of assistance that students have earned is determined on a pro-rated basis. That is, if they complete 10 percent of the payment period, they earn 10 percent of the assistance they were originally scheduled to receive. Once students have completed more than 60 percent of the payment period, they **earn all** their assis-

Registration/Student Accounts

tance. If a student as earned more than 60 percent, no return of funds is necessary.

If a student received excess funds that must be returned, DMACC must return a portion of the excess equal to the lesser of

- The institution charges multiplied by the unearned percentage of the funds, or
- The entire amount of the excess funds.

As prescribed by the changes in the law DMACC is required to return all of the excess funds; the student must return the remaining amount. For any loan funds a student must return, the student (or the parent for a PLUS Loan) will repay in accordance with the terms of the promissory note. That is, the student makes scheduled payments to the holder of the loan over a period of time.

If students are responsible for returning grant funds the law provides that they are required to return 50 percent of the grant assistance that they receive. Any amount that they do have to return is a grant overpayment and they must make arrangements with DMACC or the Department of Education to return the funds.

Example:

Penny Allowance is a resident returning student from Des Moines who was very disappointed to have to withdraw during the semester from DMACC, particularly since she is doing very well in the twelve credit hours she is taking. Penny has to withdraw for personal reasons. Penny had been awarded and credited to her student account, a Pell Grant for \$998.00, a Supplemental Education Opportunity Grant (FSEOG) for \$250.00 and a Subsidized Student Loan for \$1,261.00. Penny had completed only 11 days of the semester or 10 percent of the payment period. Penny was assessed \$951.00 in tuition and fees.

Amount and Order of Return

The school must return the lesser of:

- The unearned amount of the financial aid; or
- An amount equal to the student's total institutional charges for the period multiplied by the unearned percentage (Example: $\$951.00 \times 90\% = \855.90)

Amount the student returns:

The student must return the unearned amount of Title IV assistance minus any funds the school returned (Example: $\$1,261.00 - \$855.90 = \$405.10$). In effect, a student whose financial aid exceeded institutional charges will have to return funds. However, if the amount the student is required to repay is to a grant program the student is required to only pay half of the amount.

In this example, both DMACC and Penny will return loan proceeds. After initiating the withdrawal process it was determined that \$855.90 of the loan proceeds were to be returned by DMACC and \$405.10 of the loan

proceeds returned to the Direct Loan program by Penny, in accordance with the terms of the promissory note.

Based upon the calculation, the Pell Grant amount to be returned was \$997.10, however, because the Pell is to be repaid by the student, only 50% or \$498.55 must be repaid. (Example: $\$997.10 \times 50\% = 498.55$) In this case no FSEOG funds are returned as the loan and Pell repayments cover the excess award. Penny is now in a Pell Grant overpayment situation.

Title IV Grant Overpayment

If students have a grant overpayment, they will remain eligible for Title IV aid up to 45 days after they have been notified of the overpayment. Students may correct the overpayment situation by repaying the overpayment in full to the institution or arranging to make satisfactory repayments to the institution or with the U.S. Department of Education..

Post Withdrawal Disbursement

DMACC may credit student accounts for institutional charges but DMACC must seek the student's permission (in writing) within 30 days of the withdrawal to do so.

Leave of Absence

A leave may be granted to a student who leaves the college for military reasons or for jury duty. Only one leave per academic year will be allowed. The student must return by the end of the leave of absence or the student is treated as a withdrawal.

Contact the Financial Aid Office for additional information concerning the Return of Title IV Aid or check our web site at DMACC.cc.ia.us/finaid.htm. Regulations governing Return of Title IV aid are subject to change, please refer to DMACC's financial aid web site for updated information.

This section contains information on . . .

- Academic Achievement Centers*
- Alumni Association*
- Assessment Centers*
- Campus Security*
- Career Resource Center (CRC)*
- Child Care*
- College Bookstores*
- College Tours*
- Counseling Services*
- Dental Services*
- Developmental Studies Program*
- DMACC Choirs*
- Educational Advising*
- Emergency Auto Service*
- Excercise Class*
- Food Services*
- Gymnasium*
- Health Service (Campus Nurse)*
- Job Placement*
- Libraries*
- Lost & Found*
- Notary Public*
- Part-time & Off Campus Students*
- Recreational/Wellness Program*
 - *Intramural*
 - *Intercollegiate*
- Rehabilitation Counseling*
- Services for Students with Disabilities*
- Student Action Board*
- Student Activities*
- Student Centers*
- Student Clubs & Organizations*
- Student Housing*
- Student Publications*
- Testing Center*
- Tutoring*
- Ticket Sales*

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.

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 fund-raising activities, the Association provides scholarships and grants to deserving DMACC students. For more information, contact the Alumni Office.

Assessment Centers

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

Campus Security

Law enforcement and security is provided as warranted by existing conditions to help ensure the safety and security of our campuses. DMACC provides 24-hour/day security officer patrol of the Ankeny Campus. At the Urban Campus, security officer patrol is 7 a.m. through 10:30 p.m., Monday through Thursday; 7:00 a.m. through 3:00 p.m. Friday; and 8:00 a.m through 12:30 p.m. Saturday. Security measures may include uniformed security guards, closed circuit television, building security systems, exterior lighting, courtesy phones, and attention to landscape materials. In addition, the Ankeny, Des Moines, Boone, Carroll, and Newton Police Departments patrol and assist the College in their respective jurisdictions. DMACC Security personnel administer traffic and parking regulations and provide assistance to the college community.

Career Resource Center (CRC) Ankeny Campus

The CRC offers assistance and informational resources to students and prospective students. The CRC has current information about occupations and other two and four-year colleges and universities. CHOICES, a computerized career guidance system, is available by appointment but walk-in assistance is also available. In addition, the Strong Interest Inventory is available on-line for career decision making, however this inventory requires an interpretative appointment with a counselor. Using the CRC resources will enable people to learn about job requirements, job trends, salaries, school majors and costs, personal interest and skills. Using this information can help people make better career choices.

Child Care

The DMACC Child Development Center on the Ankeny Campus provides child care for the children of students and staff. Children ages 2

- 5 are eligible for child care during normal college business hours. Children must attend on a full or part-time regularly scheduled basis. The child care center is open year around on student contact days only. There is generally a waiting list. To make application or for more information call 515-964-6588.

The Urban Campus Zack Hamlett Child Care Center is a cooperative effort of Des Moines Area Community College and Children and Families of Iowa. The center is open year around to DMACC students and the general public. Children ages 2 - 5 are eligible. For more information call 243-2022.

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, 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 or exchange of any textbook within 14 days from the beginning of each semester, as long as the textbook is in the same condition as when purchased. Check with the bookstore for further details of the Bookstore Return Policy. 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. Check with the bookstore about further details regarding the Buyback Policy. 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 orders from the Ankeny Campus bookstore is available for other off-campus courses. MasterCard and VISA charge cards are accepted. 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.

Student Services/Activities

Students receiving funds from an agency must pick up a voucher in Student Accounts before purchasing books and supplies.

College Tours

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

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.

Dental Services

Dental Hygiene students on the Ankeny Campus provide the following preventive dental services for DMACC students and the community at a reduced fee: Cleaning of teeth, home care instruction, sealants, polishing fillings, fluoride treatment, x-rays, study models, nutritional counseling, blood pressure, and oral cancer screenings. To schedule an appointment call 964-6280.

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 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 col-

lege-level courses. Support services in the developmental studies program include tutoring, individualized instruction, homework help, assessment of basic skills, vocational interest, and academic planning offered by the Academic Achievement Centers.

DMACC Choirs

For students interested in choral music DMACC Ankeny Campus offers two student choral group experiences. The Concert Choir (MUSI 144) meets on MWF from 11:15 AM until 12:10 PM. This group, the larger of the two choirs, is available to everyone. No audition required-no experience necessary. The Chamber Choir (MUSI 145) is selected by audition from the Concert Choir membership. Chamber Choir rehearses MWF from 12:40 PM until 1:15 PM. Both choirs sing a wide variety of music ranging from serious to pop selections. Concert Choir is a 2 hour elective credit course. Chamber Choir is a one hour elective credit course. Students interested in Concert Choir should register for MUSI 144. Students may not register for Chamber Choir until after they have auditioned and been accepted.

Educational 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.

Emergency Auto Service

On the Ankeny Campus, students with cars that won't start, have low tires, or locked keys in their car should contact campus security at Ext.#6500 (964-6500 off campus). Assistance may be obtained from the Security officer or, if Security is not available, a commercial car service in Ankeny may be called. DMACC security service is provided free of charge, but charges of any commercial car service will be the full responsibility of the student. At the Boone and Carroll Campus, maintenance staff will assist with starting cars. At the Newton Campus, jumper cables may be borrowed from the Newton SAB through the Information Desk. At the Urban Campus, jumper cables may be borrowed from Security.

Exercise Classes

Exercise class schedules are available in the gym office, Building 5, on the Ankeny Campus. Exercise classes begin the first week of each semester and are free to all students.

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.

Gymnasium

There are indoor recreational facilities on the Ankeny and Boone Campuses. Schedules of the events and guidelines for utilization of the facilities are available.

Recreation/Wellness Services serves student recreational needs. All current Des Moines Area Community College students are eligible to participate in Recreation/Wellness Activities.

At the Ankeny campus, indoor facilities accommodate basketball, volleyball and indoor track. Free weights, universal machines, exercise bikes, stair climbers, treadmills, exercise mats, and locker rooms are also available for student use. Lockers, padlocks, and towels may be rented on a daily or semester basis. Gym and Exercise Room Schedules are available at the Gym's office and schedules may vary due to special events.

Open Recreation: Facilities may be used by current students, staff/faculty and alumni with current membership cards.

Family Recreation: Facilities may be used by current students, staff/faculty and alumni with current membership cards. Members may bring only their immediate family or one guest.

Please do not bring children before 5:00 P.M., as they will not be permitted in the facilities until then. Students, staff/faculty, and alumni MUST be with their family when using the facility. Evening gym hours will be posted on the bulletin boards around campus.

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 several hours per week during the fall and spring semesters. Check with the Campus Nurse for time and day.

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.

Job Placement

Placement Services include job listings and re-

Student Services/Activities

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 labor market information; help with resume writing, application letters, interviewing, and job seeking skills.

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.

Libraries

Library services are provided at the Ankeny, Boone, Carroll and Urban campuses. The DMACC Libraries' website provides access to information from any computer on the college network, www.library.dmaccc.cc.ia.us. DMACC provides access to INNOPAC, the on-line catalog; several EBSCO host databases which include full text articles from over 3,000 periodicals as well as abstracting and indexing for over 6,000 titles; other resources such as Electric Library, Encyclopedia Britannica On-line, and selected FirstSearch databases; on-line catalogs of other Iowa libraries; an on-line reference service; and library news and information. Selected sources, including INNOPAC and the EBSCO host databases, are also available to students and staff from remote sites. The DMACC Libraries are full members of the On-line Computer Library Center, Inc. (OCLC), an internationally recognized bibliographic utility, which provides important products and services to libraries and their users. DMACC is a member of the Polk County Biomedical Consortium, a group of health science libraries affiliated with the National Library of Medicine, and also participates in the State Library of Iowa's Open Access program, which allows our cardholders to borrow materials from other participating libraries.

Ankeny Campus

The Ankeny Campus Library has 45,000 volumes in the book collection, 300 periodical subscriptions, and 3,000 videos and other audiovisual materials. The collections emphasize subjects related to the College curriculum, including the humanities, social sciences, natural and health sciences, business and technology. Interlibrary loan service is available at no charge to DMACC students and staff for books and articles not owned by our libraries. Other services include reference assistance, coin-operated photocopiers, group study rooms, an individualized listening/viewing room, and library orientation sessions for individual classes at the request of the instructor.

Boone Campus

The Boone Campus Library has a collection of approximately 19,000 circulating and reference books, 175 periodical subscriptions, compact discs, audio books, and a large collection of videos. Material not owned by the library can be obtained through interlibrary loan at no charge. It also participates in the Open Access program through the State Library. The library also provides access to the 40-station student computer lab at the Boone Campus. In addition, Library Instruction classes (LIBS120) and Internet Research classes (LIBS123) are offered by the staff each semester.

Carroll Campus

The library at the Carroll campus has a collection of books, periodicals, audiovisual materials and electronic resources. The library collections of all DMACC campuses are located on the INNOPAC, the electronic database, and students can intra-campus loan these materials. The DMACC libraries subscribe to a number of research databases to help support student, faculty and staff learning. The on-line indexes, the full-text and abstracted periodical databases. (Ebsco-Host and First Search databases) are available at the URL address www.library.dmaccc.cc.ia.us. DMACC libraries are members of the OCLC library network, which provides access to interlibrary loan requests and holdings information in academic, public and special libraries in Iowa, United States and foreign countries. DMACC libraries are participants in Iowa's Open Access program and SILO (the Iowa online database of materials from many libraries) which give DMACC patrons access to a wide variety of information. Library orientation classes and additional instruction on computer database searching are provided upon request at the Carroll Campus library. These resources provide students with the tools to locate the materials needed for assignments and life long learning. The Carroll Campus library facilities include a computer lab, the testing center and academic achievement center, an elementary curriculum library and multi-media storage area for media equipment availability and check out.

Newton Polytechnic

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

Urban Campus

The library at Urban Campus has a book collection of more than 13,000 volumes. This collection reflects the courses of study for the College, including a reference collection unique to the Urban Library that complements the legal assistant program.

In addition to the book collection, the Urban Campus Library subscribes to a large number of periodicals and has many more periodicals available online along with other reference databases. There is a collection of video tapes that

supplement the textbooks in accounting and mathematics, video tapes for the telecourse division of the College, and video tapes to amplify a variety of subjects. There is a pamphlet file of materials to use in research.

Students can avail themselves of materials from other libraries through interlibrary loan services. Study facilities and audio-visual equipment are available in the Library. Assistance in the use of the library and its materials can be obtained from the library staff.

Lost & Found

If students lose or find an item on campus, contact the Student Activities Office at the Ankeny Campus, the main office at Boone, Carroll, or Urban, and the Information Desk at the Newton Campus, where the "lost and found" service is maintained.

Notary Public

Free Notary Public service is located at both the Information Center and the Student Activities Office on the Ankeny Campus, the main office at the Carroll Campus, the Business Office at the Urban Campus and the Information Desk at the Newton Campus.

Part-time & Off Campus Students

DMACC part-time and off-campus students, including those who are registered for an evening/weekend or off campus, TV or Iowa Communication Network (ICN) class, are encouraged to utilize the College's services, and they are obliged to be familiar with the College's policies and procedures.

Departments that may be of particular assistance include:

- Evening /Weekend College, Ankeny Campus 964-6286
- Off-Campus Credit, District Wide 964-6475
- TV Courses, District Wide 964-6422
- ICN, District Wide 964-6856
- Educational & Career Planning (All Campuses) 800-362-2127

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.

Student Services/Activities

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 volleyball on the Boone Campus.

Rehabilitation Counseling

Through a special agreement with the Iowa Division of Vocational Rehabilitation Services, a rehabilitation counselor is assigned to the College 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.

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 complete the Application for Accommodation. This form is available from the Counseling and Advising Office on each of the campuses.

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 available to provide rehabilitation services to eligible disabled students. These services include assistance in obtaining vocational evaluations, physical restoration, job training, financial aid, and job search assistance.

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

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.

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 Clubs and Organizations

Students are encouraged to participate in campus clubs and organizations. 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 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 Campus View Apartments at 515-964-7474, managed by Premiere Properties, L.C. 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.

Student Publications

Students produce a newspaper "The Challenger," a news and editorial forum by and for all students on the Ankeny Campus. On the

Boone Campus students publish the "Bear Facts." Publications emphasize news features, entertainment, sports, and college events. For additional information, contact the publications advisors at the Ankeny or Boone Campus.

Testing Center

The Testing Center provides a site for make-up testing when students have missed class on a test day. The center also serves as a site for administering correspondence tests for courses taken at other institutions and challenge tests for DMACC courses.

Students must arrange with their instructors to have tests sent to the Testing Center. When they arrive to take their exams, they will be required to present picture identification, such as a driver's license. For Testing Center hours, students should contact the Information Desk at the Newton Campus and the Testing Center or Academic Achievement Center at the other respective campuses.

Tutoring

Tutoring is a support service available to all DMACC students. This service offers students the opportunity to get assistance with all their difficult courses. DMACC tutoring is:

- Certified nationally through CRLA (College Reading and Learning Association)
- Offered FREE to all DMACC students
- Available for one on one or group tutoring
- Available anytime throughout the semester
- Available for any course
- Assigned on a regularly scheduled basis depending on need
- An opportunity for students to earn extra money as a tutor while on campus.

For more information call the Tutoring Services Department - Ankeny Campus at 965-7004, or the Academic Achievement Center at the campus attended.

Ticket Sales

Discount tickets to various activities and attractions are available at the Student Activities office at Ankeny, the Advising office at Carroll, or at the Business Offices at Boone, Urban and Newton Campuses. The Ankeny Campus offers discount tickets to Civic Center events, Worlds and Oceans of Fun, White Water University Park, Ankeny Paramount Theater, Woodland Hill Golf Course, and Carmike Movie Theaters in Des Moines. The Carroll Campus offers Worlds of Fun, Oceans of Fun and Carroll Theater V discounted tickets. Urban Campus offers discount tickets to Adventureland Park, White Water University Park, Carmike Theaters and discounted bus passes for Metro Transit Authority. Ticket offerings vary at the Boone and Newton Campuses. Check in the main offices for details. Cash and personal checks are accepted.

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

- *Withdrawal from College*

- *Auditing Courses*

Evaluation of Previous Training and Education

- *Transfer to DMACC*

- *Transcript Requests*

- *Credit for Educational Experience in the Armed Forces*

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. Student must be currently enrolled at DMACC.

CLEP tests will be administered by appointment. 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 student may challenge test a course only once. This can occur at any time prior to formal registration in that course or by the designated drop date for the term in which the student is in attendance.
- A course cannot be challenged that is a prerequisite to a course that has been successfully completed.
- A challenge test 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 educational 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. Each independent study may be for one, two or three credits. 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 may be made in person, by mail, by FAX, by phone, or by web access. Course ADDS can be made through the 5th day of the term. The last day to DROP a course and received a full or partial refund depends on the Part of Term in which the course falls. A list of Parts of Term and the last day to drop for each Part of Term are published in each class schedule and are also available by contacting the registration office.

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 mark 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 tran-

script. 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 2.0 or higher. Some Health Service programs may require a minimum grade of "C" in each course that fulfills a degree requirement. Since the student's grade point average is calculated from course work 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.

Transcript Requests

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. 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.

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 course work 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.

Graduation Requirements

This section contains information on . . .

Programs of Study

- College Transfer
- Vocational Education

Transfer Information

- Articulation Agreements - Transfer Plans
- Program to Assist College Transfer (PACT)

Graduation Requirements

- Graduation Analysis Report
- Graduation Application
- Commencement

Academic and Graduation Honors

- Phi Theta Kappa (All Campuses)
- 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
- Certificate of Completion

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 vocational 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 mathematical 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 a minimum requirement of 32 credits.

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 partial 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
- Journalism
- Law
- Medicine
- 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.

Program to Assist College Transfer (PACT)

Students interested in transferring to Iowa State University in either the College of Business or the College of Family and Consumer Science after their course completion at DMACC are encouraged to participate in the Program to Assist College Transfers (PACT). PACT will assist students with a smooth transition between DMACC & ISU. Staff from the selected college will facilitate this transfer by:

1. Assigning students with an ISU advisor to

Graduation Requirements

- help select appropriate coursework.
- 2. Inviting students to participate in ISU programs and activities appropriate to their major.
- 3. Assisting students in the ISU application process.

For more detailed information and program requirements contact any DMACC counselor or advisor.

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.

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, Boone, Carroll, Newton, and Urban Campus graduates.

Academic and Graduation Honors

Phi Theta Kappa

Phi Theta Kappa is a national scholastic honor society for students of two-year colleges and there are chapters on all DMACC Campuses. Membership may be conferred upon students who have completed at least 12 semester hours of course work with a 3.50 grade point average. To be eligible for membership the student must be enrolled in courses that could apply toward a two-year associate degree program. In addition, potential members must have high moral character and desirable qualities of citizenship and leadership. Interested students should contact the Phi Theta Kappa advisor at their campus for details about their campus chapter.

Dean's List

Full-time students and part-time students who

complete a minimum of six semester credit hours and 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 and part-time students who complete a minimum of six semester credit hours and 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 listed below represent the minimum content required in any program offering these degrees at Des Moines Area Community College. Specific programs may, and often do, make additional requirements. Students must refer to the programs of study which are approved by the State Department of Education and published in this college catalog.

Associate in Arts Degree (AA)

Core Requirements - 48 Credits

A. Communications - 9 credits

NOTE: Students who intend to transfer to a four-year institution are 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
Students 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. Students must take one laboratory science course from BIOL, CHEM, or PHYL listed below.
2. Students must take one MATH or BSAD course listed below:
BIOL 118, BIOL119 (if student has credit for BIOL118,) BIOL 126, 127, 141, 142, 144, 147, 149, 154
BSAD 152 or MATH121
CHEM 120, 131, 132, 151, 152, 161, 162
MATH 115, 118,
MATH121 or BSAD152,
MATH122, 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. Students may include no more than 16 semester credit hours of vocational courses.
2. Students may have up to 8 semester credit hours of Independent Study courses; up to 4 semester credit hours of Independent Study may be earned in any single semester.

To receive an AA degree students must:

- A. Maintain a 2.0 grade point average on all work applicable for the AA degree.
- B. Earn a minimum of 1/3 of the semester credit hours applicable to the degree being pursued at DMACC.
- C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for 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.

Graduation Requirements

Total AA Degree Requirements - 64 credits

Associate in Science Degree (AS)

Core Requirements - 28 Credits

A. Communications - 9 credits

NOTE: Students who intend to transfer to a four-year institution are 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
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

Students must take one MATH or BSAD course and one science BIOL, CHEM, or PHYL listed below:

BIOL: 118, BIOL119 (if student has credit for BIOL118,) BIOL 126, 127, 141, 142, 144, 147, 149, 154
BSAD: 152 or MATH121
CHEM: 120, 131, 132, 151, 152, 161, 162
MATH: 115, 118,
MATH121 or BSAD152,
MATH122, 123, 124, 129, 130, 132
PHYL: 106, 111, 112, 121, 122

D. Humanities - 3 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 - 4 credits

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

F. Electives - 36 Credits

1. Students may include up to 16 semester credit hours of vocational courses.
2. Students may include up to 8 semester credit hours of Independent Study courses; up to 4 semester credits of Independent Study may be earned in any single semester.

Total AS Degree Requirements - 64 credits

To receive an AS degree students must:

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

ing pursued at DMACC.

- C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for an exception).
- D. Complete a minimum of 64 semester credit hours.
- E. Include at least 28 semester credit hours of core courses.
- F. Include at least 36 semester credit hours of elective credit.

Associate in Applied Science Degree (AAS)

Minimum Core Requirements are listed below. To receive an AAS degree students must:

- A. Maintain a 2.0 grade point average on all work applicable for the AAS degree.
- B. Earn a minimum of 1/3 of the semester credit hours applicable to the degree being pursued at DMACC.
- C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for 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 or MATH 121, BSAD223
CHEM 120, 131, 132, 151, 152, 161, 162
ELEM 450
ELHT 313, 323
MATH 115, 118,
MATH121 or BSAD152,
MATH122, 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.

Associate in General Studies Degree (AGS)

To receive an AGS degree students must:

- A. Maintain a 2.0 grade point average on all work applicable for the AGS degree.
- B. Earn a minimum of 1/3 of the semester credit hours applicable to the degree being pursued at DMACC.
- C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for an exception).
- D. Students may include up to 8 semester credit hours of Independent Study courses; up to 4 credits of Independent Study may be earned in a single semester.
- 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 or MATH121, BSAD223
CHEM 120, 131, 132, 151, 152, 161, 162
ELEM 450
ELHT 313, 323
MATH 115, 118,
MATH121 or BSAD152,
MATH122, 123, 124, 129, 130, 132, 410,
411,
PHYL 106, 111, 112, 121, 122, 401

Graduation Requirements

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. Students 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 students must:

- A. Maintain a 2.0 grade point average on all work applicable for the diploma.
- B. Earn a minimum of 1/3 of the semester credit hours applicable to the degree being pursued at DMACC.
- C. Complete the final 10 semester credit hours at DMACC (or petition to the Credentials Office for an exception).
- D. Complete all required courses in a particular program of study. (Minimum of 30 semester credit hours)
- E. Students must satisfy the following core:
One Communications course: ENGL 410, 117, 119 or OFFC 205
and
One Social & Behavioral Science course: SOCY 101, PSCH 101, 106 or MGMT 203
or
One Math course: any MATH (100 or above) or BSAD 223, ELEM 450, ELHT 313, ELHT 323

Certificate of Specialization

To receive a certificate students must:

- A. Maintain a 2.0 grade point average on all work applicable for the certificate.
- B. Earn a minimum of 1/3 of the semester credit hours applicable to the certificate being pursued 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 program of study.

Advanced Technology Center/Business Development Group

This section contains information on . . .

Advanced Technology Center

- Academic Programs
 - Continuing Education
- ## Business Development Group
- Economic Development Group (EDG)
 - Iowa Manufacturing Technology
 - Software Training Center (IMTC)
 - West Lakes

Advanced Technology Center

When you enroll at the Advanced Technology Center (ATC) you are taking an important step toward achieving and sustaining a higher quality of life. ATC graduates are employed as: computer systems engineers, engineers, computer network administrators, tool and die makers, safety engineers, quality engineers, computer aided design technologists, firefighters, manufacturing technologists, electronics systems technicians, automation and robotics technologists, self-employed machinists, and more!

The ATC faculty and staff are great people who want to help you to achieve your own goals. You will use the very best equipment found in any college. Our faculty teach classes at businesses and industry in order to keep their skills up-to-date. The faculty have professional certifications in their fields so they know exactly what you need to be able to do to be successful in your career. Give us a call, come visit us, enroll!

ATC Academic Programs

Associate of Applied Science Degree Programs

- Computer-Aided Design Technology
- Control Systems Technology (automation/robotics)
- Electronic Systems Servicing Technology
- Information Technology/Network Administration
- Manufacturing Technology
- Safety Science
- Tool & Die Making

Associate of Science Degree Program

- Fire Science

Diploma Program

- Job Shop Machinist

ATC Specialist Certificates

- Computer Integrated Manufacturing (CIM)
 - Manufacturing Resource Planning
 - Product Engineering
 - Shop Floor Control
- High Tech Electronics
- Safety Science

Advanced Technology Center Continuing Education

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.

Business Development Group

The Business 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 assist each organization with the functions of increasing quality and productivity.

The Business Development Group is organized into two functional divisions:

Economic Development Group (EDG)

The Economic Development Group (EDG) of Des Moines Area Community College provides contract training and consulting to assist in the growth and development of central Iowa businesses and governmental agencies. This college-business 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 administers two Iowa Training Programs in central Iowa. The New Jobs Training Program provides an incentive to new or expanding businesses that are adding new positions to their payroll. The Retraining Program offers forgivable loans to businesses that must upgrade current employee skills to stay competitive in the marketplace. EDG consultants work with the companies' managers, supervisors, and employees to assess needs, design training, and tailor the delivery of training to meet the organizations' schedule and budget. This customized training can be conducted at the business site, one of DMACC's five campuses, or at other convenient locations. The training ranges from adult basic education to highly technical training.

Iowa Manufacturing Technology Center (IMTC)

The IMTC is a statewide network that provides technical and business assistance to small and midsize manufacturers. IMTC Field Agents meet with clients to answer questions, identify areas for improvement, and provide links to resources that companies can use to increase their productivity and competitiveness. The IMTC Field Agents stand ready to conduct assessments in the following areas: Quality/Inspection, Material Engineering, Human Resources, Market Development, Process Improvement, Environmental, Plant Layout/Work Flow, CAD/

CAM, Product/Design Development, and Business Systems/Management.

Software Training Center

The Software Training Center is designed to provide computer application training and services. Training is available through continuing Education classes, contract training customized for business and industry and training "online" via the Internet.

Services include: consultation, needs assessment, curriculum development and training. Customization of the curriculum and materials is available to meet specific needs. For further information, call 515-964-6214.

West Lakes Center for Professional Development

West Lakes Center for Professional Development is a division of Des Moines Area Community College located in West Des Moines. The Center works closely with partner businesses to provide training assessment, training development, training delivery, and training evaluation services in the following areas: Computer Operating Systems & Applications, Computer Programming Languages, Business/Management Development and Productivity/Personal Development. The Center is dedicated to providing timely, high-quality, basic skill to high-tech training, in a responsive, professional, state-of-the-art environment.

Continuing Education and Specialized Programs

This section contains information on . . .

Continuing Education
Evening/Weekend College
Off Campus Credit
Distance Learning
Transportation Institute
Software Training Center
Conference Center

- Ankeny
- Newton

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. For more information call 515-964-6648.

Evening/Weekend College

Courses offered evenings and weekends provide opportunities for degree completion, career development/enhancement and cultural enrichment, in both credit 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 arts and sciences 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 38/98 and Iowa Public Television, Channel 11 in Central Iowa. Classes are available via the world-wide web. Non-credit and continuing education opportunities are also available through distance delivery. For more information, see the Distance Learning Homepage at www.dmacc.cc.ia.us/distance/distance.htm or call 515-964-6422.

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 approximately 50 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.

We also have a 24 hour Train the Trainer Program that allows transportation carriers the opportunity to qualify their drivers to become certified driver finishers.

Software Training Center

The Software Training Center is designed to assist business and industry with computer application training and services. Training can be provided at the work site, or at one of the five DMACC Campuses.

Services include: consultation, needs assessment, curriculum development and training. Customization of the curriculum and materials is available to meet 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.

Ample parking is provided just outside the facility with access to food services, audio visual equipment, and other services.

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

Conference Center - Newton

The DMACC Newton Conference Center is located in the DMACC Newton Polytechnic Building in Newton, Iowa. Serving groups from 5 to 350, the DMACC Conference Center offers a 325 seat state-of-the-art auditorium, a 4,800 square foot subdividing banquet room, reception area, and breakout rooms. Parking is conveniently located at the facility with access to complete food and beverage service, audio visual equipment and other conference services.

For further information please contact the conference center staff at 641-792-1850.

Adult Basic Education

ABE/HSE/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, provide instruction to prepare adults for the General Education Development Test (GED) and earn the High School Equivalency Diploma. Individual and small group instruction allow students 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.

GED Testing Centers

DMACC Ankeny Campus
DMACC Boone Campus
DMACC Carroll Campus
DMACC Urban Campus
Newton Polytechnic

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.

For more information call 515-964-6384 or 800-362-2127, ext. 6384.

Note to Students

This guide will provide an overview of information for enrolled DMACC students. If students have questions or concerns not addressed in this guide, it is their responsibility to consult appropriate DMACC staff, or the full text of policies and procedures available at all DMACC campuses. DMACC students are obliged to be familiar with policies and procedures affecting their activities. Ignorance of policies and procedures will not excuse violations.

CAREER & EDUCATIONAL PLANNING

Career Planning & Decision Making

Because many students pursue a general education at DMACC, some may find it advantageous to research the area or areas in which they will be majoring. Students need to gather information, evaluate the information, consider their personal values and goals, and make meaningful decisions based on consideration of alternatives and on the information gathered. They should spend time considering their choices and ask themselves questions such as:

What are their long-range goals?

What are the hobbies or interests they'd like to pursue at DMACC?

Do they want a major that will teach a specific skill, or one that will lead to a broader education?

What skills and talents do they have?

What do they want out of college?

Have all the possible alternatives been considered?

For assistance in choosing an educational program or career goal, contact the Counseling, Advising and Placement Offices in Building 1, Ankeny Campus or the Student Services Office at Boone, Carroll, Urban or Newton Polytechnic.

Career Assessment Tools to Aid Planning

There are paper and pencil assessment tools that will help students evaluate their interests, experiences, abilities and personality: Career Ability Placement Survey (CAPS), and Career Orientation Placement & Evaluation Survey (COPES), Self-Directed Search, Campbell Interest and Skill Inventory, and the Myers Briggs Type Indicator.

A computerized career guidance system called CHOICES will identify careers based on a personal interest checklist and provide

up-to-date information for approximately 783 occupations. An on-line Strong Interest Inventory is also available. Carroll Campus features the computerized system DISCOVER with information on over 1200 occupations.

The Career Resource Center in Building 1 on the Ankeny campus provides information about school opportunities and job characteristics. Occupational information builds student awareness of educational requirements, skills needed, job comparisons in similar careers, and employment opportunities. The educational information describes majors available at all Iowa schools, schools outside Iowa, admission processes, costs, and transfer plans. Career counselors will help students further evaluate the information they have obtained and assist them in their career planning process.

SCHEDULING & REGISTRATION

Some things to consider when scheduling courses:

- Background and skill level requirements for courses: ACT scores, COMPASS Placement Test Recommendations, and prior coursework are helpful indicators.
- Graduation requirements for selected major: Check the DMACC Catalog, Program Information Briefs and the Course Check Lists.
- Transfer Requirements: Students should begin planning with the transfer institutions of their choice early (See Transfer Tips), obtain college articulation agreements, and work with advisors and counselors well in advance of returning student registration dates. This process will help define DMACC course equivalents for transfer.
- Employment hours and family responsibilities: Plan a minimum of 2 hours study time for every 1 hour in class per week. More time is required for some courses.

Balanced Course Selection

Students should not overload their schedules with constant discipline courses such as math or foreign language. Intersperse the schedule with reading and lecture-oriented courses as well as those of personal interest.

Scheduling Steps for Liberal Arts Students:

1. Remember test scores, work hours, etc.
2. Pick out a core requirement.
3. Read course descriptions.
4. Find all options for times/campus in the schedule of courses publication.
5. Complete sample class schedule form.
6. Transfer corrected schedule to the class schedule form.

Career Education and Para-Professional students should follow the recommended course sequence for their individual program. The program counselor, advisor, or chairperson will assist students with scheduling their courses. Course checklists and Program Information Briefs will be furnished for future planning and scheduling. Specific instructions for registration are published each semester in the class schedule. Registration dates may also be obtained by contacting the College Information Center at the Ankeny Campus or the Student Services Office at the other DMACC campuses. All students are encouraged to plan carefully and discuss any questions regarding course selection with a counselor or educational advisor before registering.

Transferring Credit to DMACC

Upon admission to Des Moines Area Community College as a degree seeking student, credits earned at a college accredited by one of the regional Associations of Colleges and Schools may be considered for transfer. A student interested in earning transfer credit should request that an official transcript be sent directly to the DMACC Admissions Processing Office by each college or university where credit was previously earned. Transcripts which have been in the student's possession are not considered official.

Only those credits that are applicable to a student's chosen degree, diploma, or certificate program will be accepted in transfer. A maximum of 43 semester hours of credit will be applied towards an Associate's degree. The total grade point average of credits transferred to DMACC from a given institution must equal 2.00 or higher. Only grades earned at Des Moines Area Community College will be used in the computation of the student's GPA at DMACC.

Transferring from DMACC to Another Institution

Transfer Tips

DMACC Assistance

Liberal Arts students will need to plan for transfer to another college or university to complete their program of study. DMACC Educational Advisors and Counselors play an important role in helping the student understand the importance of transfer planning and the steps that are key to that process. Elements of the transfer planning process include:

- Helping the student clarify their intended major
- Reviewing appropriate articulation and transfer plans
- Explaining the transfer planning steps

Guide for Student Success

Steps for the Student:

- Students considering transfer to another college or university, should contact an admissions or transfer counselor at that institution early in the planning process.
- Official college or university transcripts and high school transcripts are required during the application process. Students should request these documents from all prior schools (They need to be sent directly to the transfer institution).
- A financial aid transcript may be required from each college or university attended in order to receive aid at the transfer institution.
- Students should keep a copy of all the college catalogs of colleges attended. These may be needed when discussing transfer credit.

Copies should be kept of all documents completed as well as a record of names and phone numbers of people contacted at the transfer institution. This will help if there's a need to clarify information in the future. Applications for most major Iowa colleges and universities, and information on colleges and universities throughout the United States, are available in the Career Resource Center in Building 1, Ankeny Campus.

ACADEMIC INFORMATION

Grading System

The grading scale and designations for DMACC coursework are listed below. Please note that it is the option of each faculty member whether or not to incorporate the plus/minus values into their grading scale. The course syllabus should specify the grading scale.

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-	.67
F	.00

Other Grade Designations:

- | | |
|----------------|---------------------|
| W - Withdrawn | P - Pass |
| I - Incomplete | T - Testing |
| N - Audit | L - Life Experience |
- # - sign preceding letter grade indicates "New Start"

Computing GPA

The method of computing grade point average (GPA) is as follows:

age (GPA) is as follows:

- Multiply hours of credit in each course by the appropriate numerical value to find the quality points.
- Total the quality points earned.
- Divide the total quality points earned by the total number of semester hours taken (excluding courses in which a "W", "I", "N", "P", "T", or "L" were received).

Example:

	Semester Hours	Grade	Quality Points
Composition I	3	X B+ (3.33)	9.99
Fundamentals of Speech	3	X A (4.00)	12.00
Finite Mathematics	4	X C- (1.67)	6.68
Intro to Computer Literacy	3	X C+ (2.33)	6.99
Elementary Spanish	4	X D+ (1.33)	5.32
TOTAL	17 semester hours		40.98

Divide 40.98 points by 17 semester hours = 2.41

Repeat Coursework

Students may repeat a course previously taken at DMACC if the course is currently being offered. When a course is repeated, only the grade point value of the last grade earned will be included in calculating the grade point average. Earlier grades recorded for the repeated course will remain on the transcript record, but will be excluded from the GPA calculation. Withdrawing from a course that is being repeated and receiving a grade of "W" does not constitute a course retake.

Repeat Symbols

- I - Grade value included in the GPA calculation
- E - Grade value excluded in the GPA calculation

The repeat symbol will be noted in the far right column on the transcript record next to the respective course.

Example:

FL 92-93	PSCH 101	D	3.00	E
SP 95-96	PSCH 101	A	3.00	I

Incomplete Coursework

Students unable to complete some portion of assigned coursework during the regular term may sign a contract with the instructor's approval for an "I" (Incomplete grade). Students must complete the course by the deadline established by the instructor and specified in the "I" contract. This date may not exceed the midterm date of the following term. If there are extenuating circumstances an Extension of Time Contract may be filed granting an extension to the end of the following term. No extensions may be granted beyond the end of the following term. "I" grades are automatically converted to F if the grade earned is not recorded within the specified time period.

Grade Reports

Final grade reports are issued from the Office of Academic Records approximately one to two weeks after the end of a term.

Progress grade reports are issued from this same office prior to midterm and the deadline for dropping classes. This report notifies students who are not progressing satisfactorily (receiving F, D-, D, D+, or C-grades) of services available to help them improve their academic performance.

Academic Semester Awards

Dean's List: Students who have earned 6 credits in any term with a 3.500 to 3.99 grade point average are honored by being named to the Dean's List. Students are mailed a certificate from their respective Dean and the names of students on the list are published in their "hometown" newspaper.

President's List: Students who have earned 6 credits in any term with a 4.00 grade point average are honored by being named to the President's List. Students are mailed a certificate from the president and the names of students on the President's List are published in their "hometown" newspaper.

Academic Integrity

Academic integrity, doing one's own work in course assignments and in tests, is one of the most important values in higher education. Receiving credit for plagiarizing or cheating violates that value. It is unacceptable for students to submit another person's work as their own. If students should quote, summarize, paraphrase, or use an author's idea, they must acknowledge the source, otherwise they are plagiarizing. Allowing others to accept credit for work in tests or in written and oral reports is also cheating. Students who plagiarize or cheat will be held accountable by their instructor and are subject to the sanctions outlined in the Student Academic Appeals Procedure.

Degree Audit

Degree audits assist students in determining their progress toward completion of program requirements. Degree Audits are available through the Counseling/Advising offices and the Credentials/Graduation Office.

Application for Graduation & Commencement

Candidates for graduation must complete an application for graduation in order to receive their diploma. Students who plan to participate in one of the Annual Commencement Ceremonies indicate their intent on the application for graduation. There is no graduation fee. Students who plan to receive more than one degree, diploma or certificate need to complete a graduation application for each

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program. Candidates for graduation should submit their applications to the Credentials/ Graduation office at the Ankeny Campus or the Student Services Office at the other DMACC campuses by the following dates:

Fall October 1

Spring February 1

Summer .. February 1 (-if student plans to participate in the Annual Commencement Ceremonies for Ankeny, Urban, Newton, Carroll or Boone)

Summer .. June 1

Students who graduate at the end of Fall, Spring and Summer terms are invited to participate in the Annual Commencement Ceremonies in May. Students who do not complete requirements for graduation in the term which they have applied must submit a new application.

Diplomas

Diplomas are mailed to students approximately three to four weeks after final grades are posted. Students seeking degree verification may request a copy of their transcript showing the degree awarded and date granted from the Academic Records Office. Transcripts may be ordered prior to the end of the term to be sent once grades and graduation status are finalized. There is no charge for transcripts to students who are currently enrolled.

COMMUNICATIONS ON CAMPUS

Information Center

The main DMACC Information Center is located in Building 1 on the Ankeny Campus. The Center is designed to help students, prospective students and visitors to the college. Material is available on all college programs, current course listings, and general DMACC information. Information can also be obtained at the Student Life or Student Development/ Counseling & Advising offices of the Boone, Carroll, Newton and Urban Campuses.

Telephone Usage & Emergency Calls

Outgoing calls may be made on any of the pay phones provided for students' use. Office phones are for the use of DMACC staff. Incoming calls to students should be restricted to emergency situations (death, illness or accident). Students are rarely called out of class to answer a call. To facilitate student contact in an emergency situation, the student's name AND social security number or class schedule should be provided.

Bulletin Boards

Bulletin boards are for information or announcements relevant to the college, students and staff. Items for posting must be approved, stamped for posting and dated by the Student Activities office on the Ankeny Campus, the Student Life Office at the Urban Campus and the Information Desk at the Newton Campus. The Student Action Board Advisor approves items for posting at the Carroll Campus. Items must not be applied to glass or painted surfaces.

College Closings

If there is inclement weather such as a blizzard or ice storm, DMACC students, faculty and staff should listen to radio or television stations for possible college closing announcements. If DMACC is not mentioned, students may call the following phone numbers for a message regarding college closing:

Ankeny	515-964-6200
Boone	515-432-7203
Carroll	712-792-1755
Newton	641-791-3622
Urban	515-244-4226

DO NOT CALL THE RADIO OR TV STATIONS!

WOI-TV	CH. 5	Ames
WOI-AM	640	Ames
WOI-FM	90.1	Ames
KLRX-FM	96.1	Ames
KEZT-FM	104.1	Ames
KASI-AM	1430	Ames
KAIB-FM	98.3	Boone
KWBG-AM	1590	Boone
KCIM-AM	1380	Carroll
KKRL-FM	93.7	Carroll
WHO-AM	1040	Des Moines
KXTX-AM	940	Des Moines
KIOA-FM	93.3	Des Moines
KGO-AM	94.9	Des Moines
KRNT-AM	1350	Des Moines
KSTZ-FM	102.5	Des Moines
KMDX-FM	100.3	Des Moines
KJYY-FM	92.5	Des Moines
KCCI-TV	CH. 8	Des Moines
WHO-TV	CH. 13	Des Moines
KAZR-FM	103.3	Des Moines
KHKI-FM	97.3	Des Moines
SUNNY-FM	106.3	Des Moines
KRKQ-FM	98.3	Des Moines
KGRN-AM	1410	Grinnell
KNIA-AM	1320	Knoxville
KRLS-FM	92	Knoxville
KCOB-AM	1280	Newton
KLVN-FM	95.9	Newton
KDLS-AM	1310	Perry/ Jefferson
KDLS-FM	101.7	Perry/ Jefferson

There are no specific guidelines for college

closing in terms of inches of snow or temperature since many factors including time of day, total snow fall, intensity of snow fall, wind, visibility, etc. all affect this decision.

DMACC gives very serious consideration to all inclement weather and is committed to making decisions to close the college as soon as possible. Weather conditions are monitored continuously in advance of winter storms and decisions are targeted to be made by 6 a.m. for day classes and 4 p.m. for evening classes. However, weather conditions often change very quickly, both for the worse and for the better. It may not be possible to make a closing decision by the target times.

Weather forecasts can often be inaccurate in predicting the severity of winter storms. Consequently, the decision to close a campus is based more on actual weather conditions, current Doppler Radar and short term forecasts rather than on weather forecasts more than 2 to 4 hours in advance.

Individual circumstances such as those caused by health, child care responsibilities, rural roads, distance from the college, etc. can vary greatly. It is always DMACC's intention to provide safe learning conditions as well as provide the opportunity for students to complete their classes on a timely basis. The intent is to provide the opportunity for students to attend classes when the vast majority are able to safely attend. The final decision to come to classes when DMACC remains open can only be made by the individual based on the specific or extenuating circumstances that may make it unsafe for them to travel. During adverse weather, DMACC faculty have been considerate of students who were unable to attend classes due to extenuating circumstances.

When the College is closed at a particular DMACC campus due to inclement weather, all classes and special non-traditional events occurring on that campus will also be canceled. Credit and/or Non-credit classes that are held off campus will abide by each local site's decision to remain open or cancel classes.

DMACC Web Site

DMACC's web site (<http://www.dmacc.org>) offers a wide variety of information about the College, it's educational offerings and services. Students may request a personal identification number and utilize the Internet for research and e-mail.

OTHER HELPFUL INFORMATION

Terminology

Adaptor - courses designed to aid students whose educational background requires ad-

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ditional strengthening to achieve success in regular college level courses.

Application - a form that must be completed for admission to the college.

Audit - to attend a class without receiving credit.

Challenge Test - DMACC recognizes that because of previous education or experience in a particular field, students may possess sufficient skills and knowledge to complete their instructional programs at an accelerated rate. A challenge test may be taken to receive college credit for the tests successfully passed.

CLEP Test - the College Level Examination Program (CLEP) test is a special national examination that the college has adopted to evaluate knowledge in several broad areas. Successful performance on the CLEP can allow students to waive portions of the Liberal Education requirements and the English requirements while earning a maximum of 30 credits to meet degree requirements at DMACC.

Core - those courses that constitute the body of traditional liberal arts curriculum in the first two years of a baccalaureate degree. Essentially, these courses have universal transfer status among receiving institutions.

Corequisite - a course that must be taken concurrently with another course.

Course Description - statements identifying the contents of a course. Course descriptions are found in the college catalog.

Cross Enrollment - under a special agreement, students may enroll in a class at Drake, or Grand View or Iowa State. Students must have earned 12 semester hours at DMACC and be a full-time student in good standing. The credits earned while on the cross-enrollment plan will be added to their DMACC transcript.

Degrees - a title conferred by a college or university upon completion of a particular program of academic work. Some typical college degrees are Associate in Arts (AA), Associate in Science (AS), Associate in Applied Science (AAS), Bachelor of Arts (BA), and Bachelor of Science (BS).

Drop/Add - after completing registration, students may change their schedules by "adding and/or dropping" classes. Students may add a class during the first week of classes and drop a class up to the end of the tenth week of the term.

Elective - courses students elect to take outside of the core requirements. Depending on the number of elective courses required, electives may cover a variety of subject areas or concentrate on one major area.

Full-time Student - to be classified as full-time, students must take a minimum of 12 credit hours during the fall and spring terms. During summer term, 8 hours is considered full-time.

Part-time Student - to be classified as part-time, students carry from 1 through 11 semester hours of credit during the fall and spring terms. During the summer term 1 to 7 semester hours is considered part-time.

Prerequisite - successful completion of a course or other criterion necessary for students to succeed in a higher level course.

Semester Credit Hour - a unit of measurement used to determine approximately how many hours students are required to spend in class each week, and how many units will be accumulated toward graduation.

Term or Semester - an enrollment period (15 weeks in the Spring and Fall sessions and 10 weeks in the Summer).

Transfer - the conveyance of students' credits from one college to another.

Time Management

Record all weekly commitments on a schedule:

- Classes
- Meetings
- Extra curricular activities
- Appointments
- Work schedule

Make a "To Do" list and prioritize tasks using the A,B,C Method

- A-Highest priority
- B-Medium priority
- C-Lowest priority

Notetaking Tips

Include the following:

- Date
- Title of Class
- Class Notes
- Recall or Summarization
- Use large loose-leaf notebook
- Record notes in wide column as well
- Abbreviate keywords
- Watch for teacher personality signals: gestures, change in volume or tempo, board writing, and pauses
- Review Notes: review every night, fill in missing information, write possible test questions in a recall column
- Summarize at the bottom of each page

Test Taking Strategies

During the Exam

- Scan entire exam
- Plan the time
- Listen carefully to all verbal directions

- Read directions carefully
- Underline key words
- Use clue words (all, never, sometimes, always)
- Skip difficult questions and come back to them later
- Outline answers to essay questions
- Use erasable ink

After the Exam

- Examine missed questions
- Determine where question came from
- Consider what study technique did or did not work
- Explore support services on campus

Test Preparation

- Attend every class period
- Practice good notetaking skills
- Review notes daily
- Seek out study groups
- Explore support services on campus
- Cover all sources for test questions: lecture notes, study guides, handouts, text
- Make flashcards
- Predict test questions

Test Anxiety

Before test

- Attend ALL classes and be prepared (Most test anxiety comes from lack of preparation)
- Practice relaxation techniques
- Visualize success
- Go to bed early and eat breakfast

During Test

- Arrive early
- Practice relaxation techniques
- Reduce internal mental distractions
- Combat negative self statements with positive feedback

After Test

- Review test and examine questions
- Review study techniques
- Talk with instructor
- Contact Counseling/Advising for dates/times for Test Anxiety Seminar

Miscellaneous

- Most forms and procedures can be found in Bldg 1 of the Ankeny Campus or the Administrative/Student Services Office of each campus.

- Class attendance is vital to student academic success. If classes are missed students must assume responsibility for make-up coursework.
- Important dates (i.e. payment due date, holidays, drop date) are published in the credit schedule each term.
- Students should keep a copy of term schedule. It's needed often.
- Always find out the course instructor's name, phone number and office hours.
- For emergencies give child care providers schedule and/or phone numbers.
- Study groups can be very helpful.
- Students should try to memorize their social security number.
- When coursework is becoming a problem, talk to the instructor first if possible. If that's not possible contact the Academic Achievement Center, Advising or Counseling, or the Tutoring Office. Don't "hope" it will get better. Do something.
- Allow a minimum of 2 hours of study for every hour of class per week.
- Ask questions. Students should not assume they already know or will be told everything of importance.
- Never begin a conversation with a faculty member by saying, "I wasn't in class last time. Did I miss anything?"
- Students MUST withdraw from a course they are not attending. Drop/add forms are available at all campuses.
- Enjoy the time at Des Moines Area Community College.

POLICIES & PROCEDURES

Nondiscrimination Policy

It is the policy of the College to extend equal educational opportunities to all students. No student shall, on the basis of race, color, national origin, creed, religion, gender, age, disability, and to the extent covered by law, veteran status, be excluded from participating in, be denied the benefits of, or be subject to discrimination under any educational program or activity of the College.

Inquiries about the enforcement of this nondiscrimination policy may be directed to the College Affirmative Action Officer or to the Director of the Office of Civil Rights, Washington, D.C.

If a student believes he/she has been discriminated against, a complaint may be filed with the:

1. Dean of the Division or Campus

2. Executive Director, Human Resources, Bldg. 1, Ankeny Campus (964-6408 or 800-362-2127, #6408)
3. President or designee

Sexual Harassment

Sexual harassment is a form of discrimination which is also prohibited. Sexual harassment includes, but is not limited to, unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual or sexist nature when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education; or
2. Submission to or rejection of such conduct by an individual is used as the basis for employment or education decisions affecting such individual; or
3. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or educational performance or creating an intimidating, hostile, or offensive working or educational environment.

The dean should be contacted immediately. A complaint may be filed by contacting:

1. Executive Director, Human Resources, Bldg. 1, Ankeny Campus (Phone: 964-6408 or Watts: 800-362-2127, Ext. # 6408)
2. President or designee

References: -DMACC Policies on Nondiscrimination, Equal Employment Opportunity/ Affirmative Action and Sexual Harassment.

Scholastic Standards

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+, A, A-, B+, B, B-, C+, C, C-, D+, D, D-, 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 they 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.
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 is registered for the following term and is placed on CONDITIONAL ENROLLMENT for that term, he/she will be required to meet with a counselor/advisor no later than the first day of the CONDITIONAL ENROLLMENT term to review his/her course selections. Failure to comply will result in canceled 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 counselor/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, AA 262. Copies of this procedure are available in the Student Development Offices at Ankeny, Boone, Carroll, Newton and Urban Campuses.

Weapons & Firearms on Campus

Students are prohibited from having weapons and firearms on campus except in the following instances:

- Student holds a valid weapon permit and completely conceals the weapon at all times.
- Weapon or firearm is kept in accordance with state and federal law in a closed vehicle located on the street, drive or parking facilities on College property

Violations of this procedure will result in the following sanctions, subject to the review of the President.

VIOLATION & SANCTION

- Possession of firearms
 - Suspension for not less than one year
- Display of weapons other than firearms in a threatening manner
 - Suspension for not less than one year
- Use of weapons other than firearms to inflict harm or injury
 - Suspension for not less than one year
- Display of weapons other than firearms
 - Suspension for not less than ten days
- Possession of weapons other than firearms
 - Suspension for not less than five days

Firearms are any weapons which are designed or may readily be converted to expel a projectile by the action of an explosive, the frame or receiver of any such weapons, a muffler or silencer of such weapons, or any explosive, incendiary, or poison gas.

Weapons include, but are not limited to, knives having a blade exceeding five inches in length, guns, firearms, fireworks, explosives or other chemicals, or any simulations of any such items. Canisters of "mace", "pepper gas" and other such commercially available defensive devices carried and used by students or employees exclusively for personal protection are not deemed to constitute weapons unless displayed or used for purposes other than personal defense.

Reference: DMACC Weapons and Firearms Policy

Tobacco & Alcohol On Campus

Smoking shall be prohibited in all DMACC buildings. "No Smoking" signs are posted at the entrance to all buildings.

The use of alcohol and other controlled substances specified in the Iowa Code is prohibited at all attendance centers of the College district.

Reference: DMACC Tobacco and Alcohol Policy

Parking & 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.

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.

Attendance Policy

I. Scope

It is the student's responsibility to be aware of the role classroom participation plays in satisfactory progress and the final grade for the course, as explained in the course syllabus for each course. It is the institutional expectation that students will attend and participate in the classes for which they are enrolled. Additionally, it is necessary to establish a method for determining an unofficial withdrawal date for all students in order to satisfy Federal Title IV and State regulations on attendance to qualify for financial aid.

II. Institutional Regulations

- A. DMACC will give reasonable notice to students regarding classroom participation as a factor in grading.
- B. DMACC will comply with Federal Title IV and State regulations governing administration of all student financial assistance programs and the requirement of class attendance.

III. Procedure

- A. Classroom participation as a Factor in Grading:
 1. Students will be informed by way of the course syllabus of the instructor's grading practice. If the instructor

deems regular classroom participation to be necessary to satisfactory progress, and if the lack of regular classroom participation due to absenteeism will affect the final grade for the course, this must be stated in the syllabus.

2. If the grading practice as stated in the course syllabus includes points for classroom participation, denial of points or percentages for lack of classroom participation due to absenteeism shall be acceptable.
3. The academic penalty for lack of classroom participation due to absenteeism should reflect the impact of the lack of classroom participation on satisfactory progress.
4. No distinction will be made between lack of classroom participation due to approved absence and lack of classroom participation due to unapproved absence.
5. Students shall be informed by way of the course syllabus of the instructor's make-up practice. Failure to complete a make-up assignment within a reasonably designated time shall be grounds for failure of that assignment.

B. Classroom Attendance as a Requirement for Financial Aid.

1. The Financial Aid Office and the Student Records Office will send preliminary rosters to all faculty prior to the beginning of the term. Faculty are asked to check these rosters to help resolve any attendance problems.
2. When one-third of the term has passed (i.e., 5th week of a regular term; 3rd week of a summer term), a progress report (formerly the D/F roster) will be sent to all faculty. Faculty members will indicate attendance on this roster. If a student has never attended, the instructor will indicate such on the roster with "N/A". If a student has stopped attending, the instructor will indicate the date of the last day of attendance according to his/her records next to the grade. The instructor will return the completed roster to the Registrar a week after receipt.
3. Upon receipt of the completed roster the Financial Aid Office and Student Records Office will determine which students have not attended or stopped attending all classes for which they have enrolled.
4. Student Records will notify the student that he/she has been reported

with a "D" or "F" and that their financial aid and academic standing are in jeopardy. They will be advised to officially withdraw or receive failing grades.

5. If the student is determined to be in non-attendance of all classes for which he/she has enrolled, he/she will be withdrawn as of the most recent attendance date reported by the instructor(s). Financial aid programs will be refunded accordingly. Any cash payments awarded to a student will be repaid according to the federal repayment formula. The Financial Aid Office will notify the student of the amount to be repaid. The student will receive the grade assigned by the instructor.
6. If a student wishes to re-enroll after an unofficial withdrawal has taken place, he/she will need the written permission of instructor(s) and will need to have tuition paid in full.
7. At the end of the term, the Registrar will provide names of Title IV recipients who have all F's or F's and W's. At this time the Financial Aid Office will contact the instructor's of these students asking for the last date of attendance. The Financial Aid Office will calculate a repayment for any student not attending four consecutive weeks.
8. The student will have the established options to an appeal in writing to the FA Appeals Committee or Policy Waiver committee.

Student Academic Appeals

A student may appeal the following actions related to his or her academic performance:

1. Assignment of a final grade-A student should first attempt to resolve the matter with his or her instructor. If unsuccessful the student may proceed through the appeal steps as outlined in The Appeal Process for Final Grades.
2. Sanctions taken for academic misconduct-The following acts by a student are considered academic misconduct and are prohibited:
 - Plagiarism
 - Falsifying an exam, paper, project, transcript, etc. (or assisting another student to do so)
 - Unauthorized use of materials or collaboration with another person during a test or assignment
 - Substituting for a student, or per-

mitting a substitute for oneself, to take an exam, course or test, or to provide the work for any assigned project

- The acquisition of grades, academic credits, degrees, honors, awards, certification, or professional endorsements by means of cheating
- Failure to comply with the policies of the student's program or department as stated in the Student Handbook

Sanctions may be appealed through the appeal steps as outlined in The Appeal Process for Academic Misconduct.

3. Other faculty/staff actions-Students that feel they have been mistreated, or that departmental policies have been inconsistently applied, or that they have extenuating circumstances that affect their educational progress, may appeal through the appeal steps as outlined in The Appeal Process for a General Complaint.
4. Enrollment denial or drop-Faculty/staff may deny enrollment or drop a student in a course for either of the following reasons:
 - prerequisites for a course have not been completed
 - presence of the student would present a health or safety risk

A student who has been denied access to a course may appeal through the steps as outlined in The Appeal Process for a General Complaint.

5. Sanctions taken for failure to make satisfactory academic progress-Sanctions include academic probation, conditional enrollment, and academic suspension. Academic suspension may be appealed through the steps as outlined in The Appeal Process for a General Complaint.

An ombudsperson is available on each campus to assist students through the appeal process.

Rights & Responsibilities

DMACC offers students the freedom to learn and the freedom to enjoy community college life in an orderly and lawful manner. In return, DMACC expects students to assume the obligation and responsibilities that accompany those freedoms.

By voluntary enrollment at DMACC, students voluntarily assume the obligation and responsibility of conducting themselves in accordance with the reasonable and lawful requirements of DMACC in its educational functions and processes. Violations of these responsibilities may result in sanctions that can include expulsion from the institution.

Rights

1. Students are guaranteed those rights and freedoms contained in the laws of the

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United States and the State of Iowa.

2. Students have the right to due process.
3. Students have the right to not be discriminated against or harassed because of race, color, national origin, creed, religion, sex, age or disability or disabled veteran or Vietnam era veteran status.
4. Students have the right to privacy of their records unless they consent in writing to have it revealed.
5. Students have the right to be evaluated in the classroom solely on the basis of academic achievement and fulfillment of educational requirements with freedom of expression protected and respected.

Responsibilities

1. Students are expected to be aware of student conduct that is subject to sanctions.
2. Students are expected to exhibit proper behavior at all times. Unacceptable behavior includes, but is not limited to, verbal abuse, profanity, public disturbance, fighting, destruction of property or interference of class activity.
3. Students are expected to read the course syllabus to find out the attendance and grading policy for the course.
4. Students are expected to act in a manner that does not cause concern for the health and safety of themselves or others.
5. Students are expected to complete their work without cheating or committing plagiarism.
6. Students are expected to follow college regulations against possession or use of alcoholic beverages, drugs, firearms, fireworks or other dangerous articles on campus.
7. Students are expected to follow motor vehicle safety and parking rules and regulations.
8. Students are expected to comply with reasonable and appropriate instructions and directives given by College faculty, staff and administrators within the scope of their duties for the purpose of maintaining a productive and safe educational environment.

Conduct/Discipline Appeals

The following student conduct is subject to sanctions by the College:

- Acting or failing to act in a manner which causes concern for the health and safety of the student or of others
- Misuse or misappropriation of College property
- Use or possession of unauthorized alcoholic or other intoxicating beverages on College property

- Unlawful use, possession or sale of controlled substances on College property
- Unauthorized possession or use of firearms or other dangerous articles on College property
- Making false alarms, tampering with alarm systems, and/or threatening, attempting or starting fires or explosions
- Forgery, alteration or other misuse of College records, keys or ID cards
- Failure to properly identify oneself or to comply with a proper order from an instructor or other College official acting within the scope of his or her authority
- Disrupting College processes, obstructing or denying access to services/facilities, interfering with the lawful rights of other persons on campus or inciting others to do so
- Unauthorized use of College computer and other technology resources
- Reckless operation of a motor vehicle on campus so as to pose a threat to the safety of others
- Making noise which disrupts the atmosphere of the College
- Misrepresentation of one's status or academic performance
- Conduct which seriously threatens an educational process or the health or safety of a member of the academic community
- Discriminatory behavior, including harassment of other students or staff

Complaints regarding alleged violations of student regulations may be brought by any person and are to be made to the Office of the Director of Student Development. The complaint will be investigated and may be informally resolved, or a formal charge will be recommended for a sanction to be issued. Sanctions may include reprimand, restitution or suspension.

Sanctions may be appealed through the appeal steps as outlined in the Student Conduct, Discipline and Appeals Procedure. An ombudsperson is available on each campus to assist students through the appeal process.

Reference: Educational Services Procedures on Student Conduct, Discipline and Appeals

Reporting Crimes

Students, staff, and faculty are encouraged to report all criminal incidents and/or suspicious activity to the following:

- Ankeny Campus-Security Department-964-6500/cellular phone 24 hours a day (6500 on Campus), or 964-6259-7:30 a.m. through 4:30 p.m., Monday through Fri-

day. Contact for the Evening/Weekend Dean is 964-6441 or 964-6286 (6441 or 6286 on campus) 4:00 through 9:00 p.m. Monday through Thursday; and 7:30 a.m. through 12:30 p.m. Saturday

- Urban Campus-Security -248-7200 (7200 on campus), 7:00 a.m.-10:30 p.m., Monday through Thursday; 8:00 a.m.-3:00 p.m. Friday and 8:00 a.m.-12:30 p.m. Saturday
- Boone Campus-Campus Dean-515-432-5020 (or Building and Grounds Supervisor @ Ext.#5052 or 515-290-5053 cell phone)
- Carroll Campus-Campus Operator-712-792-1755
- Newton Campus-Campus Operator-641-791-3622

IN THE EVENT OF AN EMERGENCY SITUATION, CALL 911 TO EXPEDITE THE APPROPRIATE RESPONSE BY AUTHORITIES.

All criminal and suspicious incidents reported to the Security Department will be investigated. The local Police Department will be immediately notified of all incidents of murder, rape, robbery, assault, burglary, motor vehicle theft, and any theft over \$150 in value.

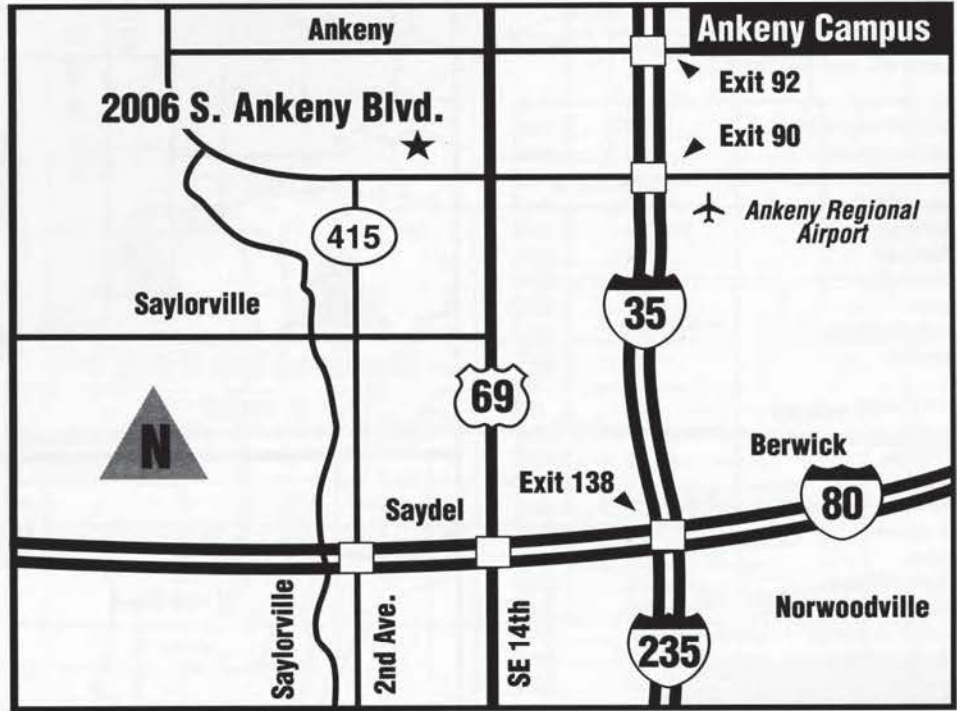
Timely warnings about crimes considered to be a threat to students and employees will be disseminated to the college community by methods which may include the student newspaper, College Bulletin announcements, press releases for local newspapers, radio, TV and/or posted notices. Copies of the DMACC Safety and Security Brochure containing Security and Personnel Safety information are available in numerous locations on all campuses.

Guide for Student Success

Ankeny Campus

2006 S. Ankeny Blvd., Ankeny Iowa 50021
(515) 964-6200 or 1-800-362-2127, Campus Code #1, and the Ext#

	Bldg #	Rm #	Ext #
Academic Achievement	6	20	6558
Accidents-Auto (On Campus)	12	01	6500
Address Changes	1	16	6565
Advising	1	16	6246
Alumni Association	5	27	6376
Assessment Center	6	24	6595
Athletics/Recreation	5	26	6333
Bookstore	5	34	6302
Campus Clubs	5	26	6359/ 6376
Campus Events	1	06	6241
Campus Nurse	5	9	6352
Career Planning/Counseling	1	06	6246
Career Resource Center	1	06	6474
Drops/Add	1	16	6800
Emergencies	1	06	6246/ 6500
Foundation Office	22		*7105
Information Center	1	06	6200
Financial Aid	1	16	6282/ 6283
Graduation	1	16	6647/ 6507
Health Insurance/Services	5	9	6352
International Students	1	16	6471
Job Placement	1	16	6215
Library	6	03	6317
Lost & Found	5	27	6359
Program Changes	1	16	6449/ 6496
Scholarships	1	16	6278
Security	12	01	6500
Services/ Students w/Disabilities	6	20	6850
Student Accounts	1	18	6432/ 6433
Transcripts	1	16	6396/ 6341
Transfer Evaluation	1	16	6647/ 6507
Tutoring Services	6	14	*7004
Veterans Services	1	16	6284



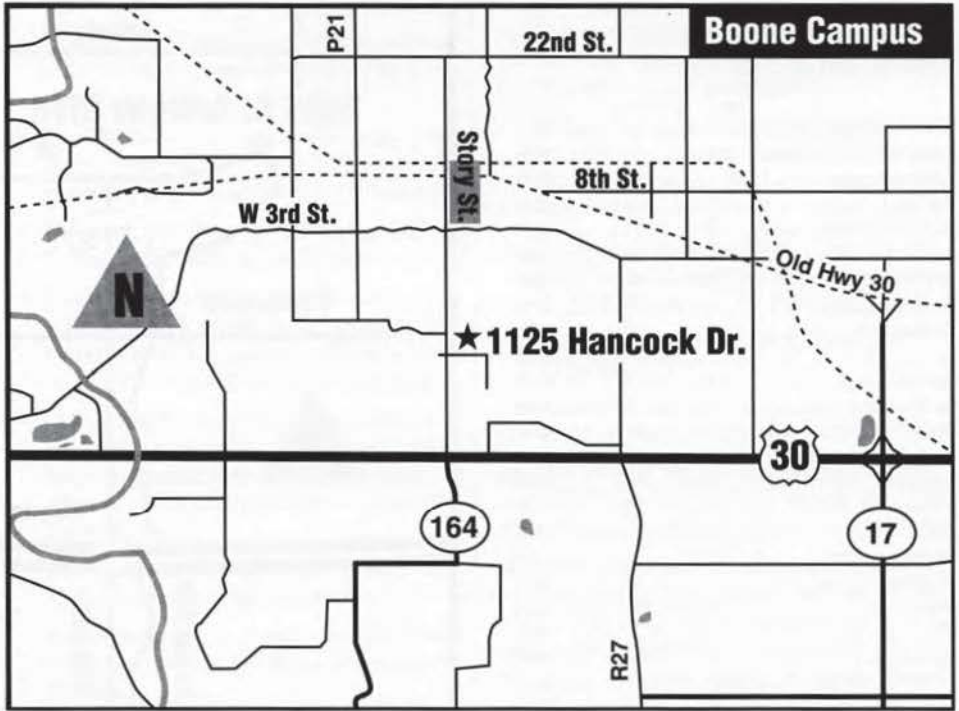
Guide for Student Success

Boone Campus

1125 Hancock DR., Boone, Iowa 50036
(515) 432-7203 or 1-800-362-2127, Campus Code #3, and the Ext #

	Rm #	Ext #
Academic Achievement	102	5096
Address Changes	120	5026
Advising	120A/129B	5025
Assessment Center	102	5096
Athletics/Recreation	133/120A	5050
Bookstore	101	5035
Campus Clubs	120	5030
Campus Events	120	*7203
Career Planning/Counseling	120A/120B	5025
Drop/Adds	120	5026/ *7203
Emergencies	120	*7203
Financial Aid	120	5022
Graduation	120	5026
Information	120	*7203
International Students	120A/120B	5026
Job Placement	120A	5025
Library	135	5040
Program Changes	120A/120B	5025
Security	105C	5052
Services for Students w/ Disabilities	120A/120B	5096
Student Accounts	120C/120D	5022
Transcripts	120	5026
Tutoring Services	102	5096
Veterans Services		

(Refer all inquiries to: 964-6284 or 800-362-2127 Ext.#6284 Ankeny Campus)

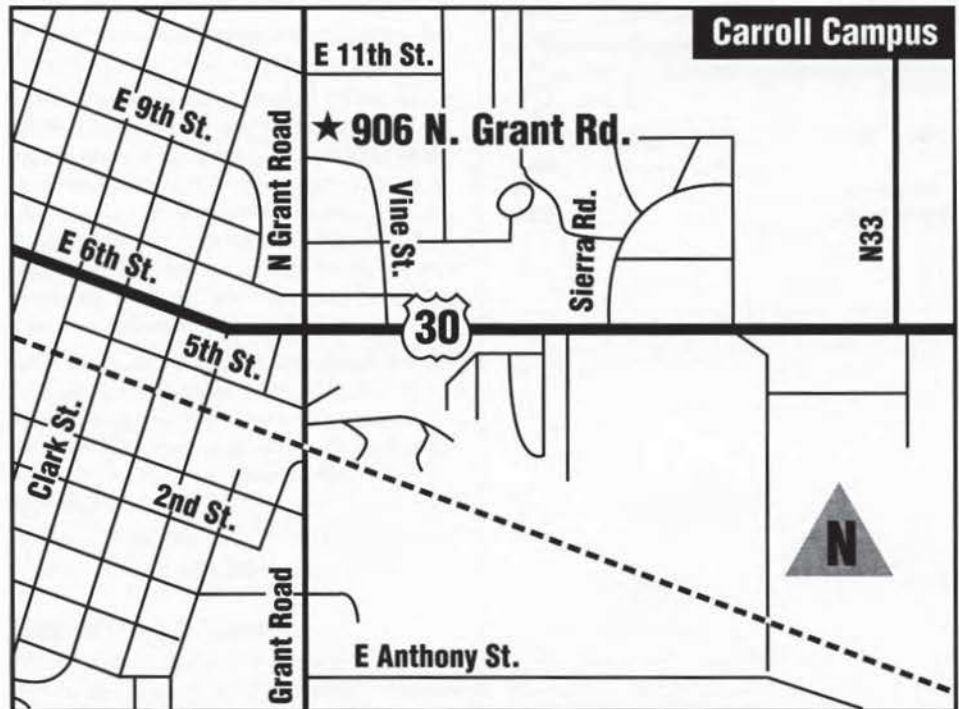


Carroll Campus

906 North Grant Rd., Carroll, Iowa 51401
(712) 792-1755 or 1-800-362-2127, Campus Code #4, and the Ext #

	Rm #	Ext #
Academic Achievement	157	8333/8307
Accidents-Auto (On Campus) Business Office	Operator	
Address Changes	141	8331/8332
Advising	141	8331/8332
Assessment Center	141	8331/8332
Bookstore	Bookstore	8310
Campus Clubs	141	8331/8332
Campus Events	141	8331/8332
Career Planning/Counseling	141	8331/8332
Drop/Adds	141	8331/8332
Emergencies	Business Office	Operator
Financial Aid	141	8305
Graduation	141	8331/8332
Health Insurance	141	8331/8332
International Students	141	8331/8332
Job Placement	141	8331/8332
Library	158	8316/8317
Lost & Found	Business Office	Operator
Program Changes	141	8331/8332
Security	Maintenance	8312
Services for Students w/Disabilities	141	8331/8332
Student Accounts	Business Office	8305
Transcripts	141	8331/8332
Transfer Evaluation	141	8331/8332
Tutoring Services	157	8333
Veterans Services		

(Refer all inquiries to: 964-66284 or 800-362-2127 Ext.#6284, Ankeny Campus)

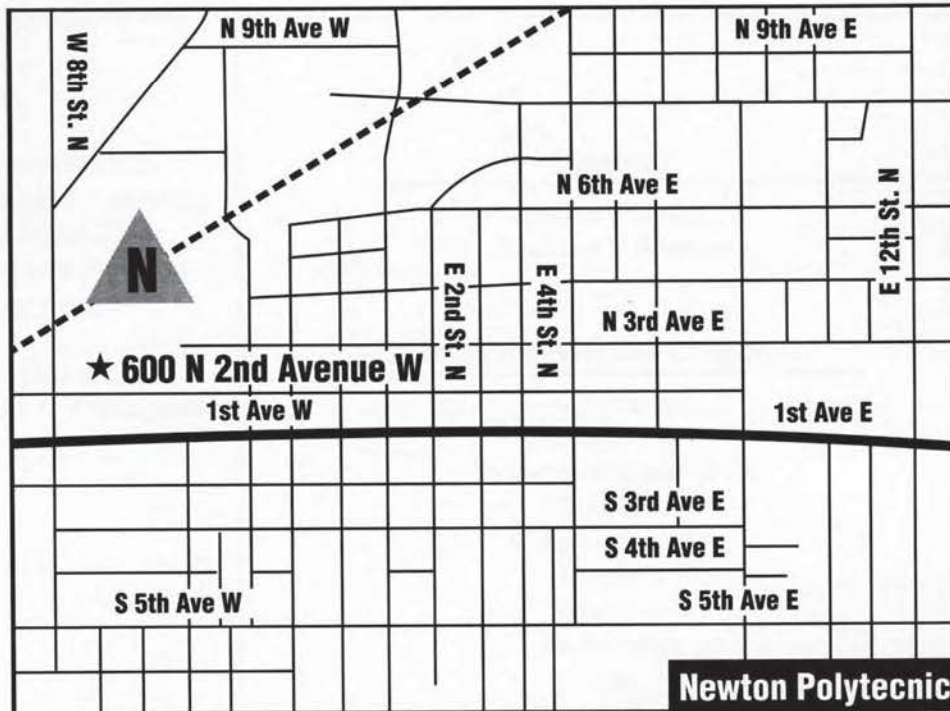


Guide for Student Success

Newton Polytechnic

600 N. 2nd Ave. W, Newton, Iowa 50208-3049
(515)-791-3622 or 1-800-362-2127, Campus Code #5, & the Ext #

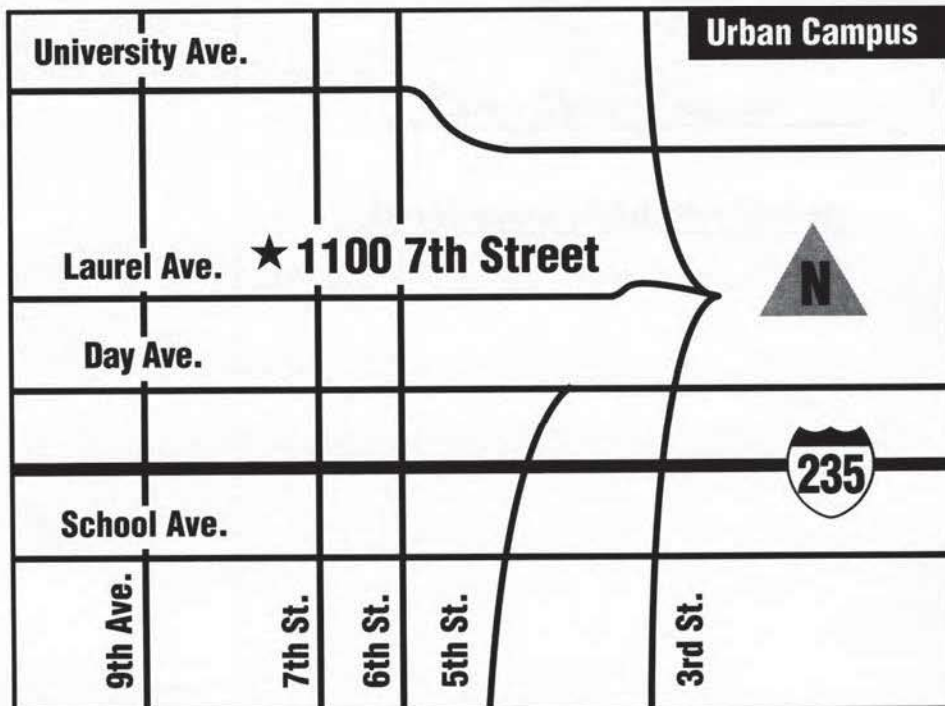
	Rm #	Ext #
Academic Achievement	130	1730
Accidents-Auto (on Campus)	Info Desk	3622/1720
Address Changes	Info Desk	3622
Advising	Info Desk	1722/1723
Assessment Center	130	1730
Bookstore	112	1770
Campus Clubs	Info Desk	1722/1723
Campus Events	Info Desk	3622
Career Planning/Counseling	Info Desk	1722/1723
Drop/Add	Info Desk	1726/1724
Emergencies	Info Desk	3622
Financial Aid	Info Desk	1725
Graduation	Info Desk	1722/1723
Health Insurance/Services	Info Desk	3622/1725
International Students	Info Desk	1722/1723
Job Placement	Info Desk	1722/1723
Lost & Found	Info Desk	3622
Program Changes	Info Desk	1722/1723
Security	Info Desk	1795
Services for Students W/ Disabilities	Info Desk	1722/1723
Student Accounts	Info Desk	1725
Transcripts	Info Desk	3622
Transfer Evaluation	Info Desk	1722/1723
Tutoring Services	Info Desk	1730
Veterans Services	(-Refer all inquiries to:)	964-6284
	or 800-362-2127 Ext.# 6284	Ankeny Campus)



Urban Campus

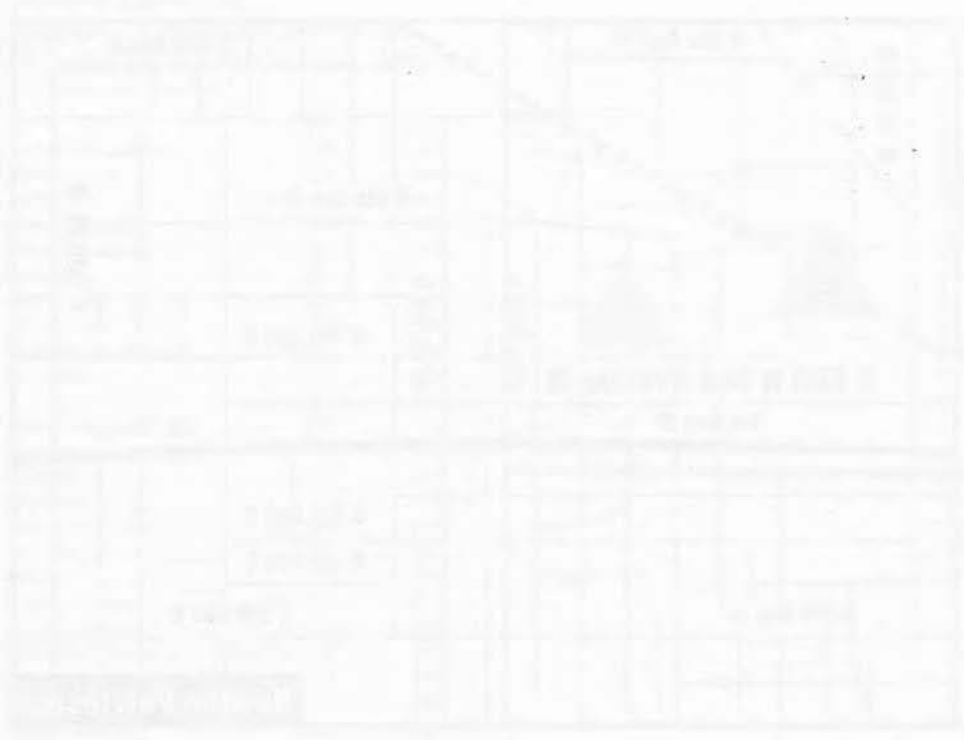
1100 - 7th St., Des Moines IA 50314
(515) 244-4226 or 1-800-362-2127, Code #2, and the Ext #

	Rm #	Ext #
Academic Achievement	204	7204
Address Changes	101	*4226
Advising	101E	*4226
Assessment Center	207A	7218
Bookstore	134A	7212
Campus Clubs	101G	7234
Campus Events	101	*4226
Career Planning/Counseling	101E	7236
Drop/Add	101	*4226
Emergencies	101	*4226
Financial Aid	101A	7202
Graduation	101	*4226
Health Insurance/Services	101A	*4226
Information	101	*4226
International Students	101E	*4226
Job Placement	101D	7236
Library	122C	7210
Lost & Found	101	*4226
Program Changes	101	*4226
Security	101	7200
Services/ Students w/ Disabilities	101D	7505
Student Accounts	101A	7202
Transcripts	101	*4226
Transfer Evaluation	101	*4226
Tutoring Services	101	*4226
Veterans Services		



Geological Survey of the United States

Sheet 1000



Section	Area	Notes
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Section	Area	Notes
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Arts & Sciences

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
Architecture
Business Administration
Chiropractic
Computer Science
Dentistry
Education
Engineering
Law
Medicine
Nursing
Optometry
Pharmacy
Physician's Assistant
Social Work
Veterinary Medicine

Career Option Programs

Developmental/Adaptor Courses

Art & Science

Introduction

The purpose of this study is to explore the relationship between art and science, and to determine how they can be used to solve complex problems.

Methodology

The methodology used in this study is a combination of qualitative and quantitative methods. The qualitative methods include interviews, focus groups, and content analysis. The quantitative methods include surveys, experiments, and statistical analysis.

Results

Qualitative Results

The qualitative results of this study show that art and science are closely related and can be used to solve complex problems. The participants in the study identified several key areas where art and science intersect, including design, problem-solving, and communication.

Discussion

The findings of this study suggest that art and science are not mutually exclusive, but rather complementary. By combining the two, we can create a more holistic approach to problem-solving.

Conclusion

In conclusion, this study has shown that art and science are essential tools for solving complex problems. By embracing both, we can unlock new possibilities and create a better future.

Arts & Sciences

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). 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 pre-professional programs for which students may begin their first two years at DMACC.

- Accounting
- Architecture
- Business Administration
- Chiropractic
- Computer Science
- Dentistry
- Education
- Engineering
- Law
- Medicine
- Nursing
- Optometry
- Pharmacy
- Physician's Assistant
- Social Work
- Veterinary Medicine

Career Option Programs

Career Option Programs are designed to prepare students for college transfer and for beginning para-professional 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 para-professional 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. Career Option Programs are:

- Accounting Paraprofessional
- Biotechnology
- Management Information Systems
- Business Administration
- Child Development
- Criminal Justice
- Fire Science
- Human Services
- Legal Assistant
- Leisure Studies

Information on each program is found in this catalog. See Index for page numbers.

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	090 Basic Writing 091 Writing Skills Review
English as a Second Language	ENGL	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

*Course approved for High School Articulation

Arts & Sciences

Students may choose to pursue a second major or a minor in a field related to their primary field of study. The University of North Carolina at Charlotte offers a variety of second major and minor programs in the following disciplines:

Anthropology	ANTH
Art	ART
Business Administration	BA
Chemistry	CHEM
Communications	COMM
Computer Science	CS
Education	ED
English	ENGL
Environmental Science	ENVS
Geography	GEOG
History	HIST
International Studies	INTS
Journalism	JOUR
Liberal Studies	LIBS
Mathematics	MATH
Music	MUSI
Natural Sciences	NS
Philosophy	PHIL
Political Science	PSCI
Psychology	PSYC
Sociology	SOCI
Theater	THEA
Visual Arts	VA
Writing	WRIT

Pre-professional

Students may choose to pursue a pre-professional program in the following areas:

- Business Administration
- Communications
- Computer Science
- Education
- Environmental Science
- Geography
- History
- International Studies
- Journalism
- Liberal Studies
- Mathematics
- Music
- Natural Sciences
- Philosophy
- Political Science
- Psychology
- Sociology
- Theater
- Visual Arts
- Writing

- Accounting
- Architecture
- Business Administration
- Chemistry
- Communications
- Computer Science
- Education
- English
- Environmental Science
- Geography
- History
- International Studies
- Journalism
- Liberal Studies
- Mathematics
- Music
- Natural Sciences
- Philosophy
- Political Science
- Psychology
- Sociology
- Theater
- Visual Arts
- Writing

Career Option Programs

Career Option Programs are designed to prepare students for careers in a variety of fields. These programs are designed to provide students with the skills and knowledge necessary to succeed in their chosen field. The following are the Career Option Programs offered by the University of North Carolina at Charlotte:

- Accounting
- Architecture
- Business Administration
- Chemistry
- Communications
- Computer Science
- Education
- English
- Environmental Science
- Geography
- History
- International Studies
- Journalism
- Liberal Studies
- Mathematics
- Music
- Natural Sciences
- Philosophy
- Political Science
- Psychology
- Sociology
- Theater
- Visual Arts
- Writing

Developmental/Adaptor Courses

The purpose of these courses is to provide students with the skills and knowledge necessary to succeed in their chosen field. These courses are designed to provide students with the skills and knowledge necessary to succeed in their chosen field. The following are the Developmental/Adaptor Courses offered by the University of North Carolina at Charlotte:

Developmental English I	ENGL 101
Developmental English II	ENGL 102
Developmental Math I	MATH 101
Developmental Math II	MATH 102
Developmental Science I	SCIE 101
Developmental Science II	SCIE 102
Developmental Social Science I	SSCI 101
Developmental Social Science II	SSCI 102
Developmental Writing I	WRIT 101
Developmental Writing II	WRIT 102

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 is designed to prepare students for the rapidly expanding food fiber and natural resources industry. Students are given an option of emphasizing agricultural supply and service, farm management or veterinary technician.

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. This program prepares students for various careers from developing improved seed corn to using DNA testing technology in crime labs.

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.

Degrees

Agri-Business
Biotechnology
Commercial Horticulture

Certificates of Specialization

Agri-Business - Agronomy
Agri-Business - Animal Science
Agri Business - Farm Management
Agri-Business - Sales/Service
Greenhouse Production
Turf Maintenance
Veterinarian Technician I
Veterinarian Technician II

Agricultural/Natural Resources

Courses

Agriculture
Introduction to
Agricultural Business

Experiences of Specialization

Agriculture - Agronomy
Agriculture - Animal Husbandry
Agriculture - Farm Management
Agriculture - Soil Science
Agriculture - Plant Pathology
Agriculture - Plant Breeding
Agriculture - Horticulture
Agriculture - Forestry

These programs are designed for students interested in careers in the rapidly expanding fields of agriculture, food technology, and conservation.

The Agricultural Business program is designed to prepare students for the rapidly expanding food, fiber and natural resources industry. Students are given an emphasis on the business, agricultural supply and distribution aspects of the industry.

The technology program is designed to prepare students to work as technicians or technicians in the rapidly expanding field of agricultural technology. This program provides students with the necessary skills and knowledge to work in the agricultural technology industry.

The Conservation Education program provides students with the necessary skills and knowledge to work in the conservation field. This program provides students with the necessary skills and knowledge to work in the conservation field.

Agricultural/Natural Resources

Degrees

Agri-Business

The Agri-Business program is designed to prepare students for the rapidly expanding food fiber and natural resources industry. Students are given an option of emphasizing agricultural supply and service, farm management or veterinary technician.

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 the industry.

Those graduates electing the agricultural supply and service option will be capable of filling entry-level jobs including agronomist, livestock, grain and petroleum marketing specialist. Other job opportunities may be found within the seed, chemical, banking and commodity brokerage industry.

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

Graduates electing the veterinarian technician emphasis will find employment in local veterinary clinics and animal care facilities.

Students should visit with program instructors and counselors for information regarding courses that transfer to four-year institutions.

Location: Ankeny

Selected courses in this program are offered at other campuses.

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.

Required Courses

AGRI201	Feeding & Animal Nutrition I	3
AGRI203	Feeding & Animal Nutrition II	3
AGRI411	Agricultural Economics	3
COMS181	Introduction to Computer Literacy	3
COOP220	Career-Seeking Skills	2
SPCH110	Fundamentals of Speech	3

Option Courses...Select 1 Course From Each Option

MATH115	Finite Mathematics	Opt1	4
MATH410*	Mathematics for Technicians 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
MGMT203	Human Relations in Business	Opt4	3
PSCH101	General Psychology	Opt4	3
SOCY101	Introduction to Sociology	Opt4	3

Option Courses...Select 4 Courses From Option 5

AGRI304	Swine Production and Management	Opt5	3
AGRI305	Beef Production and Management	Opt5	3
AGRI306	Advanced Crop Management	Opt5	3
AGRI322	Agribusiness Management	Opt5	3
AGRI323	Farm Management	Opt5	3
AGRI333	Petroleum Products in Agriculture	Opt5	3
BUSL101	Business Law I	Opt5	3
MKTG103*	Principles of Selling	Opt5	3

In addition to the above listed required and option courses students must choose one of the following plans:

Plan 1. Agribusiness Emphasis

Additional Required Courses

AGRI202	Crop Scouting	3
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AGRI204*	Animal Science	3
AGRI206	Crop Management	3
AGRI207	Livestock Disease Prevention	3
AGRI209*	Soils Laboratory	1
AGRI216	Commodity Marketing	3
AGRI217	Precision Agriculture Applications	3
AGRI219	Soils and Fertilizers	3
AGRI421	Chemical Technology	3
AGRI430	Agribusiness Internship I	2
AGRI436	Grain Management	2
AGRI455	Agribusiness Internship II	2

Total minimum credits required to complete this program- Plan 1 72

Plan 2. Veterinarian Technician Emphasis

Additional Required Courses

AGRI340	Veterinary Terminology	1
AGRI341	Veterinary Pharmacology	1
AGRI342	Animal Behavior/Kennel Mgt.	1
AGRI343	Animal Anatomy & Physiology I	3
AGRI344	Animal Nursing I	3
AGRI345	Veterinary Clinic Pathology I	3
AGRI346	Animal Anatomy & Physiology II	3
AGRI347	Veterinary Clinic Pathology II	3
AGRI348	Animal Nursing II	3
AGRI431	Veterinary Internship I	1
AGRI432	Veterinary Internship II	3

Total minimum credits required to complete this program- Plan 2 66

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.

Students planning to transfer to a four-year program after completion of this program should consider taking CHEM151 and 152 (instead of CHEM131 and 132) and CHEM161 and 162, depending on the program being considered. In addition, many programs will require calculus (MATH129 and/or 130), and physics (PHYL121 and 122 or PHYL111 and 112). Additional credit hours in humanities and the social sciences may also be helpful. Please check with the program chairperson for Biotechnology or an advisor for additional information or assistance.

Location: Ankeny

Selected courses in this program are offered at other campuses.

Program Entry Requirements

One year each of high school biology and chemistry or DMACC equivalents, two years of high school algebra or MATH092 and 094 and satisfactory writing skills. Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students start fall or spring term.

*Course approved for High School Articulation

Agricultural/Natural Resources

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	Biotechnology Internship	3
CHEM131	General Chemistry I	4
CHEM132	General Chemistry II	4
COMS181	Introduction to Computer Literacy	3
ENGL117	Composition I	3
ENGL118	Composition II	3
ENGL119	Technical and Business Writing	3
MATH121	Elementary Statistics	4
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

Total minimum credits required to complete this program **64**

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.

In addition to the required and option courses listed there are five 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, COMH433* Irrigation Systems and COMH435 Sports Turf*. Courses marked with * are required courses for the Commercial Horticulture - Turf Maintenance Certificate.

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.

Required Courses

AGRI209*	Soils Laboratory	1
AGRI219	Soils and Fertilizers	3
COMH441	Landscape Drafting	1
COMH450	Botany	3
COMH486	Horticulture Equip Safety/Maintenance	1
COMH488	Plant Materials I	2
COMS181	Intro to Computer Literacy	3
COMH410*	Introduction to Greenhouse	3
COMH437	Turf I	2

*Course approved for High School Articulation

COMH440	Landscape Design I	3
COMH454	Horticulture Internship I	3
COMH478	Plant Propagation I	3
COMH453	Landscape Design II	3
COMH457	Fruit and Vegetable Science	3
COMH458	Insects and Diseases	2
COMH489	Plant Materials II	2
COMH411	Horticulture Chemical Techniques	2
COMH479*	Nursery Production I	3
COOP220	Career-Seeking Skills	2
COMH452	Arboriculture	3
COMH469	Garden Center Management	3
COMH498	Supervised Employment Exp III	3
AAS degree	core science course	3

For the Turf Maintenance emphasis plan choose the following courses

COMH433	Irrigation Systems	2
COMH435	Sports Turf	2
COMH455	Turf II	3

For the Greenhouse Production emphasis plan choose the following course

COMH490	Greenhouse Production Techniques	2
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Option Courses...Select 1 Course From Each Option

MATH115*	Finite Mathematics	Opt1	4
MATH410*	Mathematics for Technicians I	Opt1	3
ENGL117	Composition I	Opt2	3
ENGL410*	Communication Skills	Opt2	3
MGMT203	Human Relations in Business	Opt3	3
PSCH101	General Psychology	Opt3	3
PSCH106	Psychology of Human Relations & Adj.	Opt3	3
ACCT301*	Accounting Fundamentals	Opt4	3
MKTG103*	Principles of Selling	Opt4	3

Total minimum credits required for the Greenhouse Production emphasis **71**

Total minimum credits required for the Turf Maintenance emphasis **76**

In addition to the courses required for this degree, students may take the following courses to enhance their background or for personal enrichment

COMH497	Floral Design I (optional)	1
COMH485	Floral Design II (optional)	1

Certificates of Specialization

Agri-Business - Agronomy

The Agronomy certificate prepares the student for an entry-level position in the agronomic field. Upon completion, the successful candidate will be able to formulate fertilizers, identify weeds, insects, and soil nutrient deficiencies. Marketing skills will be enhanced through the application of enterprise analysis and current commodity management tools.

The course work within this certificate will serve as a strong preparatory base for the "Certified Crop Advisor" (CCA) program.

Required Courses

AGRI202	Crop Scouting	3
AGRI206	Crop Management	3
AGRI209*	Soils Laboratory	1
AGRI216	Commodity Marketing	3
AGRI217	Precision Agriculture Applications	3
AGRI219	Soils and Fertilizers	3
AGRI306	Advanced Crop Management	3

Option Courses. . . Select 1 Course from Option 1

AGRI421	Chemical Technology	Opt1	3
AGRI430	Agribusiness Internship I	Opt1	2
AGRI436	Grain Management	Opt1	2

Total credits required to complete this certificate **21**

Agricultural/Natural Resources

Agri-Business - Animal Science

The Animal Science certificate prepares the student for an entry-level position in the livestock industry. Upon completion, the successful candidate will be able to formulate livestock rations, identify common diseases, and select appropriate facilities for livestock handling. Marketing skills will be enhanced through the application of enterprise analysis and current commodity management tools.

Required Courses

AGRI201	Feeding and Animal Nutrition I	3
AGRI203	Feeding and Animal Nutrition II	3
AGRI204*	Animal Science	3
AGRI207	Livestock Disease Prevention	3
AGRI216	Commodity Marketing	3
AGRI430	Agribusiness Internship I	2

Option Courses. . . Select 1 Course from Option 1

AGRI304	Swine Production and Management	Opt1	3
AGRI305	Beef Production and Management	Opt1	3

Total credits required to complete this certificate 20

Agri-Business - Farm Management

The Farm Management certificate prepares the student for an entry-level position in farm management. Upon completion, the successful candidate will be able to operate an entrepreneurial enterprise in the crop or livestock industry. Marketing skills will be enhanced through the application of enterprise analysis and current commodity management tools.

Required Courses

AGRI202	Crop Scouting	3
AGRI204*	Animal Science	3
AGRI206	Crop Management	3
AGRI216	Commodity Marketing	3
AGRI323	Farm Management	3
AGRI411	Agricultural Economics	3

Option Courses. . . Select 1 Course from Option 1

ACCT301*	Accounting Fundamentals	Opt1	3
AGRI430	Agribusiness Internship I	Opt1	2
BUSL101	Business Law	Opt1	3
COMS181	Introduction to Computer Literacy	Opt1	3

Total credits required to complete this certificate 20

Agri-Business - Sales/Service

The Sales/Service certificate prepares the student for an entry-level position in the agricultural sales and service industry. Upon completion, the successful candidate will be able to utilize a general knowledge of the industry to more effectively serve the customers within the sales and service sector. Marketing skills will be enhanced through the application of enterprise analysis and management tools.

Required Courses

AGRI204*	Animal Science	3
AGRI206	Crop Management	3
AGRI216	Commodity Marketing	3
AGRI322	Agribusiness Management	3
AGRI411	Agricultural Economics	3
MKTG103*	Principles of Selling	3

Option Courses. . . Select 1 Course from Option 1

AGRI430	Agribusiness Internship I	Opt1	2
BUSL101	Business Law	Opt1	3
COMS181	Introduction to Computer Literacy	Opt1	3
MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
SOCY101	Introduction to Sociology	Opt1	3

Total credits required to complete this certificate 20

Greenhouse Production

The Greenhouse Production certificate will allow students to earn recognition for work completed in the area of greenhouse production.

This certificate will provide students with the opportunity to develop specific skills related to horticulture chemicals, botany, and greenhouse production techniques.

Required Courses

AGRI209	Soils Laboratory	1
AGRI219	Soils & Fertilizers	3
COMH410	Intro to Greenhouse	3
COMH411	Horticulture Chemical Techniques	2
COMH450	Botany	3
COMH478	Plant Propagation I	3
COMH490	Greenhouse Production Techniques	3
MATH410	Mathematics for Technicians I	3

Total credits required to complete this certificate 21

These credits are applicable to the AAS degree in Commercial Horticulture

Turf Maintenance

The Turf Maintenance certificate will allow students to earn recognition for work completed in the area of turf maintenance. This certificate will provide students with the opportunity to develop specific skills related to the maintenance of such turf grass areas as lawns, parks, sports fields, and golf courses.

Required Courses

AGRI209	Soils Laboratory	1
AGRI219	Soils and Fertilizers	3
COMH411	Horticulture Chemical Technology	2
COMH433	Irrigation Systems	2
COMH435	Sports Turf	2
COMH437	Turf I	2
COMH455	Turf II	3
MATH410	Mathematics for Technicians I	3

Option Courses. . . Select 1 Course from Option 1

BIOL118	Environmental Conservation	Opt1	3
COMH450	Botany	Opt1	3

Total credits required to complete this certificate 21

Veterinarian Technician I

The Veterinarian Technician I certificate prepares the student for an entry-level position in the animal care industry. Upon completion, the successful candidate will be able to handle animals safely, convey customer concerns and work with the veterinarian. Skills will be enhanced through an understanding of terminology, pharmacology, anatomy and nursing procedures. An internship has been included.

Required Courses

AGRI201	Feeding & Animal Nutrition I	3
AGRI340	Veterinary Terminology	1
AGRI341	Veterinary Pharmacology	1
AGRI342	Animal Behavior/Kennel Management	1
AGRI343	Animal Anatomy & Physiology I	3
AGRI344	Animal Nursing I	3
AGRI345	Veterinary Clinic Pathology I	3
AGRI431	Veterinary Internship I	1

Total credits required to complete this certificate 16

Veterinarian Technician II

The Veterinarian Technician II certificate enhances the student's knowledge base for a position in the animal care industry. Upon completion, the student will be able to perform surgical preparation and assist the veterinarian with surgery. Skills will be enhanced through advanced anatomy, pathology and nursing procedures. An internship has been included.

Required Courses

AGRI346	Animal Anatomy & Physiology II	3
AGRI347	Veterinary Clinic Pathology II	3
AGRI348	Animal Nursing II	3
AGRI432	Veterinary Internship II	3

Total credits required to complete this certificate 12

*Course approved for High School Articulation

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Art

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.

Diplomas and Degrees

Commercial Art
Graphic Arts

Certificates of Specialization

Airbrush Art
Graphic Arts
Production Art

Information and Overview

1. Introduction
2. Objectives

Methodology and Results

3. Methodology
4. Results
5. Discussion

The first part of the report provides a detailed overview of the project's goals and objectives. It outlines the scope of the study and the specific areas of focus. The methodology section describes the research methods used to collect and analyze data. The results section presents the findings of the study, and the discussion section interprets these findings in the context of the project's objectives.

The second part of the report discusses the implications of the findings and provides recommendations for future research. It also includes a conclusion that summarizes the key points of the report. The final section is a list of references, which provides a list of the sources used in the report.

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.

Courses utilizing the traditional methods along with desktop publishing prepare students for entry level positions. Required courses such as design, typography, electronic photoediting and computer graphics allow students to seek advanced opportunities. Electives in photography, printing, airbrush and advanced computer graphics will allow students to specialize.

Internship 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	3
CART407	Production Art I	3
CART410*	Illustration I	3
CART411	Communication Design II	3
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
CART459	Computer Graphics I	3
CART463	Electronic Photo Editing	3
DKTP401*	Intro To Desktop Publishing	3

Option Courses . . . Select 2 Courses From Option 1

CART414	Illustration II	Opt1	3
CART419	Lettering and Sign Art	Opt1	2
CART425	Commercial Art Internship II	Opt1	3
CART428	Illustration III	Opt1	3
CART449	Airbrush I	Opt1	4
CART451	Airbrush II	Opt1	4
CART462	Computer Graphics II	Opt1	3
GRPH400*	Graphic Arts Orientation	Opt1	4
GRPH401	Methods of Graphic Arts	Opt1	3
GRPH416	Desktop Publishing II	Opt1	3
GRPH425	Electronic Image Control	Opt1	4
PHOT106	Advanced Photography	Opt1	3
PHOT407	Studio Photography	Opt1	3
MKTG104	Advertising/Sales Promotion	Opt1	3

Option Courses...Select 1 Course From Each Option

AAS Core Communications	Opt2	3
AAS Core Social and Behavioral Sciences/Humanities (PHOT105 recommended)	Opt3	3
AAS Core Mathematics or Sciences	Opt4	3
AAS Core Distributed Requirement	Opt5	3

Total minimum credits required to complete this program 73

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. Graphic 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 the required Graphic Arts program information 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 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
GRPH416	Desktop Publishing II	3
GRPH421	Electronic Prepress I	4

Term 3 . . . Select Option 2 or Option 3

MATH410*	Mathematics for Technicians I	3
GRPH413	Graphic Prepress II	Opt2 4
GRPH420	Press II	Opt2 4
GRPH425	Electronic Image Control	Opt3 4
GRPH426	Graphic Arts Design II	Opt3 4

Total credits required to complete the diploma 47

Term 4

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

Total credits required to complete the AAS degree 64

*Course approved for High School Articulation

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

Total credits required to complete this certificate **8**

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

Total credits required to complete this certificate **24**

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

Total credits required to complete this certificate **6**

*Course approved for High School Articulation

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 Information Systems
Accounting Paraprofessional
Accounting Specialist
Administrative Assistant
Business Administration
Business Information Systems
Computer Programming
Entrepreneurship
Fashion/Design
Management
Management Information Systems (MIS)
Marketing
Medical Administrative Assistant
Office Assistant
Retailing
Sales and Management

Certificates of Specialization

Accounting Certificate I
Accounting Certificate II
Computer Applications
Computer Languages
Data Entry I
Database Specialist
Entrepreneurship
Fashion
Information Processing Support
Interior Design Consultant
Management
Medical Transcriptionist
Microcomputers
Office Specialist
Personal Financial Planning
Purchasing Management
Purchasing Operations - Advanced
Retailing
Sales
Supervision
Technical Management

Business Management

The first part of the course covers the fundamentals of business management, including the role of the manager, the organization, and the environment. This section is designed to provide a solid foundation for understanding the complexities of the business world.

Key topics include:

- Management functions: planning, organizing, leading, and controlling.
- Organizational structure and design.
- Business environment and external factors.
- Decision-making processes.
- Communication and teamwork.

The second part of the course focuses on strategic management, which involves setting long-term goals and determining the best way to achieve them. This section is crucial for understanding how organizations can gain a competitive advantage in the marketplace.

Key topics include:

- Strategic planning and formulation.
- Competitive strategy and positioning.
- Resource allocation and budgeting.
- Implementation and evaluation of strategy.
- Case studies of successful strategic management.

The third part of the course explores human resource management, which is essential for attracting, developing, and retaining a high-quality workforce. This section covers various aspects of employee management, from recruitment to performance evaluation.

Key topics include:

- Recruitment and selection processes.
- Employee development and training.
- Performance management and appraisal.
- Compensation and benefits design.
- Employee relations and labor laws.

The final part of the course deals with financial management, which is critical for ensuring the financial health and sustainability of the organization. This section covers the principles of budgeting, financial analysis, and risk management.

Key topics include:

- Financial planning and budgeting.
- Financial statements and analysis.
- Risk management and insurance.
- Capital structure and financing options.
- Investment decisions and portfolio management.

Business/Management

Diplomas and Degrees

Accounting & Bookkeeping

The Accounting and Bookkeeping program prepares students for a career in the field of accounting. Upon graduation, the student will be able to distinguish, analyze, summarize, communicate, and record business transactions.

Technical courses in taxes, payroll, computers, and accounting allow students to seek advanced level placement. The internship part of the program provides a professional work environment under the combined guidance of a faculty member and a cooperating employer 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

Selected courses in this program are offered at other campuses.

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/Computers	3
ACCT403	Accounting Internship	3
ACCT404	Accounting Career Seminar	1
ACCT407	Accounting Professional Development	1
ACCT411	Payroll Accounting	3
ACCT430	Accounting Procedures/Management	4
BSAD223	Business/Financial Math	3
COMS181	Intro to Computer Literacy	3
COOP220	Career-Seeking Skills	2
DATA345	Spreadsheets	1
OFFC324	Office Calculators	1
OFFC329*	Keyboarding I	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
MGMT203	Human Relations in Business	Opt3	3
PSCH101	General Psychology	Opt3	3

Elective Courses

Electives	3
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Total credits required to complete this program 42

Accounting Information Systems

The Accounting Information Systems program prepares students to work in the accounting profession and act as a liaison between the accounting and computer programming departments. The emphasis is on strong information technology skills in addition to the traditional accounting skills in order to enhance the use of both commercial and customized accounting software and spreadsheets. The program is 64 credits and can be completed in four regular semesters. Math skills are extremely important for this program. Students need to have completed high school Algebra II or higher with a grade of "C" or better or MATH094 and MATH 115 at DMACC to be prepared for the math requirements in this program.

Locations: Ankeny, Boone, Urban

Selected courses in this program are offered at other campuses.

Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Successful completion of OFFC329 Keyboarding I or keyboarding skills of 25 WPM. Students start fall term.

Graduation Requirements

To earn an Accounting Information Systems AS 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
ACCT102	Principles of Accounting II	4
ACCT312	Accounting Information Systems	4
ACCT411	Payroll Accounting	3
COMS181	Intro to Computer Literacy	3
DATA310	Program Logic Design	4
ECON101	Principle of Macroeconomics	3
ECON102	Principle of Microeconomics	3
ENGL117	Composition I	3
ENGL118	Composition II	3
MATH121	Elementary Statistics	4
MATH122	Calculus for Business/Social Science	4
SPCH110	Fundamentals of Speech	3
	AS Core Science	3-4
	AS Core Humanities	3-4

In order to meet program requirements of 64 credits one core science course or one core humanities course must be 4 credits.

Option Courses...Select 1 Course From Each Option

ACCT103	Intermediate Accounting I	Opt1	4
ACCT203	Cost Accounting	Opt1	4
ACCT310	Internal Auditing	Opt1	3
COMS125	Business Programming COBOL I	Opt2	3
DATA103	Basic	Opt2	3
DATA304	COBOL Beginning	Opt2	4
DATA318	Intro C++ Programming	Opt2	3
ACCT351	Financial Accounting/Computers	Opt3	3
ACCT352	Managerial Accounting/Computers	Opt3	3
COMS126	Business Programming COBOL II	Opt4	4
DATA110	Computer Network Literacy	Opt4	3
DATA306	COBOL - Intermediate	Opt4	4

Total credits required to complete this program 64

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 four-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 business transactions.

Students in the program complete general education core requirements and accounting speciality courses. Professional and ethical behavioral case studies for business, as well as oral and written communication, 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. Math skills are extremely important for this program. Students need to have completed high school Algebra II or higher with a grade of "C" or better or MATH094 and MATH 115 at DMACC to be prepared for the math requirements in this program.

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

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

Locations: Ankeny, Boone, Carroll, Urban

Selected courses in this program are offered at Newton.

*Course approved for High School Articulation

Business/Management

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 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/Computers	3
ACCT352	Managerial Accounting/Computers	3
ACCT411	Payroll Accounting	3
BUSL101	Business Law I	3
COMS181	Intro to Computer Literacy	3
ECON101	Principles of Macroeconomics	3
ECON102	Principles of Microeconomics	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

Total minimum credits required to complete this program 68

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 business transactions. The program offers technical courses in intermediate accounting and computers, allowing students to seek advanced level placement. Math skills are extremely important for this program. Students need to have completed high school Algebra II or higher with a grade of "C" or better or MATH094 and MATH 115 at DMACC to be prepared for the math requirements in this program.

Oral and written communication is integrated throughout. The internship part of the program provides a professional work environment under the combined guidance of a faculty member and a cooperating employer where many of the skills 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

Selected courses in this program are offered at other campuses.

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 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/Computers	3
ACCT352	Managerial Accounting/Computers	3
ACCT403	Accounting Internship	3
ACCT404	Accounting Career Seminar	1
ACCT407	Accounting Professional Development	1
ACCT411	Payroll Accounting	3
BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
COOP220	Career-Seeking Skills	2
COMS181	Intro to Computer Literacy	3
MATH115	Finite Mathematics	4
OFFC324	Office Calculators	1
OFFC329*	Keyboarding I	1
SPCH110	Fundamentals of Speech	3

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
MGMT203	Human Relations in Business	Opt3	3
PSCH101	General Psychology	Opt3	3
BSAD243	Quantitative Methods	Opt4	4
MATH121	Elementary Statistics	Opt4	4

Elective Courses

Electives	3
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Total minimum credits required to complete this program 73

Administrative Assistant

Today's business offices have a need for highly-skilled employees who possess the skills and confidence necessary to handle a wide variety of office tasks. The Administrative Assistant degree provides a strong foundation in office skills, including the technological aspects, and combines course work and hands-on computer experience. Curriculum includes comprehensive work skills preparation necessary for the administrative assistant to work in business, professional offices, and other employing agencies.

The student will be prepared to demonstrate good communication skills, proficient problem-solving skills, effective human relations skills, and skilled use of computer applications and office procedures.

Locations: Ankeny, Boone, Carroll, Urban

Selected courses in this program are offered at Newton.

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

*Course approved for High School Articulation

Business/Management

Term 1

BSAD223	Business/Financial Math	3
MGMT203	Human Relations in Business	3
OFFC205	Business English	3
OFFC305	Word Processing Skill Development I	4
OFFC324	Office Calculators	1
OFFC355	Computer Applications	3

Term 2

COOP220	Career-Seeking Skills	2
OFFC204	Office Procedures	3
OFFC206	Business Correspondence Techniques	3
OFFC306	Word Processing Skill Development II	3
OFFC356	Advanced Computer Applications	3
OFFC405	Professional Development	3

Term 3 . . . In addition to the required courses, students must select 1 Course From Options 1 and 2 and 6 Credits from Option 3

MGMT153	Office Management	3
ACCT101	Principles of Accounting I	Opt1 4
ACCT301*	Accounting Fundamentals	Opt1 3
SPCH110	Fundamentals of Speech	Opt2 3
SPCH117	Interpersonal & Small Group Comm	Opt2 3
BSAD150	Intro to Business	Opt3 3
BSAD151	Personal Finance	Opt3 3
BUSL101	Business Law I	Opt3 3
DATA110	Computer Network Literacy	Opt3 3
MGMT243	Management of Information	Opt3 3
BSEN229	Small Business Management	Opt3 3
MKTG102	Principles of Marketing	Opt3 3

Term 4 . . . Select 3 Credits From Option 4

MGMT101	Supervisory Management	3
OFFC207	Administrative Office Applications	3
OFFC357	Emerging Technologies	3
OFFC410	Office Internship	2
OFFC411	Office Seminar	1
ACCT	Any Accounting (except adjunct)	Opt4
BSAD	Any Business Admin (except adjunct)	Opt4
BUSL	Any Business Law (except adjunct)	Opt4
COMS	Any Computer Science (except adjunct)	Opt4
DATA	Any Data Processing (except adjunct)	Opt4
ECON	Any Economics (except adjunct)	Opt4
MGMT**	Any Management (except adjunct)	Opt4
MKTG**	Any Marketing (except adjunct)	Opt4
OFFC**	Any Office (except adjunct)	Opt4

Total minimum credits required to complete the AAS degree **64**

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

MKTG103	Principles of Selling	3
MKTG231	Fashion Analysis & Design	3
MKTG332	Textiles	3
OFFC329	Keyboarding I	1

Business Administration

The Business Administration program offers the student a number of career and 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. Stu-

dents planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Locations: Ankeny, Boone, Carroll, Newton, 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	28
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 Macroeconomics	3
ECON102	Principles of Microeconomics	3

NOTE: ECON101 and ECON102 can be used to satisfy the Social and Behavioral Sciences component of the AS core. Students choosing this option will need to complete an additional 6 credit hours from either core or elective course work to meet program requirements.

In addition to the required courses students must choose one of the following plans:

1. College Transfer Plan

Students planning to transfer to a four-year institution should complete:

Additional AS Degree Core Requirement Courses	6
Electives	7

Students should contact a counselor or academic advisor to assure transferrability of courses to the four-year institution.

2. General Business Option Course Plan . . .

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
BSEN229	Small Business Management	Opt1 3
BUSL102	Business Law II	Opt1 3
MGMT102	Introduction to Management	Opt1 3
MKTG102	Principles of Marketing	Opt1 3

3. Business Computer Option Course Plan . . .

Select 2 Courses From Option 1 and 2 Courses from Option 2

COMS111	Computers and Program Logic	Opt1 3
COMS125	Business Programming COBOL I	Opt1 3
BSEN306	E-Commerce Website I	Opt2 3
COMS126	Business Programming COBOL II	Opt2 4
DATA103	BASIC	Opt2 3
DATA104	BASIC Advanced	Opt2 3
DATA110	Computer Network Literacy	Opt2 3
DATA306	COBOL Intermediate	Opt2 4
DATE318	Intro C++ Programming	Opt2 3
DATA341	Database Programming	Opt2 3
DATA343	Introduction to SQL	Opt2 3
DATA349	Advanced PL/SQL Program Units	Opt2 3
DATA350	Relational Database Design	Opt2 3
OFFC356	Advanced Computer Applications	Opt2 3
Elective		1

Total minimum credits required for this program using any plan **64**

*Course approved for High School Articulation

Business Information Systems

The Business Information Systems program is intended for the student who is interested in a programming career in a client/server environment or in the areas of electronic commerce or database applications. This is especially true of the career opportunities in the PC-related programming fields as well as the newer fields of electronic commerce and databases.

The BIS degree will allow a student to study a variety of different areas related to PC programming and related applications. This program emphasizes flexibility to allow a student to take courses that relate to specific areas of interest. It is also possible for the student to take course work from several different but related areas of study. For example: many electronic commerce applications use databases as an integral part of their business. These combined skills will give the student a more marketable background.

Information Technology careers require more diversity of skills and abilities than in the past. Employers are looking for employees with a variety of skills in related areas. Many projects today require a variety of computer-related skills and business knowledge. This degree will address those demands through more flexible course selection and exposure to a variety of programming skills and tools.

Location: Ankeny

Selected courses in this program are offered at other campuses.

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 Business Information Systems 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
COMS111	Computers and Program Logic	3
COMS125	Business Programming COBOL I	3
COMS181	Intro to Computer Literacy	3
COOP220	Career-Seeking Skills	2
DATA103	BASIC	3
DATA110	Computer Network Literacy	3
DATA341	Introduction to Databases	3
DATA382	Systems Analysis	4
ENGL410	Communication Skills	3
MGMT243	Management of Information	3
MATH	Any 100 level Math	3
SPCH110	Fundamentals of Speech	3
OFFC329	Keyboarding I	1

Option Courses... Select 1 Course From Option 1 and 18 credits from Option 2

MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
SOCY101	Intro to Sociology	Opt1	3
ACCT351	Financial Accounting/Computers	Opt2	3
COMS126	Business Programming COBOL II	Opt2	4
DATA104	BASIC Advanced	Opt2	3
DATA106	Microcomputers in Business	Opt2	3
DATA318	Intro C++ Programming	Opt2	3
DATA319	Assembler - Beginning	Opt2	4
DATA320	Intermediate C++ Programming	Opt2	3
DATA343	Introduction to SQL	Opt2	3
DATA349	Advanced PL/SQL Program Units	Opt2	3
DATA350	Relational Database Design	Opt2	3
BSEN305	E-Commerce on the Web	Opt2	3
BSEN306	E-Commerce Website I	Opt2	3

Total credits required to complete AAS degree **65**

*Course approved for High School Articulation

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

Selected courses in this program are offered at other campuses.

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
COMS111	Computers and Program Logic	3
COMS125	Business Programming COBOL I	3
COMS181	Intro to Computer Literacy	3
COOP220	Career-Seeking Skills	2
DATA301	DOS Job Control	4
DATA306	COBOL/Intermediate	4
DATA308	COBOL/Advanced	3
DATA319	Assembler/Beginning	4
DATA321	Assembler/Intermediate	4
DATA334	Applications Programming	6
DATA341	Introduction to Databases	3
DATA352	Telecommunications/CICS Programming	4
DATA382	Systems Analysis	4
ENGL117	Composition I	3
MATH	Any MATH 100 level	3-5
OFFC329*	Keyboarding I	1

Select 1 Course From Option 1, 1 Course from Option 2 and 2 Courses from Option 3

MGMT203	Human Relations in Business	Opt1	3
PSCH101	General Psychology	Opt1	3
SOCY101	Introduction to Sociology	Opt1	3
SPCH110	Fundamentals of Speech	Opt2	3
SPCH117	Interpersonal and Small Group Comm	Opt2	3
DATA103	BASIC	Opt3	3
DATA104	BASIC/Advanced	Opt3	3
DATA110	Computer Network Literacy	Opt3	3
DATA309	COBOL on the World Wide Web	Opt3	3
DATA318	Intro "C++" Programming	Opt3	3
DATA320	Intermediate C++ Programming	Opt3	3
DATA327	Assembler/Advanced	Opt3	4
DATA343	Introduction to SQL	Opt3	3
DATA349	Advanced PL/SQL Program Units	Opt3	3
DATA350	Relational Database Design	Opt3	3

Total minimum credits required to complete this program **73**

Entrepreneurship

The many rewards and challenges of owning your own business are being realized by increasing numbers of people. The Entrepreneurship 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.

Business/Management

Location: Ankeny

Selected courses in this program are offered at other campuses.

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 Entrepreneurship diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

Required Courses

BSAD223	Business and Financial Math	3
BSEN229	Small Business Management	3
BSEN301	Small Business Computerized Accounting	2
BSEN302	Small Business Management Strategies	3
BSEN303	Small Business Marketing	3
BSEN304	Small Business Start-Up	2
BSEN305	E-Commerce on the Web	3
BUSL310	Basic Law for the Entrepreneur	2

Option Courses . . . Select 1 Course From Each Option

ACCT101	Principles of Accounting I	Opt1	4
ACCT301*	Accounting Fundamentals	Opt1	3
ENGL117	Composition I	Opt2	3
ENGL410*	Communication Skills	Opt2	3
MGMT203	Human Relations in Business	Opt3	3
PSCH101	General Psychology	Opt3	3
COMS181	Intro to Computer Literacy	Opt4	3
MKTG103	Principles of Selling	Opt4	3
OFFC355	Computer Applications	Opt4	3

Total credits required to complete this program 30

Fashion/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 where style becomes a way of expression in apparel and accessories as well as interior design. A career in the fashion industry could include management, designing, buying, marketing or promotion, sales, customer service or visual merchandising.

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

Instruction is based upon lectures, labs, internships, speakers and a variety of conferences and field studies in fashion centers such as New York City. These activities offer the student a chance to interact with key industry professionals and develop an invaluable employment network.

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

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

Location: Ankeny

Selected courses in this program are offered at other campuses.

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 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/Design AAS Degree

MKTG231*	Fashion Analysis & Design	3
MKTG234	Interior Design Analysis	3
MKTG323	Visual Merchandising/Design	2
MKTG331	Fashion Coordination/Promotion	3
MKTG332*	Textiles	3
MKTG102	Principles of Marketing	3
MKTG103*	Principles of Selling	3
MKTG104	Advertising/Sales Promotion	3
MGMT101	Supervisory Management	3
MGMT341*	Business Internship I	6
MGMT342	Internship Seminar I	2
MGMT353	Business Internship II	4
MGMT358	Internship Seminar II	1
MGMT406	Relationship Strategies in Business	2
MGMT407	Leadership Strategies in Business	1
COOP220	Career-Seeking Skills	2

Option Courses . . . Select 1 Course From Each Option

MKTG233	Design Concepts	Opt1	3
MKTG235	Interior Design Planning	Opt1	3
BSAD150	Introduction to Business	Opt2	3
MKTG321	Retail Management I	Opt2	3
BSEN229	Small Business Management	Opt3	3
MKTG324	Fashion Buying	Opt3	3
MKTG322	Retail Management II	Opt3	3
DKTP401*	Intro To Desktop Publishing	Opt4	3
COMS181	Intro to Computer Literacy	Opt4	3
OFFC355	Computer Applications	Opt4	3
ENGL117	Composition I	Opt5	3
ENGL410*	Communication Skills	Opt5	3
MGMT203	Human Relations in Business	Opt6	3
PSCH101	General Psychology	Opt6	3
BSAD223	Business/Financial Math	Opt7	3
MATH115	Finite Mathematics	Opt7	4
SPCH110	Fundamentals of Speech	Opt8	3
SPCH111	Public Communication	Opt8	3
SPCH117	Interpersonal & Small Group Comm	Opt8	3

Elective Courses

Electives	5-6
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Total credits required to complete the AAS degree 73

Required Courses - Fashion/Design Diploma

MKTG231	Fashion Analysis & Design	3
MKTG234	Interior Design Analysis	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	Relationship Strategies in Business	2
MGMT407	Leadership Strategies in Business	1
COOP220	Career-Seeking Skills	2

Option Courses-Select 1 Course From Each Option

MKTG321	Retail Management I	Opt1	3
BSAD150	Introduction to Business	Opt1	3
MGMT203	Human Relations in Business	Opt2	3
PSCH101	General Psychology	Opt2	3
BSAD223	Business/Financial Math	Opt3	3
MATH115	Finite Mathematics	Opt3	4
ENGL117	Composition I	Opt4	3
ENGL410*	Communication Skills	Opt4	3

Total credits required to complete the diploma 42

*Course approved for High School Articulation

Business/Management

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 Management instructor, counselor or advisor for transfer planning assistance.

Location: Ankeny, Newton

Selected courses in this program are offered at other campuses.

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

Required Courses

MGMT101	Supervisory Management	3
MGMT102	Introduction to Management	3
MGMT103	Sales Management	3
MGMT104	Organizational Behavior	3
MGMT242	Human Resource Management	3
MGMT243	Management of Information	3
MGMT344	Field Experience I Seminar	2
MGMT345	Field Experience I	6
MGMT406	Relationship Strategies in Business	2
MGMT407	Leadership Strategies in Business	1
MKTG102	Principles of Marketing	3
MKTG103*	Principles of Selling	3
BPQ1400	Total Quality Management	3
COOP220	Career-Seeking Skills	2

Option Courses . . . Select 1 Course From Options 1 - 6 and 3 Courses From Option 7

COMS181	Intro to Computer Literacy	Opt1	3
DKTP401*	Intro to Desktop Publishing	Opt1	3
OFFC355	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
SPCH110	Fundamentals of Speech	Opt4	3
SPCH111	Public Communication	Opt4	3
SPCH117	Interpersonal & Small Group Communication	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
MGMT250	Fundamentals of Purchasing Mgmt.	Opt7	3
BSAD150	Introduction to Business.	Opt7	3

*Course approved for High School Articulation

BSEN229	Small Business Management	Opt7	3
MGMT241	Production Management	Opt7	3
MKTG321	Retail Management I	Opt7	3
BUSL101	Business Law I	Opt7	3
ECON101	Principles of Macroeconomics	Opt7	3
ACCT102	Principles of Accounting II	Opt7	4

Elective Courses

Electives	5-6
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Total minimum credits required to complete this program

72

Management Information Systems (MIS)

The Management Information Systems (MIS) 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, Newton

Selected courses in this program are offered at other campuses.

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 Management Information Systems (MIS) 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	28
ACCT101	Principles of Accounting I	4
ACCT351	Financial Accounting/Computers	3
BSAD150	Intro to Business	3
BSAD152	Business Statistics	4
COMS111	Computers and Programming I	3
COMS125	Business Programming COBOL I	3
COMS126	Business Programming COBOL II	4
COMS181	Intro to Computer Literacy	3
DATA103	BASIC	3
DATA382	Systems Analysis	3
MATH115	Finite Mathematics	4

Option Courses . . . Select 1 Course From Option 1

COMS112	Computers and Programming II	Opt1	3
DATA104	BASIC Advanced	Opt1	3
DATA110	Computer Network Literacy	Opt1	3
DATA231	RPG/II	Opt1	3

Total minimum credits required to complete this program

68

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.

Course work 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.

Business/Management

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 Marketing instructor, counselor or advisor for transfer planning assistance.

Location: Ankeny

Selected courses in this program are offered at other campuses.

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	Business Marketing	3
MKTG232	Advanced Selling Strategies	3
MKTG321	Retail Management I	3
MKTG323	Visual Merchandising/Design	2
COOP220	Career-Seeking Skills	2
MGMT101	Supervisory Management	3
MGMT341*	Business Internship I	6
MGMT342	Internship Seminar I	2
MGMT353	Business Internship II	4
MGMT358	Internship Seminar II	1
MGMT406	Relationship Strategies in Business	2
MGMT407	Leadership Strategies in Business	1
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
OFFC355	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
BSAD150	Introduction to Business	Opt5	3
MKTG322	Retail Management II	Opt5	3
ECON101	Principles of Macroeconomics	Opt5	3
MGMT203	Human Relations in Business	Opt6	3
PSCH101	General Psychology	Opt6	3
ACCT102	Principles of Accounting II	Opt7	4
BSEN229	Small Business Management	Opt7	3

Elective Courses

Electives 5-6

Total minimum credits required to complete this program 70

Medical Administrative Assistant

The Medical Administrative Assistant 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 administrative assistant 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 administrative assistant has a variety of responsibilities such as receptionist, transcriptionist, insurance claims specialist, and/or bookkeeper.

Upon successful completion of Terms 1, 2, and 3 of the Medical Administrative Assistant 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

Selected courses in this program are offered at other campuses.

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 Keyboarding I (OFFC 329) first term. Students start fall term.

Graduation Requirements

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

Term 1

MGMT203	Human Relations in Business	3
OFFC205	Business English	3
OFFC221	Medical Terminology I	3
OFFC325	Medical Computer Applications	3
OFFC355	Computer Applications	3
OFFC430	Medical Transcription I	3

Term 2

COOP220	Career-Seeking Skills	2
OFFC222	Medical Terminology II	3
OFFC306	Word Processing Skill Development II	3
OFFC324	Office Calculators	1
OFFC326	Medical Insurance	3
OFFC405	Professional Development	3
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

Total credits required to complete the diploma 48

Term 4 . . . Select 1 Course From Option 1

ACCT301*	Accounting Fundamentals	3
OFFC206	Business Correspondence Techniques	3
OFFC328	Internship for Medical Secretaries	4
OFFC356	Advanced Computer Applications	3
SPCH110	Fundamentals of Speech	Opt1 3
SPCH117	Interpersonal & Small Group Comm	Opt1 3

Total minimum credits required to complete AAS degree 64

Office Assistant

The Office Assistant diploma curriculum is for individuals who want to develop or refresh their office skills in order to qualify for general office work.

Students gain a basic knowledge of English, math, computer applications, and human relations skills. By selecting an emphasis during Term 2, students are able to customize their curriculum and gain specialized skills.

Locations: Ankeny, Boone, Carroll, Newton, Urban

*Course approved for High School Articulation

Business/Management

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

Term 1

BSAD223	Business/Financial Math	3
MGMT203	Human Relations in Business	3
OFFC205	Business English	3
OFFC305	Word Processing Skill Development I	4
OFFC324	Office Calculators	1
OFFC355	Computer Applications	3

Term 2

COOP220	Career-Seeking Skills	2
OFFC204	Office Procedures	3
OFFC206	Business Correspondence Techniques	3
OFFC405	Professional Development	3

In addition to the required courses in Term 2, students are required to select one of the following Emphasis Options:

Professional Emphasis Option

OFFC306	Word Processing Skill Dev II	3
OFFC410	Office Internship	2
OFFC411	Office Seminar	1

Information Processing Emphasis Option

OFFC306	Word Processing Skill Dev II	3
OFFC356	Advanced Computer Applications	3

Office Management Emphasis Option

DATA110	Computer Network Literacy	3
MGMT153	Office Management	3

Bookkeeping Emphasis Option

ACCT301*	Accounting Fundamentals	3
OFFC356	Advanced Computer Applications	3

Legal Emphasis Option

BUSL101	Business Law	3
OFFC331	Legal Terminology	3

Data Entry Emphasis Option

OFFC312	Data Entry	3
OFFC356	Advanced Computer Applications	3

Total credits required to complete the diploma 34

Retailing

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 numerous 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

Selected courses in this program are offered at other campuses.

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 Retailing 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
MGMT341	Business Internship I	6
MGMT342	Internship Seminar I	2
MGMT406	Relationship Strategies in Business	2
MGMT407	Leadership Strategies in Business	1

Option Courses . . . Select 1 Course From Option 1

ENGL117	Composition I	Opt1	3
ENGL410*	Communication Skills	Opt1	3

Total credits required to complete this program 42

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

Selected courses in this program are offered at other campuses.

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	Supervisory Management	3
MGMT203	Human Relations in Business	3
MGMT344	Field Experience I Seminar	2
MGMT345	Field Experience I	6
MGMT406	Relationship Strategies in Business	2
MGMT407	Leadership Strategies in Business	1
MKTG103*	Principles of Selling	3
MKTG232	Advanced 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

*Course approved for High School Articulation

Business/Management

OFFC355	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

Total credits required to complete this program 40

Certificates of Specialization

Accounting Certificate I

The Accounting Certificate I prepares the student for an entry level position in the field of accounting. Upon completion, the successful candidate will be able to distinguish, analyze, summarize, communicate, and record business transactions

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/Computers		3
BSAD223	Business/Financial Math		3
COMS181	Intro to Computer Literacy		3
OFFC324	Office Calculators		1

Option Courses...Select 1 Course From Option 1

ACCT206	Income Tax	Opt1	3
ACCT411	Payroll Accounting	Opt1	3

Total credits required to complete this certificate 21

These credits are applicable to the AAS degree in Accounting Specialist. The majority of these credits are also applicable to the AS degree in Accounting Paraprofessional and the Accounting and Bookkeeping diploma.

Accounting Certificate II

The Accounting Certificate II 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 business transactions.

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/Computers		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
ACCT308	Managerial Acct for Non-Accountants	Opt4	3
ACCT352	Managerial Accounting/Computers	Opt4	3
ACCT206	Income Tax	Opt5	3
ACCT411	Payroll Accounting	Opt5	3

Total credits required to complete this certificate 41

The majority of these credits are also applicable to the AAS degree in Accounting Specialist and the AS degree in Accounting Paraprofessional.

*Course approved for High School Articulation

Computer Applications

The Computer Applications certificate provides students with a basic understanding of the computer applications that may be performed in an office. A student will be able to complete the following applications: word processing, data base, desktop publishing, graphics, presentation, spreadsheet, e-mail, internet, and operating systems.

Required Courses

OFFC305	Word Processing Skill Dev I	4
OFFC306	Word Processing Skill Dev II	3
OFFC355	Computer Applications	3
OFFC356	Advanced Computer Applications	3
DATA110	Computer Network Literacy	3

Total credits required to complete this certificate 16

These credits are also applicable to the diploma in Office Assistant and the AAS degree in Administrative Assistant.

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
COMS111	Computers and Program Logic	3
COMS125	Business Programming COBOL I	3
COMS181	Intro to Computer Literacy	3
DATA306	COBOL/Intermediate	4
DATA382	Systems Analysis	4

Option Courses...Select a Minimum of 6 Credits

DATA103	BASIC	Opt1	3
DATA104	BASIC - Advanced	Opt1	3
DATA106	Microcomputers in Business	Opt1	3
DATA110	Computer Network Literacy	Opt1	3
DATA301	DOS Job Control	Opt1	4
DATA308	COBOL - Advanced	Opt1	3
DATA309	COBOL on the World Wide Web	Opt1	3
DATA318	Intro to C++ Programming	Opt1	3
DATA319	Assembler Beginning	Opt1	4
DATA320	Intermediate C++ Programming	Opt1	3
DATA321	Assembler Intermediate	Opt1	4
DATA327	Advanced Assembler	Opt1	4
DATA341	Introduction to Databases	Opt1	3
DATA343	Introduction to SQL	Opt1	3
DATA349	Advanced PL/SQL Program Units	Opt1	3
DATA350	Relational Database Design	Opt1	3

Total credits required to complete this certificate 27

These credits are applicable to the AAS degree in Computer Programming

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

Total credits required to complete this certificate 8

Database Specialist

The purpose of the Database Specialist certificate is to add to the specialization of study at DMACC. This certificate can also assist the student to prepare for Oracle certification as an Oracle Application Developer which is desirable for positions in the database area.

Business/Management

Many of the courses used in this certificate curriculum are also optional courses in the Computer Programming AAS degree. This certificate will allow the student to better select the focus of study and compliment the AAS Computer Programming degree.

Required Courses

COMS111	Computers and Program Logic	3
COMS125	Business Programming - COBOL I	3
COMS181	Intro to Computer Literacy	3
DATA341	Introduction to Databases	3
DATA343	Introduction to SQL	3
DATA349	Advanced PL/SQL Program Units	3
DATA350	Relational Database Design	3

Total credits required to complete this certificate 21

The majority of these courses are applicable to the AAS degree in Computer Programming

Entrepreneurship

The Entrepreneurship 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 Entrepreneurship program.

Required Courses

BSEN229	Small Business Management	3
BSEN302	Small Business Management Strategies	3
BSEN303	Small Business Marketing	3

Option Courses...Select 1 Course From Each Option

ACCT101	Principles of Accounting I	Opt1	4
ACCT301	Accounting Fundamentals	Opt1	3
BSEN301	Small Business Computerized Accounting	Opt2	2
BSEN304	Small Business Start-Up	Opt2	2
BSEN305	E-Commerce on the Web	Opt2	3
BUSL310	Basic Law for the Entrepreneur	Opt2	2

Total credits required to complete this certificate 14

These credits are also applicable to the diploma in Entrepreneurship.

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.

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

Total credits required to complete this certificate 14

These credits are applicable to the AAS degree in Fashion/Design.

Information Processing Support

The Information Processing Support certificate prepares students for an entry-level position in an office emphasizing information support. This curriculum includes business English and written communications. Students receive training on computers using office software applications with an emphasis on word processing.

Required Courses

OFFC205	Business English	3
OFFC206	Business Correspondence Techniques	3
OFFC305	Word Processing Skill Development I	4
OFFC306	Word Processing Skill Development II	3
OFFC355	Computer Applications	3
OFFC356	Advanced Computer Applications	3

Total credits required to complete this certificate 19

*Course approved for High School Articulation

These credits are also applicable to the diploma in Office Assistant and the AAS degree in Administrative Assistant.

Interior Design Consultant

The Interior Design Consultant certificate is designed for currently employed individuals who have an interest in adding specialized training in interior home products to their credentials. The focus of the Interior Design Consultant certificate is to provide training needed at the wholesale or retail levels in interior home product sales, marketing or customer service.

Required Courses

MKTG102	Principles of Marketing	3
MKTG103	Principles of Selling	3
MKTG234	Interior Design Analysis	3
MKTG235	Interior Design Planning	3
MKTG323	Visual Merchandising/Design	2
MKTG332	Textiles	3

Total credits required to complete this certificate 17

These credits are applicable to the Fashion diploma or the AAS degree in Fashion/Design

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.

Required Courses

MGMT101	Supervisory Management	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

BSEN229	Small Business Management	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT153	Office 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

Total credits required to complete this certificate 30

These credits are also applicable to the AAS degree in Management and the AAS degree in Marketing.

Medical Transcriptionist

The purpose of the Medical Transcriptionist certificate is to provide a course of study for medical administrative assistant 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

OFFC349	WORD	1
OFFC221	Medical Terminology I	3
OFFC430	Medical Transcription I	3

Business/Management

OFFC222	Medical Terminology II	3
OFFC431	Medical Transcription II	3
OFFC320	Human Body-Health and Disease	3
OFFC223	Medical Transcription III	3

Total credits required to complete this certificate 19

The majority of these credits are also applicable to the AAS degree in Medical Administrative Assistant.

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
COMS111	Computers and Program Logic	3
COMS125	Business COBOL I	3
COMS181	Intro to Computer Literacy	3
DATA110	Computer Network Literacy	3

Option Courses...Select a Minimum of 6 Credits

ACCT101	Principles of Accounting I	Opt1	4
ACCT102	Principles of Accounting II	Opt1	4
ACCT351	Financial Accounting/Computers	Opt1	3
ACCT352	Managerial Acct/Computers	Opt1	3
COMS126	Business Programming COBOL II	Opt1	4
DATA103	BASIC	Opt1	3
DATA104	BASIC -Advanced	Opt1	3
DATA318	Intro to C++ Programming	Opt1	3
DATA320	Intermediate C++ Programming	Opt1	3
DATA341	Introduction to Databases	Opt1	3
DATA343	Introduction to SQL	Opt1	3
DATA349	Advanced PL/SQ: Program Units	Opt1	3
DATA350	Relational Database Design	Opt1	3

Total credits required to complete this certificate 21

The majority of these credits are applicable to the AS degree in Accounting Information Systems.

Office Specialist

The Office Specialist certificate provides students with basic entry-level skills for office support positions. These skills include computer operations, business English, human relations, and office calculators. Completion of all courses 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
OFFC305	Word Processing Skill Dev I	4
OFFC324	Office Calculators	1
OFFC355	Computer Applications	3

Total credits required to complete this certificate 17

These credits are applicable to the AAS degree in Administrative Assistant and the diploma in Office Assistant.

Personal Financial Planning

The Personal Financial Planning certificate offers practical course work for individuals desiring to develop their basic financial skills. The program provides opportunities to help improve the problem solving abilities of students to better enable them to function in today's financial environment.

Required Course

BSAD151	Personal Finance	3
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Option Courses...Select 2 Courses From Option 1 and 3 Courses from Option 2

ACCT206	Income Tax	Opt1	3
BSAD201	Principles of Banking	Opt1	3
BSAD224	Introduction to Investments	Opt1	3
BSAD225	Principles of Insurance	Opt1	3
ACCT209	Computerized Personal Finance	Opt2	1
BSAD265	Investing and Financial Assets	Opt2	1
BSAD266	Investing in Real Assets	Opt2	1
BSAD267	Estate Planning	Opt2	1
BSAD268	Long Range Financial Planning	Opt2	1

Total credits required to complete this certificate 12

The majority of these credits are also applicable to the AAS degree in Business Administration.

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 Macroeconomics	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

Total credits required to complete this certificate 18

Purchasing Operations - Advanced

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 Microeconomics	3

Total credits required to complete this certificate 18

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.

*Course approved for High School Articulation

Business/Management

Required Courses

MKTG321	Retail Management I	3
MKTG103*	Principles of Selling	3
MKTG323	Visual Merchandising/Design	2
MGMT407	Leadership Strategies in Business	1

Total credits required to complete this certificate 9

These credits are also applicable to the AAS degree in Marketing and the AAS degree in Fashion/Design.

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. 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
MGMT406	Relationship Strategies in Business	2
MGMT407	Leadership Strategies in Business	1

Option Courses...Select 1 Course From Option 1

ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3

Total credits required to complete this certificate 15

These credits are also applicable to the diploma in Sales & Management, the diploma in Fashion/Design, the AAS degree in Management, the AAS degree in Marketing and the AAS degree in Fashion/Design.

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.

Required Courses

MGMT101	Supervisory Management	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
BSEN229	Small Business Management	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT153	Office Management	Opt1	3
MGMT341	Business Internship I	Opt1	6
MKTG103*	Principles of Selling	Opt1	3
MKTG211	Business 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

Total credits required to complete this certificate 18

These credits are also applicable to the diploma in Sales & Management, the AAS degree in Management and the AAS degree in Marketing.

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
COMS181	Intro to Computer Literacy	3
MGMT102	Introduction to Management	3
MGMT240	Principles of Managerial Finance	3
MGMT241	Production Management	3
MGMT101	Supervisory Management	3
MKTG102	Principles of Marketing	3

Total credits required to complete this certificate 34

*Course approved for High School Articulation

Health

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 Technology

Nursing Programs

Practical Nursing
Associate Degree Nursing

Respiratory Therapy

Certificates of Specialization

Dietary Manager Specialist
Emergency Medical Technician - Basic
Health Services Management
Long Term Care Administrator
Nurse Aide
Phlebotomy
Residential Care Facility Administrator

Date	Description	Amount	Balance
Jan 1	Balance forward		100.00
Jan 5	Received from A	25.00	125.00
Jan 10	Received from B	15.00	140.00
Jan 15	Received from C	10.00	150.00
Jan 20	Received from D	5.00	155.00
Jan 25	Received from E	5.00	160.00
Jan 30	Received from F	5.00	165.00
Feb 5	Received from G	5.00	170.00
Feb 10	Received from H	5.00	175.00
Feb 15	Received from I	5.00	180.00
Feb 20	Received from J	5.00	185.00
Feb 25	Received from K	5.00	190.00
Feb 30	Received from L	5.00	195.00
Mar 5	Received from M	5.00	200.00
Mar 10	Received from N	5.00	205.00
Mar 15	Received from O	5.00	210.00
Mar 20	Received from P	5.00	215.00
Mar 25	Received from Q	5.00	220.00
Mar 30	Received from R	5.00	225.00
Apr 5	Received from S	5.00	230.00
Apr 10	Received from T	5.00	235.00
Apr 15	Received from U	5.00	240.00
Apr 20	Received from V	5.00	245.00
Apr 25	Received from W	5.00	250.00
Apr 30	Received from X	5.00	255.00
May 5	Received from Y	5.00	260.00
May 10	Received from Z	5.00	265.00
May 15	Received from AA	5.00	270.00
May 20	Received from AB	5.00	275.00
May 25	Received from AC	5.00	280.00
May 30	Received from AD	5.00	285.00
Jun 5	Received from AE	5.00	290.00
Jun 10	Received from AF	5.00	295.00
Jun 15	Received from AG	5.00	300.00
Jun 20	Received from AH	5.00	305.00
Jun 25	Received from AI	5.00	310.00
Jun 30	Received from AJ	5.00	315.00
Jul 5	Received from AK	5.00	320.00
Jul 10	Received from AL	5.00	325.00
Jul 15	Received from AM	5.00	330.00
Jul 20	Received from AN	5.00	335.00
Jul 25	Received from AO	5.00	340.00
Jul 30	Received from AP	5.00	345.00
Aug 5	Received from AQ	5.00	350.00
Aug 10	Received from AR	5.00	355.00
Aug 15	Received from AS	5.00	360.00
Aug 20	Received from AT	5.00	365.00
Aug 25	Received from AU	5.00	370.00
Aug 30	Received from AV	5.00	375.00
Sep 5	Received from AW	5.00	380.00
Sep 10	Received from AX	5.00	385.00
Sep 15	Received from AY	5.00	390.00
Sep 20	Received from AZ	5.00	395.00
Sep 25	Received from BA	5.00	400.00
Sep 30	Received from BB	5.00	405.00
Oct 5	Received from BC	5.00	410.00
Oct 10	Received from BD	5.00	415.00
Oct 15	Received from BE	5.00	420.00
Oct 20	Received from BF	5.00	425.00
Oct 25	Received from BG	5.00	430.00
Oct 30	Received from BH	5.00	435.00
Nov 5	Received from BI	5.00	440.00
Nov 10	Received from BJ	5.00	445.00
Nov 15	Received from BK	5.00	450.00
Nov 20	Received from BL	5.00	455.00
Nov 25	Received from BM	5.00	460.00
Nov 30	Received from BN	5.00	465.00
Dec 5	Received from BO	5.00	470.00
Dec 10	Received from BP	5.00	475.00
Dec 15	Received from BQ	5.00	480.00
Dec 20	Received from BR	5.00	485.00
Dec 25	Received from BS	5.00	490.00
Dec 30	Received from BT	5.00	495.00
Total			495.00

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 skills 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

Total credits required to complete this program 47

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 the Option 1 Course or both Option 2 Courses and 1 Course From Option 3

DENH228	Dental Hygiene I	2
DENH229	Dental Hygiene I Practicum	4
DENH259	Dental Radiography II	2
DENH293	General and Oral Pathology	3
DENH240	Nutrition/Preventative Dentistry	Opt1 4
HRMT334	Human Nutrition	Opt2 3
DENH241	Nutritional Counseling for Dental Health	Opt2 1
BIOL132	Health Science Microbiology	Opt3 4
BIOL149	General Microbiology	Opt3 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 4

DENH290	Community Dentistry	3
DENH298	Dental Hygiene IV	2
DENH291	Dental Hygiene IV Practicum	5
ENGL117	Composition I	3
SPCH110	Fundamentals of Speech	Opt4 3
SPCH117	Interpersonal & Small Group Communication	Opt4 3

Total credits required to complete this program 81

*Course approved for High School Articulation

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 or related field, or transferring to a four-year college/university.

IMPORTANT NOTE:

Licensure requirements have changed and are quite complex. Students are strongly advised to contact one of the staff members of Health Care Administration in Bldg. 6, Room 16A on the Ankeny Campus or call 515-964-6814, 515-964-6262 regarding additional important licensure information.

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	28
HCAD278	Management in Health Care	3
HCAD279	Health Care Human Resources	3
HCAD280	Health Care Delivery Systems	2
HCAD282	Services for Long-Term Care	2
HCAD283	Regulatory Management	2
HCAD284	Long-Term Care: A Capstone	1
SOCY204	Social Gerontology/Applications	4
SOCY205	Issues in Aging	2
HCAD251	Practicum: Social Services	1
HCAD252	Practicum: Dietary	1
HCAD253	Practicum: Legal Aspects/Gov't Organization	1
HCAD265	Practicum: Seminar	1
HCAD254	Practicum: Nursing	1
HCAD255	Practicum: Environmental Services	1
HCAD256	Practicum: Activity/Community Resources	1
HCAD265	Practicum: Seminar	1
HCAD257	Practicum: Business Administration	1
HCAD258	Practicum: Administrative Organization	1
HCAD259	Practicum: Human Resource Management	1
HCAD265	Practicum: Seminar	1

Option Courses - Select 11 or 12 Credits from Option 1

ACCT101	Principles of Accounting I	Opt1	4
ACCT301*	Accounting Fundamentals	Opt1	3
HCAD238	Health Care Financial Management	Opt1	3
HCAD239	Information Systems in Health Care	Opt1	2
HCAD274	Law and Ethics in Health Care	Opt1	3

Total minimum credits required to complete this program 70

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 multi-skilled health professionals, medical assistants perform a variety of clinical procedures and administrative functions in these settings.

Students gain a basic knowledge of anatomy and physiology, laboratory procedures, administration procedures, 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 students will not receive pay during the clinical rotation.

The Medical Assistant program is fully accredited by the Commission of Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Committee on 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 2.0 (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. Several courses have corequisites as listed in the catalog.

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
PSCH101	General Psychology	3

Term 3

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

Total credits required to complete this program 48

*Course approved for High School Articulation

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 Sciences (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.

Term 1

BIOL154	General Anatomy and Physiology	5
CHEM131	General Chemistry I	4
MLTS400	Intro to Medical Laboratory	6
PSCH101	General Psychology	3

Term 2

BIOL132	Health Science Microbiology	4
CHEM132	General Chemistry II	4
ENGL117	Composition I	3
MLTS411	Hematology	6

Term 3

MLTS442	Immunohematology	5
MLTS450	Clinical Practicum I	2
SPCH110	Fundamentals of Speech	3

Term 4

MLTS422	Clinical Chemistry	8
MLTS431	Clinical Microbiology	6
MATH	Any 100 level MATH	3-5

Term 5

MLTS455	Clinical Practicum II	12
MLTS460	Clinical Seminar	1
MLTS461	Medical Laboratory Review	1
MLTS463	Professional Development	1

Total credits required to complete this program 77

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 and Associate Degree Nursing students.

The student who completes two terms is prepared to become a **Licensed Practical Nurse (LPN)**. LPNs 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 hospitals, long-term facilities or clinics.

Upon successful completion of Terms 1 and 2, 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 manage bedside nursing care for patients in hospitals, long-term care facilities, and a variety of community based health care settings.

Upon successful completion of Terms 1 - 5 of the nursing curriculum, the student is 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)
Selected liberal arts courses in this program are offered at other campuses.

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

Program Entry Requirements

1. Complete an application.
2. Attend any required information/registration sessions including a nursing program orientation session.
3. Successful completion of NRA0301 or an equivalent 75 hour (or more) Certified Nurse Assistant course from an approved program - January 1992 or after.
4. BIOL133 Health Science Anatomy with a grade of C (not C-) or better.
5. COMS181 Computer Literacy or OFFC355 Computer Applications with a grade of C (not C-) or better.
6. Complete required COMPASS testing obtaining satisfactory scores in reading (81 or above) and math (44 or above) or ACT of 19 or above.
7. Proof of high school graduation or GED completion.

Practical Nursing starts:

Ankeny - Fall and Spring Terms
Boone, Carroll - Fall Term Only

In both the Practical and Associate Degree levels of the program, all nursing and liberal arts support courses must be successfully completed with a grade of "C" or above. In order to progress to the next term, these courses must be successfully completed in the term identified or a previous term.

Continuation in the Associate Degree program requires successful completion of Terms 1 and 2 of the Practical Nursing curriculum. 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 have "C" or above in all Nursing and support courses in the curriculum.

To earn an Associate Degree Nursing AAS degree, a student must complete all course work as prescribed in Terms 1-5 and have a grade of "C" or above in all NURS, ASDN and support courses in the curriculum.

*Course approved for High School Articulation

Health

PRACTICAL NURSING

Term 1

PSCH101	General Psychology	3
PSCH103	Developmental Psychology	3
NURS221	Health Assessment	3
NURS222	Foundation of Nursing Practice	3
NURS223	Skills and Technology	3

Term 2

ENGL117	Composition I	3
BIOL134	Health Science Physiology	3
NURS224	Health: Birth to Middle Adult	5
NURS225	Older Adult Health	4

Total credits required to complete the diploma 30

ASSOCIATE DEGREE NURSING

(CURRICULUM BEGINNING FALL TERM 2000)

MUST COMPLETE TERMS 1 & 2 PRIOR TO ENROLLING IN ASDN COURSES

Term 3

BIOL132	Health Science Microbiology	4
SPCH117	Interpersonal and Small Group Comm.	3

Term 4...Select 2 Courses from Option 1

ASDN226	Nursing Practice II	2
SOCY101	Introduction to Sociology	3
ASDN227	Family Health Nursing	Opt1 5
ASDN228	Adult and Older Adult Health	Opt1 5
ASDN229	Mental Health Nursing	Opt1 5

Term 5...Select 1 Course From Option 2 and 1 Course from Option 3

ASDN230	Nursing Management	3
ASDN231	Nursing Seminar	3
ASDN227	Family Health Nursing	Opt2 5
ASDN228	Adult and Older Adult Health	Opt2 5
ASDN229	Mental Health Nursing	Opt2 5
HUMN131	Humanities Through the Arts	Opt3 3
LITR120	Introduction to Literature	Opt3 3
PHIL110	Introduction to Philosophy	Opt3 3
PHIL111	Introduction to Logic	Opt3 3
PHIL112	Ethical Problems	Opt3 3
PHIL113	Comparative Religions	Opt3 3

Total credits required to complete the AAS degree 66

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 to plan, provide and evaluate direct care to persons with pulmonary and cardiovascular diseases.

The curriculum includes over 900 hours of supervised clinical practicum experience in local health care facilities. Graduates will acquire 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 licensure by the Iowa Department of Public Health.

Employment opportunities are found in hospitals, clinics, physicians' 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. Meet with a Respiratory Therapy faculty advisor. Students must also:

- Submit proof of high school graduation or GED prior to enrollment.
- Submit evidence of grade "C" or above in two semesters of high school Algebra I or the equivalent (Academic Achievement Center Algebra I & II or MATH 092) and two semesters of Algebra II or the equivalent (Academic Achievement Center Algebra III & IV or MATH094) within five (5) years of admission.
- * Submit to Admissions office evidence of completion of CHEM131 General Chemistry I with a grade of "C" or above.
- Complete BIOL133 Health Science Anatomy or BIOL154 General Anatomy and Physiology or equivalent courses with a grade of "C" or above.
- Successfully complete COMS181 Introduction to Computer Literacy or the equivalent with a grade of "C" or above.

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 above is required in all RESP courses.

Term 1

BIOL134	Health Science Physiology	3
RESP300	Fundamentals of Respiratory Therapy	3
RESP302	Gas, Humidity and Aerosol Therapy	4
RESP304	Cardiopulmonary Therapeutics	4

Term 2... Select 1 Course From Option 1

RESP310	Cardiopulmonary Renal Pathophysiology	5
RESP315	Respiratory Therapy Pharmacology	3
RESP352	Respiratory Therapy Practicum I	4
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

BIOL132	Health Science Microbiology	4
RESP320	Advanced Respiratory Therapy	5
RESP372	Respiratory Therapy Practicum III	7

Term 5... Select 1 Course From Option 2

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	5

Total credits required to complete this program 78

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.

*Course approved for High School Articulation

Health

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

Total credits required to complete this certificate 15

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 Course

HLCR307	Emergency Medical Tech Basic	6
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Health Services Management

The purpose of the Health Services Management Specialist Certificate is to provide course work to qualify individuals for mid-management positions in the health care field. Mid-managers may be responsible for budgeting, staffing, supervision, management, human resources, and staff development. This is for individuals in medical offices, acute care, long-term care, health insurance, and managed care.

IMPORTANT NOTE:

Students are strongly advised to contact one of the staff members of Health Care Administration in Bldg. 6, Room 16A on the Ankeny Campus or call 515-964-6814, 515-964-6262 or 515-964-7117 regarding additional information.

Required Courses

HCAD260	Health Services Mangement Field Experience	3
HCAD274	Law and Ethics in Health Care	3
HCAD278	Management in Health Care	3
HCAD279	Health Care Human Resources	3
HCAD280	Health Care Delivery Systems	2

Option Courses... Select 1 Course from Option 1 and 10 Credits from Option 2

ACCT101	Principles of Accounting I	Opt1	4
ACCT301	Accounting Fundamentals	Opt1	3
COOP220	Career Seeking Skills	Opt2	2
HCAD238	Health Care Financial Management	Opt2	3
HCAD239	Information Systems in Health Care	Opt2	2
HCAD248	Quality Improvement in Health Care	Opt2	3
HCAD282	Services for Long-Term Care	Opt2	2
HCAD283	Regulatory Management	Opt2	2
HCAD285	Case Management	Opt2	2
MEDA462	Medical Terminology	Opt2	1
OFFC326	Medical Insurance	Opt2	3
SOCY105	Race, Ethnic and Gender Roles	Opt2	3
SOCY204	Social Gerontology	Opt2	4
SOCY205	Issues in Aging	Opt2	2
SPAN101	Elementary Spanish I	Opt2	4

Total credits required to complete this certificate 27

Long Term Care Administrator

The Long Term Care Administrator Specialist 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.

IMPORTANT NOTE:

Students are strongly advised to contact one of the staff members of Health Care Administration in Bldg. 6, Room 16A on the Ankeny Campus or call 515-964-6814, 515-964-6262 or 515-964-6814 regarding additional information.

Required Courses

HCAD278	Management in Health Care	3
HCAD279	Health Care Human Resources	3
HCAD280	Health Care Delivery Systems	2
HCAD282	Services for Long-Term Care	2
HCAD283	Regulatory Management	2
HCAD284	Long-Term Care: A Capstone	1
SOCY204	Social Gerontology/Applications	4
SOCY205	Issues in Aging	2
HCAD251	Pract.: Social Services	1
HCAD252	Pract.: Dietary	1
HCAD253	Pract.: Legal Aspects/Gov't Organization	1
HCAD265	Practicum: Seminar	1
HCAD254	Pract.: Nursing	1
HCAD255	Pract.: Environmental Services	1
HCAD256	Pract: Activities/Community Resources	1
HCAD265	Practicum: Seminar	1
HCAD257	Pract: Business Administration	1
HCAD258	Pract: Administrative Organization	1
HCAD259	Pract: Human Resource Management	1
HCAD265	Practicum: Seminar	1

Total credits required to complete this certificate 31

Nurse Aide

The Nursing Assistant Specialist Certificate is designed for individuals seeking employment in any health care setting. The skills and knowledge learned will meet the requirements of many job titles from Psychology Tech to Emergency Department Tech. You will earn from \$7.00-\$12.00 per hour. You will be drug free and have no criminal or misdemeanor record. You will need to be flexible and be able to take direction and be a team member. A uniform is required.

Required Courses

HLCR314	Emergency Care	1
And		
HLCR324	Nursing Assistant 120 Hours	6
OR		

The following two courses:

NRAO301	Nurse Aide 75 Hours	3
NRAO333	Advanced Nurse Aide	3

Option Courses...Select 1 Course From Option 1

HLCR331	Home Health Aide	Opt1	1
MEDA462	Medical Terminology	Opt1	1

Total credits required to complete this certificate 8

Phlebotomy

A phlebotomist draws blood from patients for 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 1 courses, with a focus on

*Course approved for High School Articulation

Health

Mentally Retarded/Developmentally Disabled Residents or option 2 courses, with a focus on Geriatric Residents.

IMPORTANT NOTE:

Students are strongly advised to contact one of the staff members of Health Care Administration in Bldg. 6, Room 16A on the Ankeny Campus or call 515-964-6814, 515-964-6262 or 515-964-7117 regarding additional information.

Required Courses

ACCT301	Accounting Fundamentals		3
ENGL117	Composition I		3
HCAD274	Law and Ethics in Health Care		3
HCAD278	Management in Health Care		3
HCAD279	Health Care Human Resources		3

Option Courses . . . Select One Of The Following Options

HCAD227	Integrating Comm Serv-MH/MR/DD	Opt1	4
HCAD277	Serv Delivery Systems-MH/MR/DD	Opt1	5
PSCH104	Abnormal Psychology	Opt1	3
HCAD280	Health Care Delivery Systems	Opt2	2
HCAD282	Services for Long-Term Care	Opt2	2
PSCH101	General Psychology	Opt2	3
SOCY101	Introduction to Sociology	Opt2	3
SOCY204	Social Gerontology / Applications	Opt2	4

Total minimum credits required to complete this certificate 29

*Course approved for High School Articulation

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

Culinary Arts
Hospitality Business
Hotel and Restaurant Management

History

The history of the United States is a complex and multifaceted story. It begins with the first Native American civilizations, which thrived in various regions across the continent. The arrival of European explorers in the late 15th and early 16th centuries marked the beginning of a new era. The Spanish, French, and British established colonies, each with its own unique characteristics and challenges. The American Revolution (1775-1783) was a pivotal moment, leading to the birth of the United States as an independent nation. The subsequent years were marked by westward expansion, the Civil War (1861-1865), and the Reconstruction period. The 20th century saw the rise of the United States as a global superpower, with significant events such as World War I, the Great Depression, and the Cold War. The modern era is characterized by technological advancements, social movements, and ongoing challenges.

The United States has a rich and diverse cultural heritage. It is a melting pot of different ethnicities, languages, and traditions. The American dream, the idea of achieving success through hard work and determination, is a central theme in the nation's history. The country has also been a leader in many fields, including science, technology, and the arts. The American Revolution and the Civil War are key events in the nation's history, shaping its identity and values. The United States has a long and proud history of freedom and democracy, and it continues to play a significant role in the world today.

Hospitality

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	3	Opt1
MATH410*	Mathematics for Technicians I	3	Opt1

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	

Total credits required to complete the diploma 37

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/Buffer Decorating	2	
CULA451	Culinary Cuisine Lab	4	
CULA452	Advanced Culinary Cuisine	2	
HRMT367	Beverage Seminar	2	

Total credits required to complete the AAS degree 67

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	
OFFC355	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	2	Opt1
HRMT328	Food Preparation II Lab	2	Opt1
MKTG102	Principles of Marketing	3	Opt2

Total minimum credits required to complete this program 38

Hotel and 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.

*Course approved for High School Articulation

Hospitality

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
OFFC355	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
BSEN229	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 Group Communication	3
HRMT367	Beverage Seminar	Opt5 2
HRMT364	Hotel Administration	Opt6 2
BSAD150	Intro to Business	Opt7 3
BUSL101	Business Law I	Opt7 3
MGMT101	Supervisory Management	Opt7 3
MGMT102	Introduction to Management	Opt7 3

Total minimum credits required to complete this program 64

*Course approved for High School Articulation

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 Millwork
Architectural Technologies
ASEP - General Motors
ASSET - Ford
Auto Collision Technology
Auto Mechanics Technology
BSEP - General Motors
Building Trades
Civil Engineering Technology
Computer-Aided Design Technology
Diemaking
Diesel Technology
Electronic Systems Service Technology
Fire Science Technology
Heating, Air Conditioning, Refrigeration Technology
High Tech-Automation/Robotics
Information Technology Network Administration
Integrated Manufacturing Technology
Manufacturing Technology
Job Shop Machinist
Quality Technician
Safety Science
Telecommunications Technology
Tool and Diemaking
Welding

Certificates of Specialization

Building Maintenance
CIM - Manufacturing Resource Planning
CIM - Product Engineering
CIM - Shop Floor Control
Fire Specialist
Microsoft Certified Professional
Novell Education Certification Program
Quality Technician
Safety Science
Welding

Certificate of Completion

Commercial Vehicle Operator Training

Industrial Technology

Diplomas and Degrees

Architectural Millwork

The Architectural Millwork program will give students the training to produce one of a kind cabinetry, millwork (wood trim), and solid surface products, such as solid surface counter tops. Students will receive classroom instruction as well as hands-on training and experience using modern millwork equipment. Graduates of the program will earn a diploma, which will prepare them for entry-level positions in the architectural millwork field.

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 an Architectural Millwork diploma, complete all course work as prescribed and maintain a 2.0 (C) grade point average.

Term 1

MILL440	Blueprint Reading and Layout	3
MILL441	Material Identification and Usage	3
MILL442	Introduction to Portable Tools	3
MILL443	Stationary Equipment	4
HLCR314	Emergency Care	1
MATH410*	Mathematics for Technicians I	3

Term 2

MILL444	Advanced Equipment Techniques	3
MILL445	32 Millimeter Cabinet Techniques	3
MILL446	Millwork Techniques	3
MILL447	Introduction to Application	3
ENGL410*	Communication Skills	3

Term 3

MILL448	Advanced Millwork Applications I	5
MILL449	Advanced Millwork Applications II	5

Total credits required to complete this program 42

Architectural Technologies

The Architectural Drafting program is designed to develop the proper manual and computer skills and knowledge required for satisfactory entrance into the field of architectural drafting, and detailing.

Graduates are employed by architects, structural, mechanical and electrical engineers, contractors, subcontractors and building equipment and material suppliers. Students periodically visit construction sites to observe actual construction practices and architectural offices to experience their future work environment.

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 above 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 (C) grade point average.

Term 1

ARCH410*	Architectural Drafting I	2
ARCH460*	Architectural Drafting Lab I	3
ARCH464	Construction Techniques I	2
ARCH472	Construction Estimating	2
CADD401*	Intro Computer Aided Drafting	3

Term 2

ARCH420	Architectural Drafting II	2
ARCH461	Architectural Drafting Lab II	3
ARCH470	Construction Techniques II	2
ARCH473	Building Assemblies I	2
CADD403	Intermediate CADD-Architectural	3
ENGL117	Composition I	3
MATH410*	Mathematics for Technicians I	3

Term 3 . . . Select 1 Course from Option 1

ARCH462	Architectural Drafting III	2
ARCH463	Architectural Drafting Lab III	3
ARCH465	Building Assemblies II	2
ARCH471	Construction Techniques III	3
ARCH475	Technical Report & Specs	2
MATH411	Mathematics for Technicians II	3
MGMT203	Human Relations in Business	Opt1 3
PSCH101	General Psychology	Opt1 3
PSCH106	Psychology of Human Relations & Adjustment	Opt1 3
SOCY101	Introduction to Sociology	Opt1 3

Total credits required to complete this program 48

ASEP - General Motors

The Automotive Service Educational Program (ASEP), co-sponsored by DMACC and General Motors, is a two-year automotive program is designed to prepare students for employment as a 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. Students start in October each year.

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	4
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 Systems	3
ASEP337	GM Tune-Up Proc and Emission Control	4
ASEP340	Technical Internship III	3
ASEP344	GM Manual Drivetrains	4
ASEP345	GM Automatic Drivetrains	4
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

Total credits required to complete this program 73

*Course approved for High School Articulation

Industrial Technology

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
ASST328	Diagnosis/Repair Ford Electrical Systems	5
ASST330	Technical Internship II	3
ASST333	Ford Engine Diagnosis/Repair	4
ASST336	Ford Fuel Systems & Injection	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 & Adjustment	3

Total credits required to complete this program 73

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.

The Auto Collision diploma option prepares graduates for entry into auto collision jobs related to paint, refinishing and major structural repairs.

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 DIPLOMA

Required Courses

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
AUTC414	Collision Analysis and Measuring	2
AUTC420	Advanced Refinishing	6
AUTC421	Adv Estimating/Ownership/Management	3
AUTC440	Frame and Unibody Structural Repair	5
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
WELD468*	Related Welding/Auto Collision	2

Total credits required to complete the diploma 47

AUTO COLLISION TECHNOLOGY

Required Courses

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
AUTC414	Collision Analysis and Measuring	2
AUTC420	Advanced Refinishing	6
AUTC421	Adv Estimating/Ownership/Management	3
AUTC440	Frame and Unibody Structural Repair	5
AUTO468	Automotive Electricity	6
AUTO472	Auto Air Conditioning and Heating	4
AUTO486	Basic Brakes	3
AUTO488	Basic Suspension/Alignment	4
ENGL410*	Communication Skills	3
HLCR314	Emergency Care	1
MATH410*	Mathematics for Technicians I	3
PHYL401*	Physics for Technicians	3
WELD468*	Related Welding/Auto Collision	2

Option Courses...Select 1 Course From Each Option

BSEN229	Small Business Management	Opt1	3
BUSL101	Business Law I	Opt1	3
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

Total credits required to complete the AAS degree 74

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 one course, 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
AUTO469	Basic Automotive Electricity	3
AUTO470	Advanced Automotive electricity	3

*Course approved for High School Articulation

Industrial Technology

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

Total credits required to complete Engines & Tune-Up diploma 44

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

Total credits required for Chassis & Power Trains diploma 34

AUTOMOTIVE MECHANICS TECHNOLOGY

WELD467*	Related Weld-Transportation Trades	2
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Total credits required for the Auto Mechanics AAS degree 74

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 46 weeks of classroom/lab work and 35 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 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	4
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

Total credits required to complete this program 75

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

Total credits required to complete the program 46

*Course approved for High School Articulation

Industrial Technology

Civil Engineering Technology

The Civil Engineering Technology program prepares the student for a career as a technician in the areas of design, construction, and inspection. These positions could include highway/bridge design, surveying, right-of-way legalities, materials testing, and highway/bridge construction techniques.

Upon completion of the program, graduates will be able to follow laboratory procedures and apply their knowledge through the use of high-tech instruments. They will have a working knowledge of surveying equipment, industry-based computer software, and laboratory testing instruments.

The program is designed to fill an increasing demand for technically skilled people in the civil engineering technology field and demand is expected to continue well into the 21st century.

Location: Boone

Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students must have basic computer skills or successfully complete COMS181 Introduction to Computer Literacy prior to enrolling in this program. Students start summer term.

Graduation Requirements

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

Required Courses

CET-315	Fundamentals of Civil Engineering	3
CET-320	Survey I	3
CET-325	Survey II	4
CET-422	Survey III	4
CET-330	Highway Design I	4
CET-430	Highway Design II	4
CET-340	Construction I	3
CET-440	Construction II	3
CET-350	Materials I	4
CET-450	Materials II	3
CET-360	Soils and Foundations	3
CET-380	Statics	3
CET-390	Automated Design I	4
CET-490	Automated Design II	4
CET-405	Field Coop	3
CET-406	Advanced Field Coop	2
CET-470	Structure Design and Construction	3
ENGL117	Composition I	3
ENGL119	Technical and Business Writing	3
MATH410*	Mathematics for Technicians I	3
MATH411	Mathematics for Technicians II	3

Option Courses... 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

Total credits required to complete AAS degree 72

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 meet international and U.S. customary drafting standards.

Students can obtain 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

Selected courses in this program are offered at other campuses.

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 Interface	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

Total credits required to complete the diploma 39

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

Total credits required to complete the AAS degree 71

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, and heavy construction equipment.

Students may choose to complete either the diploma option or the AAS degree option. To receive a diploma, a student must complete all of the courses required for the diploma. To receive an AAS degree, a student must complete all of the courses required for the AAS degree plus one of the emphasis plans.

Location: Ankeny

*Course approved for High School Articulation

Industrial Technology

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

Required Courses - Diploma

DISL401	Diesel Engines I	6
DISL402	Diesel Engines II	6
MATH410*	Mathematics for Technicians I	3
DISL404	Power Trains I	6
DISL406	Hydraulics and Brakes	5
DISL408	Basic Electricity	5
DISL420	Air Conditioning	3
DISL428	Operation and Maintenance	5
ENGL410*	Communication Skills	3

Total credits required to complete the diploma 39

Required Courses - AAS

DISL401	Diesel Engines I	6
DISL402	Diesel Engines II	6
MATH410*	Mathematics for Technicians I	3
DISL404	Power Trains I	6
DISL406	Hydraulics and Brakes	5
DISL408	Basic Electricity	5
DISL420	Air Conditioning	3
DISL428	Operation and Maintenance	5
DISL405	Power Trains II	5
DISL409	Diesel Electronics	5
DISL470	Advanced Electricity	4
WELD467*	Related Weld-Transportation Trades	2
ENGL410*	Communication Skills	3
PHYL401*	Physics for Technicians	3
MGMT203	Human Relations in Business	3

In addition to the required courses listed above students must choose one of the following emphasis plans.

1. Diesel Emphasis Plan

DISL407	Diesel Fuel Systems	6
DISL417	Heavy Equipment Repair	5
DISL418	Truck Repair	5

1. Caterpillar Emphasis Plan

DISL430	Caterpillar Fuel Systems	4
DISL431	Caterpillar Failure Analysis	2
DISL432	Caterpillar LS/PC Hydraulics	2
DISL433	Caterpillar Service Information System	2
DISL434	Caterpillar Internship	4
DISL435	Caterpillar Multi-Media	2

Total credits required to complete the AAS degree 80

Electronic Systems Service Technology

The Electronics Systems Service Technology program prepares students for a career as a technician servicing electronic systems. Upon completion of this program, students should be able to diagnose and repair electronic equipment such as televisions, VCRs, security systems, business machines and medical electronics.

The curriculum includes the fundamental technologies, systems applications and an internship. Upon program completion graduates may seek employment with local and regional electronic systems servicing companies.

Location: Ankeny

Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Satisfactory completion of department entrance exams. Students start fall or spring term.

Graduation Requirements

To earn an Electronics Systems Servicing Technology AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

Term 1

ELHT314	Circuit Analysis I	5
ELHT316	Circuit Analysis I Lab	3
ELHT315	Fabrication Techniques	3
ELHT323	Technical Math II	3
ENGL410	Communication Skills	3

Term 2... Select 1 Course from Option 1

ELHT332	Digital Electronics	3
ELHT364	Digital Electronics Lab	3
ELHT331	Circuit Analysis II	3
ELHT363	Circuit Analysis II Lab	3
ELHT346	Microcomputer Operating Systems	3
MGMT203	Human Relations in Business	Opt1 3
PSCH101	General Psychology	Opt1 3
SOCY101	Introduction to Sociology	Opt1 3

Term 3

ESST376	Electro-Mechanical Systems	3
ESST377	Electro-Mechanical Systems Lab	3
ESST378	Basic Imaging Devices	2
ESST379	Basic Imaging Devices Lab	2

Term 4

ESST380	Communications Systems	3
ESST381	Communications Systems Lab	3
HTCT364	Microcomputer Systems	3
ESST382	Security Systems	2
ESST383	Security Systems Lab	2
ECON101	Principles of Macroeconomics	3

Term 5

ESST384	Medical Electronics Systems	2
ESST385	Medical Electronics Systems Lab	2
ESST386	System Troubleshooting	2
ESST387	System Troubleshooting Lab	5
ESST388	Internship	5

Total credits required to complete the AAS degree 77

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

*Course approved for High School Articulation

Industrial Technology

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

Electives Courses
Electives 9-12

Complete remaining AS degree Core Requirements
Total minimum credits required to complete the AS degree 64

Heating, AC, Refrigeration Technology

The Heating, Air Conditioning, Refrigeration Technology 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 HVAC-R field.

By completing the first three terms a student can receive a diploma. An AAS degree will be awarded upon completion of all five terms.

Location: Ankeny

Program Entry Requirements

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

Graduation Requirements

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

Term 1

HACR451	Fundamentals of Refrigeration	5
HACR452	Trade Skills I	3
HACR453	Electricity	5
MATH410*	Mathematics for Technicians I	3

Term 2... Select 1 Course from Option 1

HACR454	Residential Heating and AC	5
HACR455	Electrical Controls and Circuits	5
HACR456	Trade Skills II	3
ENGL117	Composition I	Opt1 3
ENGL410	Communication Skills	Opt1 3

Term 3

HACR457	Applied Heating and AC	5
HACR458	HVAC Internship	4

Total credits required to complete the diploma 41

Term 4

HACR459	Advanced Heating and AC	5
HACR460	Advanced Sheetmetal	3
HACR461	Air Distribution	3
PHYL401*	Physics for Technicians	3

Term 5... Select 1 Course from Option 2

HACR462	Commercial HVAC and Refrigeration	5
HACR463	Computer Load Calculations	2
HACR464	Environmental Controls	5
MGMT203	Human Relations in Business	Opt2 3
PSCH101	General Psychology	Opt2 3
SOCY101	Introduction to Sociology	Opt2 3
SOCY102	Social Issues	Opt2 3

Total credits required to complete the AAS degree 70

High Tech-Automation/Robotics

This program will undergo minor changes during this academic year. Contact the program chair for additional information.

The High Tech-Automation/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-Automation/Robotics 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	2
ELHT331	Circuit Analysis II	3
ELHT340	Microprocessors	3
ELHT341	Microprocessors 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 Macroeconomics	Opt2 3
HTCT371	Netware 3.x Administration	Opt3 2
HTCT374	Netware 4.x Administration	Opt3 2

Total credits required to complete this program 78

*Course approved for High School Articulation

Industrial Technology

Information Technology Network Administration

The ITNA program will provide students with a foundation in the basic technologies of computer networking, both as an objective and measurable skill set as well as a preface to certification. Course work such as the Microsoft MCSE and the NOVELL CNE. The modular design of the ITNA core/certification integration is designed to allow the future addition of other professional certifications.

Location: Ankeny

Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Satisfactory completion of a department entrance exam. Students start fall term.

Graduation Requirements

To earn an Information Technology Network Administrator 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

ELHT332	Digital Electronics		3
ELHT364	Digital Electronics Lab		3
ELHT346	Microcomputer Operating Systems		3
ELHT323	Technical Math II		3
MGMT203	Human Relations in Business	Opt1	3
PHIL111	Introduction to Logic	Opt1	3

Term 2.

HTCT364	Microcomputer Systems		3
ITNA310	Network Technologies		4
ELHT324	Computer Programming		3
ENGL410	Communication Skills		3
ECON101	Principles of Macroeconomics		3

Term 3

ITNA320	Technology Implementation		3
ITNA330	Network Applications		4
ITNA332	Network Applications Lab		2

Term 4... Students must select a minimum of 12 credits of MCSE or NECP courses (see attached)

Term 5... Students must select a minimum of 12 credits of MCSE or NECP courses (see attached)

After term 5 students will have completed 64 credits. Students may need to complete additional terms depending upon which Microsoft or Novell certification tracts they choose.

Minimum number of credits required to complete this AAS degree 64

Integrated Manufacturing Technology

The Integrated Manufacturing Technology program prepares selected applicants for a wide variety of manufacturing tasks at the John Deere Des Moines Works. Successful applicants will learn the basic elements of welding, automation, computer numerical controlled machine operation, computer-aided drafting and design, machining, and workplace skills. Manufacturers in Iowa report that they will require more than 1,000 workers who have these skills by 2005. Graduates will be positioned for employment by a wide variety of manufacturers throughout the state and nation.

At completion of this two year Associate of Applied Science degree program, the top one-third of the graduating class will be offered immediate employment at the John Deere Des Moines Works with a salary/benefits package exceeding \$40,000/year. The remaining graduates will be eligible for preferential hiring by the Des Moines Works and the other Iowa John Deere plants.

To apply for this program, call the Advanced Technology Center at DMACC, 515-965-7046 during business hours to request information regarding the John Deere Team Scholars program application process.

Location: Ankeny

Program Entry Requirements

Complete a DMACC application and take the basic skills evaluation. Successfully complete the following: a) the Deere "Job Fit Inventory," b) two personal interviews, and c) a mechanical comprehension assessment. Prior to the internship experience at the Des Moines Works, all program participants must submit to drug testing. Students start fall term.

Graduation Requirements

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

Term 1

CADD401*	Intro Computer Aided Design		3
CIM-408	Intro to Computer Integrated Manufacturing		3
ENGL410*	Communication Skills		3
MATH410*	Mathematics for Technicians I		3
TOOL480*	Blueprint Reading I		2
TOOL482	Machine Shop Measurements I		2

Term 2

BPQI411	Measuring Devices - SPC		1
CADD402	Intermediate CADD-Mechanical		3
CIM-404	Robotics		2
MATH411	Mathematics for Technicians II		3
WELD474*	Shielded Metal Arc Welding I		2
WELD478	Shielded Metal Arc Welding II		3
WELD481*	Blueprint Reading		3

Term 3

SFTY301	Introduction to Safety Science		3
TOOL481	Blueprint Reading II		3
TOOL497	Basic Lathe Operation		1
TOOL498	Vertical Mill Operation		1
WELD483*	Gas Metal Arc Welding		2

Term 4... Select 1 Course from Option 1

BPQI400	Total Quality Management		3
CIM-403	Introduction to CAD/CAM		3
CM-418	IMT Internship		5
MGMT203	Human Relations in Business	Opt1	3
PSCH106	Psychology of Human Relations	Opt1	3

Term 5

BPQI412	Controlling Mfg. and Business Costs		2
HTPC382	Control System Overview		2
TOOL490	Machine Tool Operations Lab III		7
TOOL491	Machine Tool Operations III		4

Total minimum credits required to complete this program 72

Manufacturing Technology

The DMACC Manufacturing Technology program prepares applicants for a wide variety of manufacturing tasks in the industry. Successful applicants will learn the basic elements of welding, automation, computer numerical controlled machine operation, computer-aided drafting and design, machining, and workplace skills. Manufacturers in Iowa report that they will require more than 1,000 workers who have these skills by 2005. Graduates will be positioned for employment by a wide variety of manufacturers throughout the state and nation.

At completion of this two year Associate of Applied Science degree program, graduates will be prepared for a large number of skilled careers in the manufacturing industry. Opportunities exist in many different types of manufacturing.

To apply for this program, call the Advanced Technology Center at DMACC, 515-965-7046 during business hours to request information.

Location: Ankeny, Newton

*Course approved for High School Articulation

Industrial Technology

Program Entry Requirements

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

Graduation Requirements

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

Term 1

CADD401*	Intro Computer Aided Design	3
CIM-408	Intro to Computer Integrated Manufacturing	3
ENGL410*	Communication Skills	3
MATH410*	Mathematics for Technicians I	3
TOOL480*	Blueprint Reading I	2
TOOL482	Machine Shop Measurements I	2

Term 2

BPQI411	Measuring Devices - SPC	1
CADD402	Intermediate CADD-Mechanical	3
CIM-404	Robotics	2
MATH411	Mathematics for Technicians II	3
WELD474*	Shielded Metal Arc Welding I	2
WELD478	Shielded Metal Arc Welding II	3
WELD481*	Blueprint Reading	3

Term 3

SFTY301	Introduction to Safety Science	3
TOOL481	Blueprint Reading II	3
TOOL497	Basic Lathe Operation	1
TOOL498	Vertical Mill Operation	1
WELD483*	Gas Metal Arc Welding	2

Term 4 . . . Select 1 Course from Option 1

BPQI400	Total Quality Management	3
CIM-403	Introduction to CAD/CAM	3
CM-418	IMT Internship	5
MGMT203	Human Relations in Business	Opt1 3
PSCH106	Psychology of Human Relations	Opt1 3

Term 5

BPQI412	Controlling Mfg. and Business Costs	2
HTPC382	Control System Overview	2
TOOL490	Machine Tool Operations Lab III	7
TOOL491	Machine Tool Operations III	4

Total credits required to complete this program 72

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

Selected courses in this program are offered at other campuses.

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
ENGL117	Composition I	3

Total credits required to complete the diploma 35

Term 3

BPQI406	Quality Standards & Compliance	3
BPQI407	Teams and Teamwork	3
BPQI408	Introduction to Quality Control Management	3
BPQI409	Advanced Statistical Process Control	3
BUSL101	Business Law	3
MGMT244	Leadership Development	3

Term 4...Select 1 course from Option 1

BPQI410	Quality Technician Program Project	3
ECON102	Principles of Microeconomics	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

Total credits required to complete this program 68

Safety Science

Safety is a major concern of any business in today's world. The importance of competent professionals heading up business safety programs is an ever increasing concern. If you currently work in the field of safety or wish to pursue a career in this field, this program will provide the knowledge and expertise required.

This program provides not only the conceptual knowledge but the "hands on" skills and abilities so important and required in this field. Students will learn how to readily apply what is learned in the classroom to the workplace.

Upon completion of this AAS degree program, graduates will find themselves uniquely prepared for challenging careers in either the service or manufacturing sectors of business. Individuals with a competent, thorough working knowledge in the field of safety are highly sought after in today's job market.

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 Safety Science AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

*Course approved for High School Articulation

Industrial Technology

Term 1		
CHEM131	General Chemistry I	4
COMS181	Introduction to Computer Literacy	3
HLCR314	Emergency Care	1
SFTY301	Introduction to Safety Science	3
SFTY310	Regulatory Safety Standards & Requirements	3

Term 2		
BSAD152	Business Statistics	4
FIRE247	Planning for Fire Protection	3
ENGL117	Composition I	3
SFTY302	Accident Investigation and Workers Comp	3
SFTY311	Safety Program Management	3

Term 3... Select 1 Course from Option 1		
BUSL101	Business Law	3
FIRE245	Hazardous Materials	3
SFTY315	Ergonomics in the Workplace	3
SFTY331	Industrial Hygiene-Chemical Hazards	3
MGMT203	Human Relations in Business	3 OptI
PSCH106	Psychology of Human Relations & Adj.	3 OptI

Term 4		
BPQI320	Train the Trainer	3
ENGL119	Technical and Business Writing	3
MGMT244	Leadership Development	3
SFTY332	Industrial Hygiene-Physical Hazards	3
SFTY390	Safety Science Capstone Project	4
SPCH117	Interpersonal & Small Group Communication	3

Total credits required to complete this program 64

Telecommunications Technology

The Telecommunications Technology program begins with areas that are most familiar to the student and progresses to the new technologies that are the driving force of the information age. The program provides a blend of lecture and hands-on training courses that gradually introduce students to a variety of areas within the field of telecommunications. Graduates may pursue a career in several different areas of telecommunications.

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	Telecommunications I	3
TELE411	Telecommunications Experience I	6

Term 2		
ELEM462	Digital Electronics	3
ELEM463	Digital Electronics Lab	3
TELE420	Telecommunications II	4
TELE421	Telecommunications Experience II	7

Term 3		
TELE430	Telecommunications III	3
TELE431	Telecommunications 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	Telecommunications IV	3
TELE441	Telecommunications Experience IV	3

*Course approved for High School Articulation

MGMT203	Human Relations in Business	3 Opt1
PSCH101	General Psychology	3 Opt1
PSCH106	Psychology of Human Relations & Adjustment	3 Opt1
SOCY101	Introduction to Sociology	3 Opt1

Total credits required to complete this program 65

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 Diemaking 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

Total credits required to complete Job Shop diploma 48

DIEMAKING

Required Courses

CADD401*	Intro Computer Aided Drafting/CADD	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

Total credits required to complete Diemaking diploma 43

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 & Adjustment	Opt1	3
SOCY101	Introduction to Sociology	Opt1	3

Total credits required to complete the AAS degree 85

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 metal arc, gas tungsten arc, and gas shielded arc welding processes. Freehand 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.

The Welding program offers open entry and open exit courses. Students will be allowed to drop in and out of these open entry/open exit courses as long as there is space available.

Location: Ankeny

Program Entry Requirements

Complete an application, satisfy the assessment requirement and attend any required information/registration session. Students must meet with the program chair before admission to the program can be confirmed. Students start any term.

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

Total credits required to complete this program 30

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

Total credits required to complete this certificate 7

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 Manufacturing	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

Total credits required to complete this certificate 15

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 Manufacturing	3

Total credits required to complete this certificate 15

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 Manufacturing	3
CIM-413	Introduction to FMS Cell	3

Total credits required to complete this certificate 11

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

Total credits required to complete this certificate 21

*Course approved for High School Articulation

Microsoft Certified Professional

Microsoft issues certificates starting at the MCSE level. The table at the right specifies the minimum requirements for attaining this. Upon completion of the courses and successful passing of the associated Microsoft Certification exams, Microsoft will issue the MCSE certificate.

Additional certifications may be earned beyond the MCSE level by taking additional courses and exams. Visit Microsoft's web page at www.microsoft.com for additional information.

These DMACC courses will prepare the student to take the associated Microsoft exams. DMACC is an Authorized Academic Training Partner and the classes are taught at DMACC by a certified Microsoft trainer.

Certification exams may be taken in DMACC's Ankeny Campus Assessment Center located in building 6. All certificates shall be issued by Microsoft.

MCSE - Microsoft Certified Systems Engineer

Required Courses

MCSE305	Networking Essentials	3
MCSE310	MS Windows Pro & Server	4
MCSE320	MS Windows Directory Services Enterprise	3

Plus 1 of the following courses:

MCSE312	Designing MS Directory Services Infrastructure	2
MCSE314	Designing Security for MS Net	2
MCSE316	Designing MS Net Infrastructure	2

Plus 2 elective courses not previously taken:

(Credit will be granted once for each course)

MCSE312	Designing MS Directory Services Infrastructure	2
MCSE314	Designing Security for MS Net	2
MCSE316	Designing MS Net Infrastructure	2
MCSE318	Migrating from Windows NT 4.0	3

Novell Education Certification Program

Certificates may be issued in certified Novell Administrator (CNA), Certified Novell Engineer (CNE), and Certified Internet Professional (CIP). These Novell Certification courses will prepare students to take the required Novell exams for certification. The Certified Novell Administrator (CNA) requires one class and the passing of one Novell exam. The Certified Novell Engineer (CNE) requires six additional classes and exams after becoming a Certified Novell Administrator (CNA). The Certified Internet Professional (CIP) has five different tracks: Certified Internet Business Strategist, Certified Web Designer, Certified Web Developer, Certified Intranet Manager, and Certified Intranet Architect. DMACC is a Novell Education Academic Partner (NEAP). A Certified Novell Instructor, (CNI), teaches all Novell classes. Novell certification exams may be taken in the Assessment Center in building 6 on the Ankeny campus. See Novell's website at education.novell.com for more information. This will be an option track within the upcoming ITNA program.

CERTIFIED NOVELL ADMINISTRATOR - VERSION 5

Required Course

NECP351	NetWare 5 Administration	2
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Upon successful completion of this course and Test 50-639 the student will be a Certified Novell Administrator for version 5.

CERTIFIED NOVELL ENGINEER - VERSION 5

Prerequisite: NECP351

Required Courses

NECP342	Networking Technologies	2
NECP352	NetWare 5 Advanced Administration	2
NECP344	NetWare 4.x Design & Implementation	2
NECP346	Service & Support	2
NECP347	IntraNetWare Integrating NT	2

Upon successful completion of these courses and Tests 50-147, 640, 601, 626 and 636, the student will be a Certified Novell Engineer for version 5.

CERTIFIED INTERNET PROFESSIONAL

Emphasis: Certified Internet Business Strategist

Required Courses

NECP301	Internet Business Strategies	1
NECP302	Mastering the Net/ Netscape Communicator	1

Upon successful completion of these courses and Novell tests the student will be a Novell Certified Internet Business Strategist.

CERTIFIED INTERNET PROFESSIONAL

Emphasis: Certified Web Designer

Prerequisite: NECP301, 302

Required Courses

NECP303	Web Authoring & Publishing	1
NECP304	Advanced Web Authoring	1
NECP305	Designing Web Sites	1

Upon successful completion of these courses and Novell tests the student will be a Novell Certified Web Designer.

CERTIFIED INTERNET PROFESSIONAL

Emphasis: Certified Web Developer

Prerequisite NECP301, 302

Required Courses

NECP306	Java Programming	2
NECP307	Advanced Java Programming	2

Upon successful completion of these courses and Novell tests the student will be a Novell Certified Web Developer.

CERTIFIED INTERNET PROFESSIONAL

Emphasis: Certified Intranet Manager

Prerequisite NECP301, 302, 303, 304, (NECP401 or 501)

Required Courses

NECP308	Web Server Management	1
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Upon successful completion of this course and Novell test the student will be a Novell Certified Intranet Manager.

CERTIFIED INTERNET PROFESSIONAL

Emphasis: Certified Intranet Architect

Prerequisite CNE Certification, NECP308

Required Courses

NECP311	NetWare TCP/IP Transport	1
NECP312	Fundamentals of Internetworking	1
NECP313	DNS/FTP Server Installation & Configur.	1
NECP314	Securing Intranets with BorderManager	2

Upon successful completion of these courses and Novell tests the student will be a Novell Certified Intranet Architect.

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

Total credits required to complete this certificate 17

*Course approved for High School Articulation

Safety Science

The Safety Science certificate is designed to provide an introduction to the basics of safety policy, procedures and practices for individuals interested in the field of safety science.

Emphasis is placed on well rounded, basic, entry-level courses to supplement the individual who needs only specific information regarding occupational safety.

Required Courses

CHEM131	General Chemistry I	4
FIRE245	Hazardous Materials and Handling	3
FIRE247	Planning for Fire Protection	3
HLCR314	Emergency Care	1
SFTY301	Intro to Safety Science	3
SFTY302	Accident Investigation & Worker Compensation	3
SFTY310	Regulatory Safety Standards & Requirements	3
SFTY311	Safety Program Management	3
SFTY331	Industrial Hygiene - Chemical Hazards	3
SFTY332	Industrial Hygiene - Physical Hazards	3

Total credits required to complete this certificate **29**

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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These credits are applicable to the diploma in Welding

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

Total credits required for Shielded Metal Arc Welding **15**

These credits are applicable to the diploma in Welding

GAS METAL ARC WELDING

WELD483*	Gas Metal Arc Welding	2
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These credits are applicable to the diploma in Welding

GAS TUNGSTEN ARC WELDING

WELD493	Gas Tungsten Arc Welding	2
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These credits are applicable to the diploma in Welding

BLUEPRINT READING

WELD481*	Blueprint Reading	3
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These credits are applicable to the diploma in Welding

STRUCTURAL WELDING

WELD497	Advanced Shielded Metal Arc Welding I	2
WELD498	Advanced Shielded Metal Arc Welding II	3

PIPE WELDING

WELD499	Intro-Shielded Metal 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 its 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

Basic Operations	112.00
Safe Operational Practices	112.75
Advanced Operating Procedures	22.00
Vehicle Maintenance	26.00
Non-Vehicle Activities	47.25

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 approved for High School Articulation

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

Criminal Justice AA or AS
Early Childhood Education
Early Childhood Education Associate
Exercise Science
Human Services
Legal Assistant

Certificates of Specialization

Chemical Dependency Counseling
Legal Assistant

Public and Human Services

Community Development

The Department of Community Development is committed to providing a wide range of services to the community. Our primary focus is on housing, urban renewal, and economic development. We work closely with local government and private industry to address the needs of the community. Our services include:

- Housing assistance and counseling
- Urban renewal and revitalization
- Economic development and job training
- Community planning and development

Our commitment to the community is reflected in our dedication to providing high-quality services. We are currently seeking qualified individuals to join our team. For more information, please contact us at [phone number] or visit our website at [website URL].

The Department of Public and Human Services is committed to providing a wide range of services to the community. Our primary focus is on housing, urban renewal, and economic development. We work closely with local government and private industry to address the needs of the community. Our services include:

- Housing assistance and counseling
- Urban renewal and revitalization
- Economic development and job training
- Community planning and development

Community Development

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- Housing assistance and counseling
- Urban renewal and revitalization
- Economic development and job training
- Community planning and development

Public and Human Services

Diplomas and Degrees

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

Selected courses in this program are offered at other campuses.

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

Total minimum credits required to complete the AA degree 75

AS DEGREE

Required Courses

	Complete AS Degree Core Requirements (ENGL117, 118 and 119 are required for this AS degree)	28
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

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

Total minimum credits required to complete the AS degree 64

*Course approved for High School Articulation

Early Childhood Education

The Early Childhood Education 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, Early Childhood Education Associate, is also available.

Location: Ankeny

Selected courses in this program are offered at other campuses.

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 Early Childhood Education diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

Recommended Course of Study

A recommended course of study, listed below, has been created to insure that each student completes the program in the minimal amount of time required. However, the course of study can be tailored to meet the specific needs of each student.

Required Courses 1st Semester

CHLD110	Early Childhood Development	3
CHLD210	Intro to Early Childhood Education	1
CHLD211	Guidance Techniques for Young Children	2
CHLD212	Assessment and Planning for Young Children	1
CHLD213	Group Exp for Early Childhood Programs	2
CHLD214	Curriculum for Preschool Children	3
CHLD240*	Emergency Care	1
CHLD410	Student Participation I	3

Total 16

Required Courses 2nd Semester

CHLD215	Child Health Safety and Nutrition	3
CHLD216	Infant and Toddler Care and Education	2
CHLD217	Professional Relationships	2
CHLD411	Student Participation II	3
CHLD420	Early Childhood Education Practicum	2

Option Courses . . . Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3
OFFC205	Business English	Opt1	3
MGMT203	Human Relations in Business	Opt2	3
SOCY101	Introduction to Sociology	Opt2	3
PSCH101	General Psychology	Opt2	3
PSCH106	Psychology of Human Relations & Adj	Opt2	3

Total 18

Total credits required to complete this program 34

Public and Human Services

Early Childhood Education-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.

Students who intend to transfer to a four-year institution should contact the Early Childhood Education program chair or program counselor to obtain information about articulation agreements.

Location: Ankeny

Selected courses in this program are offered at other campuses.

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.

Recommended Course of Study

A recommended course of study, listed below, has been created to insure that each student completes the program in the minimal amount of time required. However, the course of study can be tailored to meet the specific needs of each student.

Required Courses 1st Semester

CHLD110	Early Childhood Development	3
CHLD210	Intro to Early Childhood Education	1
CHLD211	Guidance Techniques for Young Children	2
CHLD212	Assessment and Planning for Young Children	1
CHLD213	Group Exp for Early Childhood Programs	2
CHLD214	Curriculum for Preschool Children	3
CHLD240*	Emergency Care	1
CHLD410	Student Participation I	3
Total		16

Required Courses 2nd Semester

CHLD215	Child Health Safety and Nutrition	3
CHLD216	Infant and Toddler Care and Education	2
CHLD217	Professional Relationships	2
CHLD411	Student Participation II	3
CHLD420	Early Childhood Education Practicum	2
Total		12

Required Courses for Remaining Semesters

Additional AS Degree Core Requirements		28
CHLD220	Admin of Programs/Children	3
CHLD421	Early Childhood Ed Assoc Practicum	3
Elective courses		2
Total minimum credits required to complete this program		64

Exercise Science

Exercise Science includes the study of the effects of physical activity on the human body. The interest in exercise to maintain health and fitness is increasing in our society in both the young and older population. It is a well-known fact that exercise has a positive effect on the health and well being of all people regardless of age. More and more corporations and communities are offering wellness programs to fight the escalating cost of health care and to improve the quality of life in seniors/elderly. There has been an increase in the fields of cardiac rehabilitation and adult fitness programs in hospitals and clinics as well as sports and rehabilitative medicine. The expanding of these areas has increased the marketplace for professionals in the field of exercise and sports medicine.

The Exercise Science AS degree is a transfer degree for students who want some career specialization during the first two years of college. The main focus of this program is to provide a two-year curriculum with a strong science foundation, which will prepare students for an easy transfer into an exercise-related field in four-year institutions. Graduates of this program would also be prepared to work in entry level positions as exercise and fitness technicians in health and fitness centers and corporate fitness programs, technicians in chiropractic clinics, retirement communities and in nursing facilities.

Location: Boone

Selected courses in this program are offered at other campuses.

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 Exercise Science AS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

Required Courses

AS Degree Core Humanities Requirement		3
COMS181	Intro to Computer Literacy	3
EXSP220	Physical Fitness & Conditioning	2
EXSP221	Leadership Techniques for Fitness Program	2
EXSP250	Introduction to Exercise Physiology	3
ENGL117	Composition I	3
ENGL118	Composition II	3
HRMT334	Human Nutrition	3
LIBS120	Library Instruction	1
MATH121	Elementary Statistics	4
PHYE146	Personal & Community Health	3
PSCH101	General Psychology	3
SOCY101	Introduction to Sociology	3
SPCH110	Fundamentals of Speech	3

Option Courses . . . Select 1 Course From Each Option

CHEM131	General Chemistry I	Opt1	4
CHEM151	General/Inorganic Chemistry I	Opt1	4
PHYL106	Survey of Physical Science	Opt2	4
PHYL111	College Physics I	Opt2	4
MATH115	Finite Mathematics	Opt3	4
MATH123	Trigonometry	Opt3	3

Select 1 Course From Option 4 or 2 Courses from Option 5

BIOL154	General Anatomy & Physiology	Opt4	5
BIOL133	Health Science Anatomy	Opt5	3
BIOL134	Health Science Physiology	Opt5	3

*Course approved for High School Articulation

Public and Human Services

Select 7-9 Credits from Option 6

BIOL260	Biology of Aging	Opt6	3
EXSP145	First Aid	Opt6	2
PHYE144	Intro to Physical Education	Opt6	3
PHYE157	Intro to Athletic Training	Opt6	2
SOCY204	Social Gerontology	Opt6	4
SPCH111	Public Communication	Opt6	3

Total credits required to complete this program 64

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, psychosocial rehabilitation and social services.

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, supported living and work programs, and state or county departments of social services.

Locations: Ankeny, Urban

Selected courses in this program are offered at other campuses.

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		28
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
HUMS210	Counseling Techniques	Opt1	3
HUMS211	Counseling with Women	Opt1	3
HUMS213	Pract: Chemical Depend Counseling I	Opt1	6
HUMS214	Pract: Chemical Depend Counseling II	Opt1	6
HUMS216	Survey of Addictive Disease	Opt1	3
HUMS217	Psychosocial Rehabilitation	Opt1	3
SOCY103	Courtship, Marriage and Family	Opt1	3
SOCY105	Race, Ethnic and Gender Relations	Opt1	3
SOCY106	Juvenile Delinquency	Opt1	3
SOCY107	Criminology	Opt1	3
SOCY204	Social Gerontology / Applications	Opt1	4
PSCH101	General Psychology	Opt1	3
PSCH105	Social Psychology	Opt1	3
PSCH106	Psychology of Human Relations & Adjustment	Opt1	3
PSCH107	Principles of Behavior Modification	Opt1	3
PSCH108	Human Sexuality and Gender Roles	Opt1	3

*Course approved for High School Articulation

PSCH109	Educational Psychology	Opt1	3
SOCY101	Introduction to Sociology	Opt2	3
SOCY102	Social Issues	Opt2	3

Total minimum credits required to complete this program 64

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 students to become legal assistants who are 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 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.

Important Note: Students entering the program need satisfactory computer skills. OFFC 355 Computer Applications is highly recommended as a developmental course. (OFFC 355 will not satisfy program requirements.)

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		28
LEGA240	Introduction to Law		3
LEGA242	Torts & Litigation I		3
LEGA246	Business & Corporate Law I		3
LEGA250	Legal Internship & Ethics		4
LEGA260	Legal Research and Writing I		3
LEGA261	Legal Research and Writing II		3

Option Courses . . . Select 15 Credits From Option 1

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

Public and Human Services

LEGA256	Debtor/Creditor Law	Opt1	3
LEGA258	Computerized Legal Research	Opt1	1
LEGA259	Advanced Legal Research and Writing	Opt1	3
LEGA265	Mediation	Opt1	3
ACCT206	Income Tax	Opt1	3
COMS181	Intro to Computer Literacy	Opt1	3
CRIM104	Criminal Law	Opt1	3
CRIM105	Constitutional Law	Opt1	3
HUMS202	Interviewing/Interpersonal Relations	Opt1	3

Elective Courses

Electives	2
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Total credits required to complete this program **64**

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 Dependency Counsel I		6
HUMS214	Practicum: Chemical Dependency Counsel II		3
HUMS216	Survey of Addictive Disease		3

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

Total credits required to complete this certificate **36**

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
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*Course approved for High School Articulation

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

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
LEGA265	Mediation	Opt1	3
ACCT206	Income Tax	Opt1	3
COMS181	Intro to Computer Literacy	Opt1	3
CRIM104	Criminal Law	Opt1	3
CRIM105	Constitutional Law	Opt1	3
HUMS202	Interviewing/Interpersonal Relations	Opt1	3

Total credits required to complete this certificate **34**

Course Descriptions

CURRICULUM TYPE						CREDITS
COURSE NUMBER	ACCT099			2 0 4 0 0		LECTURE HOURS
COURSE NAME	Accounting Adaptor Lab - Adjunct			Adaptor		LAB HOURS
COURSE DESCRIPTION	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					PRACTICUM HOURS
						WORK EXPERIENCE
						*COURSE TYPE
						**SEE BELOW

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. REQUIRED - Students must take the required course/s or meet the required criteria prior to taking the course listed.***

*** An instructor may deny enrollment in or drop a student from a specific course if the course prerequisite or required criteria has not been met.

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: ACCT101

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. PREREQUISITES: ACCT101 or ACCT301

ACCT208 - ADJUNCT**** 3 2 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.

ACCT309 - ADJUNCT**** 1 0 2 0 0
Computerized Personal Finance Voc/Tech
 Hands-on instruction using Quicken. Special features include check writing, balancing statements, preparing financial reports, tracking payments, and trying “what if” scenarios with retirement, investments, etc.

ACCT310 3 3 0 0 0
Internal Auditing Voc/Tech
 Introduces the activities performed by auditors who function within an organization. Acquaints students with the methods, tool and techniques used by internal staff to evaluate the effectiveness and efficiency of operations. Special attention is given to internal control systems. PREREQUISITE: ACCT102

ACCT312 4 4 0 0 0
Accounting Information Systems Voc/Tech
 Identifies the information required by accountants as it relates to financial and managerial accounting. It provides an overview of systems design and development process. PREREQUISITE: ACCT102, COMS181

ACCT314 - ADJUNCT**** 3 3 0 0 0
Business Tax Voc/Tech
 This course provides an overview of the forms of business organization and the fundamentals of taxation for sole proprietorship, C corporations, S corporations, limited liability companies, and partnerships. PREREQUISITE: ACCT101

ACCT351 3 2 2 0 0
Financial Accounting/Computers Voc/Tech
 Emphasizes application of computerized financial software used in business. Topics include setting up a company, receivables, payables, inventory control, payroll, time tracking and job estimating. PREREQUISITES: ACCT101 or ACCT301

ACCT352 3 2 2 0 0
Managerial Accounting/Computers Voc/Tech
 Computer operations with an emphasis on managerial uses. Includes topics in spreadsheet modeling, spreadsheet commands, manufacturing systems, budgeting, profit analysis. PREREQUISITES: ACCT203, COMS181

ACCT390 - ADJUNCT**** 3 3 0 0 0
Auditing Voc/Tech
 An introduction to auditing concepts, internal control procedures, preparation of audit programs and working papers, application of methods and procedures for conducting an audit. The legal and ethical responsibilities of auditors. Preparation of audit reports. PREREQUISITE: ACCT103

ACCT395 - ADJUNCT**** 3 3 0 0 0
Treasury & Cash Management Voc/Tech
 Introduces the requisite skills and knowledge for entry-level positions in the treasury and cash management operation. Utilizes case studies and articles relevant to treasury management practice. Relates directly to accounting and financial management topics.

*** Adaptor Courses cannot be used to fulfill degree requirements

**** Adjunct Courses cannot be used to fulfill or substitute for required or option courses in any degree or diploma program

Course Descriptions

ACCT403 3 0 0 0 12
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)

ACCT411 3 3 0 0 0
Payroll Accounting Voc/Tech
 Covers payroll laws, state and federal withholding taxes, state and federal forms, salary deductions including cafeteria insurance plans and pension plans and computerized payroll software packages. **PREREQUISITES:** ACCT101 or ACCT301

ACCT430 4 3 2 0 0
Accounting Procedures/Mgmt Voc/Tech
 A project approach to accounting systems and records management. Includes topics in receivables, payables, banking records, planning and organizing; leadership, human relations, and communications. **PREREQUISITES:** ACCT101, BSAD223, OFFC324

AGRI201 3 3 0 0 0
Feeding & 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 Voc/Tech
 An analysis of the livestock industry with emphasis on reproduction, inheritance, performance testing, selection and marketing.

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.

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. **COREQUISITE:** AGRI219

AGRI216 3 3 0 0 0
Commodity Marketing Voc/Tech
 Focus on the futures market and how it can be used as a marketing tool. Major areas of study include hedging, speculation, price forecasting, spreading, technical and fundamental analysis. The use of options as an economical marketing tool will be covered.

AGRI217 3 2 2 0 0
Precision Agriculture Applications Voc/Tech
 This course is an introduction to the general principles of Precision Agriculture. Major topic areas will include Global Positioning Systems (GPS), yield mapping, Geographic Information Systems (GIS) and remote sensing equipment.

AGRI219 3 3 0 0 0
Soils & 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:** AGRI209

AGRI304 3 3 0 0 0
Swine Production & 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. **REQUIRED:** Permission of instructor or AGRI201, 204

AGRI305 3 3 0 0 0
Beef Production & Management Voc/Tech
 The practical application of technical information to life-cycle beef production with emphasis on cow-calf production and feedlot management. **REQUIRED:** Permission of instructor or AGRI201, 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. **REQUIRED:** Permission of instructor or AGRI202, 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.

AGRI340 1 1 0 0 0
Veterinary Terminology Voc/Tech
 Course is designed to help logically understand medical terminology with a veterinary emphasis. Basic prefixes, suffixes and root words are emphasized as a method of acquiring and retaining knowledge. **REQUIRED:** High School Biology

AGRI341 1 1 0 0 0
Veterinary Pharmacology Voc/Tech
 Studies medications and products commonly used in veterinary medicine. **PREREQUISITE:** AGRI340

AGRI342 1 0 2 0 0
Animal Behavior/Kennel Mgt. Voc/Tech
 Studies basic animal behavior and the influences that modify behavior, kennel management includes understanding laws, regulations, records and daily operation of kennels. Practical experience is included. **PREREQUISITE:** AGRI340

AGRI343 3 2 2 0 0
Animal Anatomy and Physiology I Voc/Tech
 Beginning anatomy and physiology with veterinary clinical emphasis. Provides the basis for study of conformation, production and pathological processes of diseases of dogs, cats, horses, sheep, cattle, swine and laboratory animals. **PREREQUISITE:** AGRI340

AGRI344 3 2 2 0 0
Animal Nursing I Voc/Tech
 Introduces the fundamentals of animal nursing, including handling, restraint, patient history and admissions. Emphasis will be placed on preparation and administration of vaccines and medications for hospitalized animals. **PREREQUISITE:** AGRI340

AGRI345 3 2 2 0 0
Veterinary Clinic Pathology I Voc/Tech
 Introduces basic laboratory procedures including specimen collection and preservation, hematology, urinalysis, and fecal exam preparation. Hematology will include preparation and performance of PCV, Hgb, WBC, RBC counts and the staining of blood smears. **PREREQUISITE:** AGRI340

AGRI346 3 2 2 0 0
Animal Anatomy and Physiology II Voc/Tech
 Studies anatomy and physiologic principles of domestic animals. Continuation of physiological principles of Animal Anatomy and Physiology I **PREREQUISITE:** AGRI343

AGRI347 3 2 2 0 0
Veterinary Clinic Pathology II Voc/Tech
 Continues Veterinary Clinic Pathology I with emphasis on coagulation studies and clinical chemistry. Selected serological tests will also be covered. **PREREQUISITE:** AGRI345

AGRI348 3 2 2 0 0
Animal Nursing II Voc/Tech
 Continuation of Animal Nursing I with emphasis on radiology and anesthesiology. Limited to Veterinarian Technician students. **PREREQUISITE:** AGRI344

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 2 0 0 0 8
Agribusiness Internship I Voc/Tech
 Students will have the opportunity to experience an agricultural career through participation in an internship experience. The internship will provide career exploration through a structured evaluation. **PREREQUISITES:** AGRI204 or AGRI206

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Course Descriptions

AGRI431 1 0 0 0 4
Veterinary Internship I Voc/Tech
 Internship experience within a veterinarian related business. PREREQUISITE: AGRI340, 342

AGRI432 3 0 0 0 12
Veterinary Internship II Voc/Tech
 Internship experience within a veterinarian related business with emphasis on animal care procedures. PREREQUISITE: AGRI348, 431

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 2 0 0 0 8
Agribusiness Internship II Voc/Tech
 Students will have the opportunity to participate in an internship within the agribusiness industry. The internship may provide experiences within the agronomic, animal science, management, sales and service sectors that affect the food, fiber and environmental sciences. PREREQUISITE: AGRI430

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 & 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 construction drawings and building codes.

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 in developing a set of residential drawings.

ARCH461 3 0 6 0 0
Architectural Drafting Lab II Voc/Tech
 Practical application of architectural CAD techniques necessary to develop a set of residential drawings. PREREQUISITE: ARCH460

ARCH462 2 2 0 0 0
Architectural Drafting III Voc/Tech
 Commercial building drawings will be developed in CAD. PREREQUISITE: ARCH420

ARCH463 3 0 6 0 0
Architectural Drafting Lab III Voc/Tech
 Involvement in the practical drawing of commercial buildings using architectural CAD techniques. 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 Assemblies II Voc/Tech
 This course is a continuation of ARCH473 as an introduction to building assemblies and the relationship of materials within those assemblies. This course continues the focus on the assemblage of materials and is intended to expound upon the material investigation of ARCH470 and ARCH471. PREREQUISITE: ARCH473

ARCH470 2 2 0 0 0
Construction Techniques II Voc/Tech
 An ongoing look into the Construction Specification Institute's system of categorizing building materials. PREREQUISITE: ARCH464

ARCH471 3 3 0 0 0
Construction Techniques III Voc/Tech
 Complete the Construction Specification Institute's uniform system of 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 Assemblies I Voc/Tech
 Introduction to building assemblies and the relationship of materials within those assemblies. This course focuses on the assemblage of materials and is intended to expand upon the material investigation of ARCH 464 and ARCH470.

ARCH475 2 2 0 0 0
Technical Report & Specs Voc/Tech
 A look into the forms and contracts used in architecture as well as the technical section called specifications. Study material will include aspects for certification as C.S.I. Construction Document Technologist.

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 papermaking, 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 water based media. Study of the elements of art to aid in composition and development of a personal painting style. Field trips will be required.

ASDN226 2 1 2 0 0
Nursing Practice II Open
 Focus on advanced nursing skills and health assessment techniques utilized with individuals, families and groups. Methods of care plan revision and nursing roles of the Registered Nurse are investigated. PREREQUISITES: BIOL132, 134, ENGL117, NURS224, 225, SPCH117

ASDN227 5 3 0 6 0
Family Health Nursing Open
 Provides an in-depth study of the complications of pregnancy, the high risk infant, acute and chronic illnesses of children and young adults. The student participates in health and illness care in a variety of traditional and community-based settings. PREREQUISITES: BIOL132, 134, ENGL117, NURS224, 225, SPCH117, COREQUISITES: ASDN226

ASDN228 5 3 0 6 0
Adult and Older Adult Health Open
 Focuses on holistic nursing care using the nursing process. Conditions affecting the health of adults and older adults and their influences on family are examined. Pathophysiology, collaborative care and the nursing roles of advocate and teacher are emphasized. The student practices in a variety of health care settings. PREREQUISITES: BIOL132, 134, ENGL117, NURS224, 225, SPCH117, COREQUISITES: ASDN226

ASDN229 5 3 0 6 0
Mental Health Nursing Open
 Discusses mental health and illness across the lifespan emphasizing a holistic viewpoint. The student participates in mental health and illness care to clients in a variety of traditional and community-based settings. PREREQUISITES: BIOL132, 134, ENGL117, NURS224, 225, SPCH117, COREQUISITES: ASDN226

ASDN230 3 1 0 6 0
Nursing Management Open
 Allows the student to discuss issues then apply theoretical concepts of management with a group of clients, peers and subordinates. Communications within organizational structures, principles of conflict resolution, delegation, advocacy and collaboration with health care professionals will be emphasized. PREREQUISITES: ASDN226, 227, 228, 229, SOCY101

ASDN231 3 1 0 6 0
Nursing Seminar Open
 Professional practice is emphasized through the study of professional issues and role development. Includes exposure to research and licensure issues. This course culminates in clinical preceptor and community based experience which assist the student to formulate a philosophy of practice. PREREQUISITES: ASDN226, 227, 228, 229, SOCY101

ASEP312 4 3 2 0 0
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. REQUIRED: Admission to Automotive Service Educational Program

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**** Adjunct Courses cannot be used to fulfill or substitute for required or option courses in any degree or diploma program

Course Descriptions

ASEP317 3 2 2 0 0
GM Shop Fund & 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. **REQUIRED:** 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. **REQUIRED:** 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:** 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:** 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:** 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:** 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:** ASEP320, 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:** ASEP327

ASEP336 3 2 2 0 0
GM Carb & Fuel Induction Sys Voc/Tech
 Theory of carburetion principles and current model fuel delivery systems to include diesel fuel systems, electromechanical carburetors and gasoline fuel injection. **PREREQUISITES:** ASEP328

ASEP337 4 3 2 0 0
GM 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:** ASEP336

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:** ASEP330, 344, 345

ASEP344 4 2 4 0 0
GM Manual Drivetrains Voc/Tech
 Provides an understanding of the principles of operation in manual power trains including manual transmissions and transaxles, front and rear differentials, driveshafts and transfer cases. Proper diagnosis, service, and repair procedures of these systems are studied and practiced. **PREREQUISITES:** ASEP317, AUTO464

ASEP345 4 2 4 0 0
GM Automatic Drivetrains Voc/Tech
 Provides an understanding of the principles of operation in automatic transmissions and transaxles. Proper diagnosis, service, and repair procedures of these systems are studied and practiced. **PREREQUISITES:** ASEP317, AUTO464

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:** ASEP340

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:** 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. **REQUIRED:** Admission to Automotive Student Service Ed Training

ASST317 3 2 2 0 0
Ford Shop Fund & 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. **REQUIRED:** 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. **REQUIRED:** Admission to Automotive Student Service Ed Training. **PREREQUISITE:** ASST320, **COREQUISITE:** ASST328

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. **REQUIRED:** Admission to Automotive Student Service Ed Training. **PREREQUISITES:** ASST312, 317

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. **REQUIRED:** Admission to Automotive Student Service Ed Training. **PREREQUISITES:** ASST336, 337

ASST328 5 3 4 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. **REQUIRED:** Admission to Automotive Student Service Ed Training. **PREREQUISITES:** ASST312, 317; **COREQUISITE:** ASST318

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. **REQUIRED:** Admission to Automotive Student Service Ed Training. **PREREQUISITES:** ASST318, 320, 328

ASST333 4 2 4 0 0
Ford Engine Diagnosis/Repair 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. **REQUIRED:** Admission to Automotive Student Service Ed Training. **PREREQUISITES:** ASST340, 328; **COREQUISITE:** ASST343

ASST336 3 2 2 0 0
Ford Fuel Systems and Injection Voc/Tech
 Theory of carburization 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. **REQUIRED:** Admission to Automotive Student Service Ed Training; **PREREQUISITES:** ASST330; **COREQUISITE:** ASST326, 337

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. **REQUIRED:** Admission to Automotive Student Service Ed Training; **PREREQUISITES:** ASST330; **COREQUISITE:** ASST326, 336

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. **REQUIRED:** Admission to Automotive Student Service Ed Training; **PREREQUISITES:** ASST330, 326, 336, 337, PHYL401

ASST343 8 6 4 0 0
Ford Transmissions & Transaxles Voc/Tech
 Standard and automatic transmissions and transaxles including all components in front and rear drive power trains and 4-wheel drive vehicles. **REQUIRED:** Admission to Automotive Student Service Ed Training; **PREREQUISITES:** ASST340; **COREQUISITES:** ASST333

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. **REQUIRED:** Admission to Automotive Student Service Ed Training; **PREREQUISITES:** ASST333, 343

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. **REQUIRED:** Admission to Automotive Student Service Ed Training; **PREREQUISITES:** ASST333, 343

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.

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. **REQUIRED:** WELD468 must be taken concurrently with or prior to this course.

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Course Descriptions

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.

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.

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: AUTC408

AUTC413 4 2 4 0 0
Plastic Repair & 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: AUTC408

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: AUTC412, 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 management. 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: AUTC410

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: AUTC414, WELD468

AUTO464 3 2 2 0 0
Auto Measurement & 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.

AUTO469 3 1 4 0 0
Basic Automotive Electricity Voc/Tech
 Provides instruction in theory and operation of automotive electrical circuits. Safety, meters and services information will be emphasized.

AUTO470 3 1 4 0 0
Advanced Automotive Electricity Voc/Tech
 Provides instruction in the diagnosis, repair and service of electrical and electronic components found on current vehicles. PREREQUISITE: AUTO469

AUTO472 4 2 4 0 0
Auto AC & 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.

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 mechanical 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 power train 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 & 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. REQUIRED: Enrollment in or prior completion of 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. It is recommended that high school chemistry be taken prior to this course. REQUIRED: H.S. biology

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. REQUIRED: H.S. biology and chemistry 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. REQUIRED: BIOL133 OR 154 or equivalent

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. REQUIRED: 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. It is recommended that BIOL141 be taken prior to this course. REQUIRED: H.S. biology and H.S. chemistry or equivalent

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Course Descriptions

BIOL144 5 3 4 0 0
General Zoology Core
 A progressive study of the animal kingdom. Topics emphasize the anatomy, physiology, development, classification, evolution, and ecology of representative animals of each phylum. REQUIRED: BIOL141 or equivalent

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, bryophytes, and the vascular plants, with emphasis on the local flora. Includes study of plant ecology. REQUIRED: BIOL141 or equivalent

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. REQUIRED: one semester of any college-level biology course

BIOL150 1 0 2 0 0
Ecology Field Experience 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 & Physiology Core
 A classic integration of human anatomy and physiology at the cellular level and organ/ system level. Includes cat dissection. REQUIRED: H.S. biology and H.S. chemistry or equivalent

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. It is recommended that BIOL149 and CHEM132 be taken prior to this course. REQUIRED: MATH121 and BIOL165 or equivalent

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: immunology; recombinant DNA methods and principles; the human genome project; protein analysis and characterization; and chromatography principles and methods. REQUIRED: BIOL164 or equivalent; PREREQUISITE: BIOL161

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, prokaryotes and viruses; recombinant DNA technology; gene expression; and the genetic basis of immunology. REQUIRED: BIOL141 or BIOL149

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. REQUIRED: permission of instructor

BIOL260 3 3 0 0 0
Biology of Aging General
 This course is designed for individuals planning to work with the elderly population. The course describes changes that occur in body systems due to the normal aging process as well as some of the most common dysfunctions and diseases associated with aging. Furthermore, environmental factors, effects of diet and exercise in the aging process will be discussed.

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. REQUIRED: BLDG455 should be taken concurrently with or prior to this course

BLDG461 4 1 6 0 0
Concrete Systems & 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 & 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, 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

BLDM325 1 1 0 0 0
Boiler Room Maintenance Voc/Tech
 Boiler accessories, fittings, controls, water treatment and fundamentals for beginners.

BLDM326 2 2 0 0 0
Steam Plant Operations Voc/Tech
 High-pressure steam boilers, operation, controls, burning equipment instruments. PREREQUISITE: BLDM325

BLDM329 2 2 0 0 0
Basic Plumbing Voc/Tech
 Plumbing, plumbing components, plumbing codes, and reading blueprints.

BPQI320 3 3 0 0 0
Train the Trainer Voc/Tech
 This course provides students with the ability to design and perform adult training sessions for a company or business. Emphasis is placed on how to train the adult learner for maximum training retention.

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: 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: BPQI402

BPQI406 3 3 0 0 0
Quality Standards & 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 & 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

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Course Descriptions

BPQ1408 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: BPQ1401, 403

BPQ1409 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: BPQ1403, BPQ1405

BPQ1410 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: BPQ1409

BPQ1411 1 1 0 0 0
Measuring Devices, SPC Voc/Tech
 An introduction to quality-control measuring devices, their use, and application of data in Statistical Process Control.

BPQ1412 2 2 0 0 0
Controlling Mfg. Business Costs Voc/Tech
 The purpose of this course is to provide an understanding of the principles and concepts of production and work costs, the cost impact of shop floor activities and the various contributions company employees have on costs and profitability. Emphasis is placed on the effect individuals have on costs on a day to day basis.

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, insurance, economic systems, and finance as well as the role of government.

BSAD151 3 3 0 0 0
Personal Finance Open
 This course emphasizes family financial planning including financial statements, budgeting, taxes, risk management, and retirement.

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. Same content as MATH121, credit will not be granted credit for both BSAD152 and MATH121. REQUIRED: 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

BSAD265 1 1 0 0 0
Investing in Financial Assets Open
 This course explores personal investment in financial assets. Investing in stocks, bonds, and mutual funds is the focus of investigation. Concepts, techniques and strategies related to realizing financial goals with these types of assets are considered.

BSAD266 1 1 0 0 0
Investing in Real Assets Open
 Course analyzes procedures in residential real estate purchases. An evaluation of residential home, mobile home and condominium purchasing versus renting is discussed. Additional topics include investments in REITs, commercial property, undeveloped land, limited partnership, collectibles and gold.

BSAD267 1 1 0 0 0
Estate Planning Open
 The goal of this course is to establish a desirable and efficient dissolution of one's assets and liabilities at death. Course includes identifying goals for estate planning, both pre death and postmortem. Estate tax and gift tax issues are examined.

BSAD268 1 1 0 0 0
Long Range Financial Planning Open
 This course is designed to increase awareness of the need for identifying a desired retirement life-style within the context of the anticipated financial retirement inflows. Assessment will be made of retirement resources from employee, business and government sources. Individual retirement resource strategies are investigated. Health care and housing issues are examined.

BSEN229 3 3 0 0 0
Small Business Management Open
 Examines introductory business applications and strategies needed to start and operate a small business. Topics include: entrepreneurship preparation, idea feasibility, business plan content, introductory marketing, management, and finance concepts for small business.

BSEN301 2 1 2 0 0
Sm Business Computerized Acct Voc/Tech
 Provides introductory computer applications for a small business accounting system. Topics include: invoicing, billing, payroll, financial statements, inventory management, time tracking, job costing and customized reporting. REQUIRED: Basic computer skills; PREREQUISITE: ACCT301 or ACCT101

BSEN302 3 3 0 0 0
Small Business Management Strat Voc/Tech
 Emphasizes human resource concepts and their applications to small business operations. Leadership development, management styles and decision making strategies are stressed.

BSEN303 3 3 0 0 0
Small Business Marketing Voc/Tech
 Discussions and focus is on marketing applications. Workshops and strategies such as: market research, product development, pricing, distribution, promotion, marketing campaigns and budgets.

BSEN304 2 2 0 0 0
Small Business Start-Up Voc/Tech
 This course includes information, examples, forms and activities needed for business start-up and for development of a successful business operation. Topics include: market research and assessment; naming your business; finding a location; determining asset needs and forecasting sales; identifying job tasks and determining human resource needs; and writing a business plan.

BSEN305 3 3 0 0 0
E-Commerce on the Web Voc/Tech
 This course will introduce the student to the basic elements of electronic commerce. It will focus on business and technical issues faced by a company that enters into the e-commerce marketplace. Topics include products, advertising, resource requirements, third party options, technical and operational issues.

BSEN306 3 2 2 0 0
E-Commerce Website I Voc/Tech
 This course introduces the student to basic concepts, languages and tools used in the development of an e-commerce website. Student will identify effective design concepts and characteristics of successful websites. They will use current tools and techniques to design and create e-commerce website. PREREQUISITE: COMS181 or OFFC355

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

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Course Descriptions

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: ASEP420, 421

BSEP472 4 3 2 0 0
A/C & 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

BUSL101 3 3 0 0 0
Business Law I General
 Provides introductory overview of the sources of law of the American legal system, the structure of the court systems, torts, contract law and sales law.

BUSL102 3 3 0 0 0
Business Law II General
 Provides an overview of negotiable instruments, debtor/creditor law (collecting judgments,) secured transactions, agency relationships, and selecting the right business formation. PREREQUISITE: BUSL101

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.

BUSL310 2 2 0 0 0
Basic Law for the Entrepreneur Voc/Tech
 This course is designed to acquaint business students and those currently involved in operating small businesses with the general areas of law that may be problematic for the entrepreneur and create risks resulting in lawsuits.

BUSL312 3 3 0 0 0
Law of Purchasing & 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 to 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. REQUIRED: Basic computer literacy

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. Three-dimensional concepts will be discussed. PREREQUISITE: CADD401

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. Site plans and presentation are some of the topics that will be discussed. PREREQUISITE: CADD401

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

CADD410 - ADJUNCT**** 3 2 2 0 0
Introduction to Multimedia Voc/Tech
Basic three dimensional concepts and applications are covered. Rendering, animating and application of basic color manipulation are discussed and used. PREREQUISITE: CADD401

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. REQUIRED: Basic computer skills

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

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 & 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

CADT472 3 2 2 0 0
CAD Rendering & 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

CART363 - ADJUNCT**** 2 1 2 0 0
Electronic Photo Editing Voc/Tech
Electronic photo manipulation, scanning and editing. Class covers projects dealing with line art, gray-scale, halftone, and full color photographs. PREREQUISITES: DKTP401

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Course Descriptions

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 3 2 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 copyfitting and the 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 3 2 2 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 drawings 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 3 2 2 0 0
Illustration II Voc/Tech
 Lab and lecture study of tools and skills necessary to create color marker illustrations. Study includes a variety of surfaces and products as well as the human figure. The illustrations will be conceived within the context of publication advertisements.

CART415 3 2 2 0 0
Production Art II Voc/Tech
 This will add to the student's qualifications from taking Production Art I by emphasizing two-color & advance camera-ready art for printing. PREREQUISITE: CART407

CART419 2 0 4 0 0
Lettering & 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 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

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. PREREQUISITES: 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

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

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
 Use of Adobe Illustrator to produce electronic drawings 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
 Use of Adobe Illustrator and Adobe Dimensions. 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
 Introduction to using Adobe Photoshop. The student will learn how to electronically merge and edit color images such as 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.

CET-315 3 3 0 0 0
Fundamentals of Civil Engineering Voc/Tech
 Introduces concepts of the civil engineering technician career. Topics include civil engineering technician disciplines and career structures; construction and civil engineering industry; introduction to basic engineering principles; layout of civil plans; introduction to design methods; standards and equipment used in design and manual drafting.

CET-320 3 3 0 0 0
Survey I Voc/Tech
 This course will develop a working knowledge of surveying fundamentals. Topics will include an introduction to: surveying instruments and equipment; measurement of distances and angles; determining elevation; note keeping, traversing, triangulation, mapping, researching of monuments and benchmarks, cross sections and earthwork; introduction to right of way and property plats. REQUIRED: CET-315 or department approval

CET-325 4 3 2 0 0
Survey II Voc/Tech
 A continuation of Survey I. Topics will include: control surveys; topographic survey, construction survey, coordinate systems (i.e. state plane); spheres; watersheds; aerial photography; photogrammetry; legal descriptions; right of way; electronic data collection and global positioning will be utilized; data downloading and editing. Legal principles of land boundaries, public domain survey systems. REQUIRED: CET-320 or department approval

CET-330 4 4 0 0 0
Highway Design I Voc/Tech
 This course will develop a working knowledge of civil design plans and design principles. Topics will include: design criteria and standards; typical roadway sections; traffic data; cross sections; earthworks; survey data, historical project information, bid items, design manuals, geometric design, hydrology, staging, records management, vertical profile design, environmental project information. GEOPAK will be utilized. REQUIRED: CET-315 or department approval

CET-340 3 3 0 0 0
Construction I Voc/Tech
 This course will develop a working knowledge of construction inspection fundamentals. Topics will include introduction to: construction reviews, pre-construction planning, permits process, embankment construction, drainage solutions, stabilization methods, equipment used in construction, placement work, paving procedures, estimating of time and materials. REQUIRED: CET-315 or department approval

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Course Descriptions

CET-350 4 3 2 0 0
Materials I Voc/Tech
 Students will develop a working knowledge of soils and materials used in the construction industry. Topics will include: soil types, foundations and aggregates; subsurface explorations; engineering property of soils and aggregates, such as moisture content, compaction, permeability; soils plan creation; soil borings; concrete properties; concrete mixes; asphalt properties; sampling methods (J); testing of materials; testing equipment; calibration of equipment. **REQUIRED:** CET-315 or department approval

CET-360 3 3 0 0 0
Soils and Foundations Voc/Tech
 This course will develop a working knowledge of soil mechanics and soil relationship to roadway construction. Topics include: definitions, types, properties, classifications, and distributions of soil. This course will examine how to transfer soils mechanics principles to roadway construction. The application of differing soil type and properties and how soils materials are incorporated into the design will be presented. **PREREQUISITE:** CET-315 or department approval

CET-380 3 3 0 0 0
Statics Voc/Tech
 Designed to develop and present basic structural concepts. Emphasis is placed on the use of free-body diagrams in understanding the forces acting on a structural member. Topics presented will be demonstrated in model form to reinforce the ideas through visual images. **REQUIRED:** MATH411 or department approval

CET-390 4 4 0 0 0
Automated Design I Voc/Tech
 This course will introduce the student to Micro Station CAD software. Basic two-dimensional CAD drawings will be taught. Drawings will be created and plotted. Drawing formats, geometric construction and lettering will be taught on computer-aided drafting (CAD) software. Drafting standards will be covered. Sketching and fundamentals of orthographic projection are stressed. **REQUIRED:** CET-315 or department approval

CET-405 3 0 0 0 12
Field Coop Voc/Tech
 Practical experience through on-the-job training in an approved civil engineering technician setting. Tasks will be consistent with student's career objectives, skills, and knowledge. **REQUIRED:** Successful completion of 32 credit hours of CET- credit courses and/or departmental approval

CET-406 2 0 0 0 8
Advanced Field Coop Voc/Tech
 Practical experience through on-the-job training in an approved civil engineering technician setting. Tasks will be consistent with student's career objectives, skills, and knowledge. **REQUIRED:** CET-405

CET-422 4 3 2 0 0
Survey III Voc/Tech
 This course illustrates the application of survey concepts to a highway survey. Topics will include: legal description research, route surveying, horizontal and vertical curve layout, closed and open loop survey, bench level circuits; subdivision surveying, construction surveying; electronic data collection and global positioning will be utilized. **REQUIRED:** CET-325 or department approval

CET-430 4 4 0 0 0
Highway Design II Voc/Tech
 Application of design concepts and standards to a highway design project. A complete project design is required with a written and oral presentation. The finished project will be created utilizing GEOPAK that includes: determining design criteria; determining horizontal and vertical alignment layout; intersection and interchange design, selection of typical, standard notes, and design standards; hydrology; generating and analyzing cross sections; determining right of way needs; earthwork to include quantities, a mass diagram and mass ordinates; detailed material list and cost estimates (preliminary and final). The presentation will include a three-dimensional drive through of the project. **REQUIRED:** CET-330 or department approval

CET-440 3 3 0 0 0
Construction II Voc/Tech
 This course will involve the definition, interpretation and utilization of drawings, specifications, agreements, bidding forms, general considerations, bonds, subcontracts, shop drawings, material approvals and related documents, record keeping and materials measurement, as built plans. **REQUIRED:** CET-340 or department approval

CET-450 3 2 2 0 0
Materials II Voc/Tech
 This course will develop a working knowledge of soils and materials used in the construction industry. Topics will include: soil types; aggregates; subsurface explorations, engineering property of soils and aggregates such as moisture content, compaction, permeability; soils plan creation; soil borings; concrete properties; concrete mixes; asphalt properties; sampling methods; testing of materials; testing equipment; calibration of equipment. **PREREQUISITE:** CET-350 or department approval

CET-470 3 3 0 0 0
Structural Design and Construction Voc/Tech
 This course is an introduction to the understanding of load and resistance factor design (LRFD) method. Topics considered include material properties, tension, compression, bending, beam columns, simple connections, base plates, bearing plates, open web steel joists, steel roof decks, concrete structures, mixes, placement, precast and pre-stressed. **REQUIRED:** CET-315 or department approval

CET-490 4 4 0 0 0
Automated Design 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. GEOPAK fundamentals will be taught to include: project manager, horizontal alignment, vertical alignment, point manipulation, chains, existing cross section creation, proposed cross section creation, quantity outputs and criteria. **PREREQUISITE:** CET-390 or department approval

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. **REQUIRED:** 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. **REQUIRED:** 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. **REQUIRED:** 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. **REQUIRED:** 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. **REQUIRED:** 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. **REQUIRED:** CHEM161 or equivalent

CHLD110 3 3 0 0 0
Early Child Development Open
 Course covers typical and atypical development of children from birth through eight years of age in the areas of physical/motor, language/cognitive and social/emotional growth. Emphasis is placed on the effects of interactions between child, family and society within a variety of cultural contexts.

CHLD210 1 1 0 0 0
Intro to Early Childhood Education Open
 Course prepares students for employment in the field of early childhood education. State of Iowa child care center licensing/day care home registration requirements are reviewed. Basic job skills are discussed. Training requirements for universal precautions/infectious disease control and mandatory reporting of child abuse are met.

CHLD211 2 2 0 0 0
Guidance Techniques - Young Children Open
 Course covers various philosophies of and techniques for the application of developmentally and individually appropriate guidance for typically and atypically developing young children.

CHLD212 1 1 0 0 0
Assess & Planning for Young Children Open
 Course presents students with individually and developmentally appropriate assessment and planning skills for the care and early education of children in a variety of inclusive settings. Curriculum planning approached through the use of emergent curriculum concepts, thematic approaches, webbing, curriculum strands and individual education plans and individual family service plans.

CHLD213 2 2 0 0 0
Group Experience for EC Programs Open
 Topics include assessment, planning and presentation of individually and developmentally appropriate small and large group activities for an inclusive program for preschool age children. Areas of focus include language, music, movement and literature.

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Course Descriptions

CHLD214 3 3 0 0 0
Curriculum for Preschool Children Open
 Planning of developmentally and individually appropriate activities for children 3 through 5 years of age. Planning of activities to enhance development in the curricular areas of art, sensory, dramatic play, science, math, literacy, motor and cognitive skills.

CHLD215 3 3 0 0 0
Child Health, Safety & Nutrition Open
 Provision of a safe and healthy environment for young children in a group setting. Specifically covered are nutrition analysis, menu planning, indoor and outdoor safety principles and assessments, health assessments and policies, and the care of children with chronic health problems.

CHLD216 2 2 0 0 0
Infant & Toddler Care & Education Open
 Course focuses on best practices for care and education of children birth through 2 years of age in an integrated setting. Health and safety issues as well as presentation of developmentally appropriate activities are covered.

CHLD217 2 2 0 0 0
Professional Relationships Open
 Course designed to give students an overview of expected professional behaviors and responsibilities as a member of an early childhood team. Focus on relationships with parents, communication skills with parents and co-workers, job-seeking skills, job performance, and professional associations and educational opportunities.

CHLD220 3 3 0 0 0
Administration Programs-Young Child Open
 Course covers basic principles involved in setting up and administering an early childhood program. Emphasis placed on funding, bookkeeping, business procedures, insurance, enrollment, and record keeping. Designed for second-year students and persons interested in becoming a center director.

CHLD240 1 1 0 0 0
Emergency Care Open
 Cardiopulmonary 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.

CHLD250- ADJUNCT**** 1 1 0 0 0
Parenting Today Open
Course covers a wide variety of parenting topics through class discussion and reading from current literature. Topics included are child development principles, guidance, developmentally appropriate activities and expectations, health, safety and nutrition principles.

CHLD364 1 1 0 0 0
Activities-School-age Children Open
 Course focuses on ideas for working with children ages 6-12 years. Includes a variety of activities that are designed to enhance children's day after school.

CHLD410 3 0 0 9 0
Student Participation I Open
 Participation with children in the inclusive day care center on campus under the supervision of a lead teacher. Students have limited responsibilities for curriculum planning. Daily student-teacher conferences are held. **REQUIRED:** enrollment in or completion of a minimum of 8 credits of early childhood education or permission of instructor.

CHLD411 3 0 0 9 0
Student Participation II Open
 A continuation of Student Participation I in which students assume full responsibility for assessment, planning, lead teaching and parent communications in the inclusive day care center on campus under the supervision of a lead teacher. **REQUIRED:** completion of 10 credits in early childhood education including CHLD410 (minimum of a 2.0 in CHLD 410) or permission of instructor.

CHLD420 2 0 0 0 8
Early Childhood Education Practicum Open
 Placement in a community-based program for typically or atypically developing young children in an inclusive setting. Emphasis is on the development of competencies necessary for employment in a similar setting. **REQUIRED:** completion of 10 credits in early childhood education with a minimum of a 2.0 GPA or permission of instructor.

CHLD421 3 0 0 0 12
Early Childhood Ed Associate Practicum Open
 Placement for the associate degree student in a community-based program for typically and atypically developing young children in an inclusive setting. The practicum is designed to further build competencies necessary for employment and to develop competencies in the area of program administration. **REQUIRED:** cumulative GPA of 2.0 in all early childhood courses, enrollment in or completion of CHLD220. **PREREQUISITE:** CHLD420

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. **PREREQUISITES:** CIM-321

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.

CIM-410 3 3 0 0 0
Material Requirements Planning Voc/Tech
 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.

CIM-411 3 3 0 0 0
Production & Capacity Management Voc/Tech
 This course studies such topics as break-even analysis, time and motion studies, forecasting of demand, scheduling, statistical process control, and make versus buy analysis to provide manufacturing managers with simple but effective tools to control plant operations to maximize productivity and minimize cost.

CIM-412 3 3 0 0 0
Just In Time Inventory Control Tech. Voc/Tech
 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.

CIM-413 3 2 2 0 0
Introduction to FMS Cell Voc/Tech
 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. **REQUIRED:** HTPC358 & 359 or instructor permission

CIM-417 - ADJUNCT**** 3 3 0 0 0
Advanced Purchasing Operations Voc/Tech
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.

CIM-418 5 0 0 0 20
IMT Internship Voc/Tech
 Supervised work experience with employer based upon individual training plan which enables student to apply his/her skills and knowledge. **REQUIRED:** Successful completion of courses in Terms 1, 2, 3 of Integrated Manufacturing Technology program

CIM-419 - ADJUNCT**** 3 3 0 0 0
Master Planning Voc/Tech
This course covers topics related to the preparation and use of master planning systems in manufacturing companies. It addresses the topic of forecasting, demand management, production planning systems, and the developing and use of a master planning schedule based on product forecasts. This is also an APICS certification review course.

CIM-420 - ADJUNCT**** 3 3 0 0 0
Systems and Technology Voc/Tech
This course covers topics related to the implementation of management systems and technologies designed to enhance the competitive position of a firm. It will address the topics of overall corporate strategy, infrastructure considerations, role of quality, and the interface of production of control systems. This is also an APICS certification review course.

CIM-421 - ADJUNCT**** 3 3 0 0 0
Motor Control Voc/Tech
Troubleshoot electro-mechanical motor controls, gain an understanding of ladder diagrams. Students should have a general knowledge of electricity to take this course.

COMH410 3 2 2 0 0
Introduction to Greenhouse Voc/Tech
 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. **REQUIRED:** COMH450, AGR1209, 219

COMH411 2 2 0 0 0
Horticulture Chemical Techniques Voc/Tech
 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.

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Course Descriptions

COMH433 2 1 2 0 0
Irrigation Systems Voc/Tech
 A study of the design, installation, use, maintenance and repair of the different types of irrigation systems used in the production of a wide variety of horticulture crops. Irrigation system components, materials, and estimates of installation, maintenance and operation costs will be addressed. PREREQUISITES: AGR1209, 219, COMH437

COMH435 2 1 2 0 0
Sports Turf Voc/Tech
 Introduction to the variety of sports contests played on turfgrass fields. Students will study the sport, site selection and preparation, turfgrass species selection, establishment, and maintenance of the field. Pre-competition practices of field layout along with post-competition practices of repair and field recovery will be discussed. PREREQUISITES: AGR1209, 219, COMH437

COMH437 2 2 0 0 0
Turf I Voc/Tech
 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. REQUIRED: COMH450, AGR1209, 219

COMH440 3 1 4 0 0
Landscape Design I Voc/Tech
 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. REQUIRED: The following courses should be completed or be currently enrolled: COMH441, 488

COMH441 1 1 0 0 0
Landscape Drafting Voc/Tech
 Introduction to landscape drafting and associated drafting equipment and materials. COREQUISITE: COMH488

COMH450 3 3 0 0 0
Botany Voc/Tech
 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.

COMH452 3 2 2 0 0
Arboriculture Voc/Tech
 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. REQUIRED: COMH450, AGR1209, 219

COMH453 3 1 4 0 0
Landscape Design II Voc/Tech
 Course will include design of residential, commercial, public areas and annual and perennial flower beds. Use of landscape construction materials in design and materials and labor estimates will be developed. REQUIRED: The following courses should be completed or be currently enrolled: COMH440, 441, 488. COREQUISITE: COMH489

COMH454 3 0 0 0 15
Horticulture Internship I Voc/Tech
 Experience in a business setting related to the student's career objective. Taken over a five week period. (P/F) PREREQUISITES: COMH410, 437, 488

COMH455 3 2 2 0 0
Turf II Voc/Tech
 Turf management practices on golf and recreation areas with practical experience in maintaining turf on outdoor campus facilities. PREREQUISITE: COMH437

COMH457 3 2 2 0 0
Fruit & Vegetable Science Voc/Tech
 A study of tree fruits, small fruits and vegetable culture, including varietal selection, planting, pruning, fertilizing, disease and insect control programs. REQUIRED: COMH450, AGR1209, 219

COMH458 2 2 0 0 0
Insects & Diseases Voc/Tech
 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.

COMH469 3 3 0 0 0
Garden Center Management Voc/Tech
 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.

COMH478 3 2 2 0 0
Plant Propagation I Voc/Tech
 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. REQUIRED: COMH450, AGR1209, 219

COMH479 3 2 2 0 0
Nursery Production I Voc/Tech
 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. REQUIRED: COMH450, AGR1209, 219

COMH483 1 0 2 0 0
Plant Propagation II Voc/Tech
 Summer methods of plant propagation including softwood and semi-hardwood cuttings, budding, layering, divisions and an overview of apical meristem culture. PREREQUISITE: COMH478

COMH485 1 0 2 0 0
Floral Design II Voc/Tech
 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

COMH486 1 0 2 0 0
Horticulture Equip Safety/Maint Voc/Tech
 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.

COMH488 2 1 2 0 0
Plant Materials I Voc/Tech
 The study of plant materials using the plant materials in their growing environment. Course will cover use of identification keys and plant families. COREQUISITE: COMH441

COMH489 2 0 4 0 0
Plant Materials II Voc/Tech
 The study of plant materials will be expanded to include annuals and perennials. REQUIRED: The following courses should be completed or be currently enrolled: COMH488, COREQUISITE: COMH453

COMH490 3 2 2 0 0
Greenhouse Prod Techniques Voc/Tech
 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

COMH497 1 0 2 0 0
Floral Design I Voc/Tech
 Construction and mechanics of merchandising flowers and plants at retail.

COMH498 3 0 0 0 15
Horticulture Internship II Voc/Tech
 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

COMS111 3 3 0 0 0
Computers & Program Logic Open
 This course provides students with a firm foundation in problem solving methods in computer programming and facilitates the development of good structured programming skills for solving business problems. Students will define and analyze problems, design computer solution algorithms, and prove the correctness of the solutions. PREREQUISITE: COMS181

COMS112 3 3 0 0 0
Computers & Programming II Open
 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

COMS125 3 3 0 0 0
Business Programming COBOL I Open
 Introduces the programming language COBOL. Topics include move, logical testing, control & page breaks, totals and others. Emphasis is given to business applications. REQUIRED: COMS111 or 176

COMS126 4 4 0 0 0
Business Programming COBOL II Open
 Introduces advanced COBOL programming techniques. Emphasis is given to the SORT verb, multiple level tables and ISAM file access techniques. PREREQUISITE: COMS125

COMS160 3 3 0 0 0
Computational Structures Open
 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

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. REQUIRED: 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. REQUIRED: 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. Includes an introduction to Windows, Word, Excel, Access and the Internet.

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Course Descriptions

COOP212 1 1 0 0 0
Coop Career Seminar Voc/Tech
 Weekly examination of topics relevant to the internship experience, sharing workplace problems encountered and the solutions found to those problems. COREQUISITE: COOP221 or 222 or 223 or 224 or 225 or 226

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
 Practical experience through on-the-job training in an approved business setting. Tasks will be consistent with student's career objectives, skills, and knowledge. (P/F) COREQUISITE: COOP212

COOP222 2 0 0 0 8
Coop Career Experience Voc/Tech
 Practical experience through on-the-job training in an approved business setting. Tasks will be consistent with student's career objectives, skills, and knowledge. (P/F) COREQUISITE: COOP212

COOP223 3 0 0 0 12
Coop Career Experience Voc/Tech
 Practical experience through on-the-job training in an approved business setting. Tasks will be consistent with student's career objectives, skills, and knowledge. (P/F) COREQUISITE: COOP212

COOP224 4 0 0 0 16
Coop Career Experience Voc/Tech
 Practical experience through on-the-job training in an approved business setting. Tasks will be consistent with student's career objectives, skills, and knowledge. (P/F) COREQUISITE: COOP212

COOP225 5 0 0 0 20
Coop Career Experience Voc/Tech
 Practical experience through on-the-job training in an approved business setting. Tasks will be consistent with student's career objectives, skills, and knowledge. (P/F) COREQUISITE: COOP212

COOP226 6 0 0 0 24
Coop Career Experience Voc/Tech
 Practical experience through on-the-job training in an approved business setting. Tasks will be consistent with student's career objectives, skills, and knowledge. (P/F) COREQUISITE: COOP212

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 versus 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 versus real roles and functions of the agencies. Includes on-site visits. REQUIRED: 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

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

CULA365 2 0 4 0 0
Advanced 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: HRMT316, 320

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: HRMT326, 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. 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. PREREQUISITE: 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 Visual BASIC programming language. The various commands will be presented; and students design, code, and test several programs including file processing. PREREQUISITES: COMS181

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, SQL and database processing. 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/Windows), word processing, spreadsheets and database management software. Course features extensive hands-on usage combined with lecture and discussion. PREREQUISITES: COMS181

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Course Descriptions

DATA110 3 2 2 0 0
Computer Network Literacy Voc/Tech
 This course is an introduction to basic concepts and terminology in computer networks and data communications. Topics include data communications equipment and media network basics and the Internet. Student will develop a personal web page. PREREQUISITES: 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

DATA304 4 3 2 0 0
COBOL - Beginning Voc/Tech
 Introduces the student to structured COBOL design and coding including control break processing and screen I/O. REQUIRED: COMS181 and DATA310 must be taken concurrently with or prior to this course

DATA306 4 3 2 0 0
COBOL - Intermediate Voc/Tech
 COBOL VSE structured programming involving sequential disk, table processing and file update processing, using IBM ICCF text editor, VSE/ESA JCL on an IBM ES/900 Mainframe. PREREQUISITE: COMS125 or DATA304

DATA308 3 2 2 0 0
COBOL - Advanced Voc/Tech
 ANSCOBOL involving advanced editing programs, table processing, VSAM file process, programs linkage, and report writer. PREREQUISITE: DATA301 and 306

DATA309 3 3 0 0 0
COBOL on the World Wide Web Voc/Tech
 Apply COBOL to the WWW using Net Express. Topics include CGI programs, data access on the server, GUI development for HTML based sites. PREREQUISITE: DATA304 or COMS125

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. REQUIRED: COMS181 must be taken concurrently with or prior to this course

DATA318 3 2 2 0 0
Intro C++ Programming Voc/Tech
 Students will examine the structure of typical C++ programs, explore the concepts of object oriented programming and design eight small to medium sized programs in C++. PREREQUISITE: DATA310

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

DATA320 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

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, chkdisk, 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

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

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: 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: DATA352

DATA335 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.

DATA341 3 3 0 0 0
Introduction to Database Voc/Tech
 This course provides a comprehensive foundation that enables students to understand and use commercially available relational DBMS products effectively. PREREQUISITES: COMS181, COMS111, COMS125

DATA343 3 2 2 0 0
Introduction to SQL Voc/Tech
 This course is an introduction to SQL as a database programming language to those already familiar with basic relational database concepts. Students will write executable SQL statements to create and maintain database objects. PREREQUISITE: DATA341

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: DATA345

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

DATA348 2 1 2 0 0
Advanced P.C. Database Voc/Tech
 Students will use advanced techniques to retrieve data, format reports, and create script files to generate SQL. The course also provides the opportunity for students to write COBOL programs that utilize embedded SQL statements. PREREQUISITE DATA347

DATA349 3 2 2 0 0
Advanced PC/ SQL Program Units Voc/Tech
 An advanced study of P.C. database concentrating on programs that are menu driven; screen generation and file manipulation. PREREQUISITE DATA343

DATA350 3 3 0 0 0
Relational Database Design Voc/Tech
 Students learn a systematic approach to database development using entity-relationship models, normalization and relational database design. Students will use this approach to identify and define business information requirements, create entity-relationship models, and transform the requirements into an initial database design. PREREQUISITE DATA341

DATA352 4 4 0 0 0
Telecommunications/CICS Prog Voc/Tech
 Provides theory and working knowledge of telecommunication programming. Students will code programs using CICS. PREREQUISITES: DATA308, 321

DATA382 4 4 0 0 0
Systems Analysis Voc/Tech
 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 or COMS125

DENA302 4 4 0 0 0
Dental Science I Voc/Tech
 Introduction to the various sciences necessary for the dental assistant. Microbiology and oral pathology are covered. REQUIRED: DENA304 must be taken concurrently with or prior to this course

DENA304 2 2 0 0 0
Dental Anatomy Voc/Tech
 The study of head, neck and dental anatomy is combined to give the student background information for application in dental assisting courses.

DENA305 2 1 2 0 0
Dental Radiography II Voc/Tech
 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

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Course Descriptions

DENA309 1 1 0 0 0
Dental Assisting Seminar Voc/Tech
 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

DENA310 3 0 0 0 12
Dental Assisting Clinical Voc/Tech
 Application of knowledge and skills as students rotate through dental offices, clinics and hospital clinics. General and speciality practices are included in rotations. REQUIRED: Current CPR certification DENA302, 304, 320, 325, DENH201, 257 COREQUISITE: DENA309

DENA312 2 2 0 0 0
Dental Science II Voc/Tech
 A continuation of Dental Science I. Emphasis on effects of drugs, and emergency procedures. REQUIRED: CPR certification DENA302, 304

DENA316 1 1 0 0 0
Ethics & Clinical Seminar Voc/Tech
 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. REQUIRED: Second semester standing in Dental Assisting program. COREQUISITE: DENA318

DENA318 4 0 0 0 16
Dental Assisting Clinical II Voc/Tech
 Continuation of DENA310. COREQUISITE: DENA316

DENA320 6 4 4 0 0
Preclinical Dental Assisting Voc/Tech
 Basic concepts of chairside assisting are covered with emphasis on the role of the team in delivery systems. Terminology, instruments, equipment and basic procedures are covered. REQUIRED: DENA302, 304, 325 and DENH201 must be taken concurrently with or prior to this course

DENA322 5 3 4 0 0
Clinical Dental Assisting Voc/Tech
 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

DENA323 2 2 0 0 0
Dental Business Office Procedure Voc/Tech
 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. REQUIRED: 35 wpm keyboard skills and computer literacy

DENA325 1 0 2 0 0
Dental Materials Lab Voc/Tech
 Through laboratory experience the student learns techniques in preparation and utilization of dental materials. PREREQUISITE: DENA304

DENH201 2 2 0 0 0
Dental Materials Open
 A study of materials utilized in the practice of dentistry. Properties of dental materials and ADA requirements are presented. REQUIRED: DENA304 must be taken concurrently with or prior to this course

DENH203 1 0 2 0 0
Dental Materials Lab Open
 Through laboratory experience the student learns techniques in preparation and utilization of dental materials. COREQUISITE: DENH201

DENH208 2 2 0 0 0
Principles of Dental Hygiene Open
 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

DENH209 3 0 6 0 0
Principles of Dental Hygiene Practicum Open
 See DENH208. PREREQUISITES: BIOL154, CHEM131 COREQUISITE: DENH208

DENH210 2 2 0 0 0
Oral Histology & Embryology Open
 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

DENH227 3 2 2 0 0
Dental Health Education Open
 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

DENH228 2 2 0 0 0
Dental Hygiene I Open
 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

DENH229 4 0 8 0 0
Dental Hygiene I Practicum Open
 See DENH228. PREREQUISITES: DENH208, 209 COREQUISITES: DENH228, 259

DENH230 4 4 0 0 0
Dental Anatomy Open
 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

DENH240 4 4 0 0 0
Nutrition/Preventative Dentistry Open
 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 preventative dentistry necessary to maintain optimum oral health. PREREQUISITES: BIOL154, CHEM132

DENH241 1 1 0 0 0
Nutrition/Dental Counseling Open
 A combined teaching, learning and practice course emphasizing the identification and analysis of diet as it relates to dental health. Students will evaluate caries and periodontal disease risk levels and perform counseling and instruction in elements of nutrition as they relate to the prevention of dental disease. PREREQUISITES: BIOL154, CHEM132, HRMT334

DENH257 3 2 2 0 0
Dental Radiography I Open
 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. REQUIRED: DENA302, 304 and DENH230, or DENH230 must be taken concurrently with or prior to this course. COREQUISITE: DENA304 or DENH230

DENH259 2 1 2 0 0
Dental Radiography II Open
 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

DENH278 2 2 0 0 0
Dental Hygiene II Open
 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

DENH279 2 0 0 6 0
Dental Hygiene II Practicum Open
 See DENH278. PREREQUISITES: DENH228, 229 COREQUISITE: DENH278

DENH280 2 2 0 0 0
Periodontology Open
 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

DENH281 5 0 0 15 0
Dental Hygiene III Practicum Open
 See DENH288. PREREQUISITES: DENH278, 279 COREQUISITE: DENH288

DENH282 3 3 0 0 0
Dental Pharmacology Open
 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

DENH288 2 2 0 0 0
Dental Hygiene III Open
 A continuation of clinical practices. Topics include dental hygiene care for individuals with special needs, care planning, third party payment applications, substance abuse and dependent adult abuse. PREREQUISITES: DENH278, 279 COREQUISITE: DENH281

DENH290 3 2 2 0 0
Community Dentistry Open
 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

DENH291 5 0 0 15 0
Dental Hygiene IV Practicum Open
 See DENH298. PREREQUISITES: DENH281, 288 COREQUISITE: DENH298

DENH293 3 3 0 0 0
General & Oral Pathology Open
 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

DENH298 2 2 0 0 0
Dental Hygiene IV Open
 A continuation of clinical practices. Legal, ethical, and management aspects of the dental care system are considered. Career alternatives and job seeking skills are demonstrated. PREREQUISITES: DENH281, 288 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.

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Course Descriptions

DEVS080*** 3 3 0 0 0
Study Skills Adaptor
 Emphasis on improving time management, developing listening skills, development of critical thinking 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. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITE: TOOL491; 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

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

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 REQUIRED: DIEM404 must be taken concurrently with or prior to this course

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. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITE: DIEM400 & DIEM401

DIEM413 3 2 2 0 0
Electrical Discharge Machining Voc/Tech
 Operation of both conventional and wire EDM machines. Construction of EDM electrodes.

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 I Voc/Tech
 Class and lab activities in the design and operation of drive train components including clutches, manual transmissions, drive lines, rear axles, and wheel bearings.

DISL405 5 1 8 0 0
Power Trains II Voc/Tech
 Instruction will include the basics of automatic transmissions, power shift transmissions, final drives, and hydrostat drives. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITE: DISL404, 406

DISL406 5 1 8 0 0
Hydraulics & Brakes Voc/Tech
 The study of basic mobile hydraulics. Introduces principles, components, fluid systems and circuits of hydraulic systems. Vehicle braking includes study of hydraulic and air brake systems.

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. Experienced individuals may contact the instructor to gain admittance to this course. 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. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITE: DISL408

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. Experienced individuals may contact the instructor to gain admittance to this course. 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. Experienced individuals may contact the instructor to gain admittance to this course. 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 5 1 8 0 0
Operation & Maintenance Voc/Tech
 Instruction in the proper methods of maintaining all equipment. Safety will be emphasized.

DISL430 4 2 4 0 0
Caterpillar Fuel Systems Voc/Tech
 The student will be introduced to basic Caterpillar fuel system principles and theory for mechanical and electronic engines. General repair and diagnostic procedures will also be covered. PREREQUISITE: DISL402, 404, 406, 408

DISL431 2 1 2 0 0
Caterpillar Failure Analysis Voc/Tech
 The student will determine the root cause of failure, how to properly prepare the parts for inspection, and determine what is normal and abnormal wear. PREREQUISITE: DISL402, 404, 406, 408

DISL432 2 1 2 0 0
Caterpillar LS/PC - Hydraulics Voc/Tech
 This course will cover the design and theory of LS/PC hydraulic systems. This course will cover the function, operation and diagnosis of LS/PC hydraulics. PREREQUISITE: DISL402, 404, 406, 408

DISL433 2 2 0 0 0
Caterpillar Service Information Sys Voc/Tech
 Instruction covers basic computer skills related to Caterpillar computer systems. Students will learn how to operate SIS, Parts Integrator, DBS Parts orders and work orders.

DISL434 4 0 0 0 16
Caterpillar Internship Voc/Tech
 Work experience at a local Caterpillar dealership. The work experience will be compatible with the students ability and previous course work. PREREQUISITE: DISL402, 404, 406, 408

DISL435 2 0 4 0 0
Caterpillar Multi-Media Voc/Tech
 The student will complete Caterpillar computerized tests and review modules. PREREQUISITE: DISL402, 404, 406, 408

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. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITE: DISL408

DKTP401 3 1 4 0 0
Intro To Desktop Publishing Voc/Tech
 Course introduces student to operating system of the Macintosh computer. Industry standard electronic layout program is used to introduce the student to the field of electronic desktop publishing.

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)

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Course Descriptions

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 playwriting. 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.

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 Macroeconomics Core
 This course is an introduction to basic macroeconomic concepts and principles. It deals with the problems of resource allocation, supply and demand, national income, employment, price levels, fiscal and monetary policy, money and banking systems, and elements of global finance. ECON101 is not a prerequisite for ECON102.

ECON102 3 3 0 0 0
Principles of Microeconomics Core
 This course covers a survey of demand and supply conditions, cost structure, market structure, and how these elements affect individual households, business firms, government and global trade. ECON101 is not a prerequisite for ECON102.

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. Recommended for students who plan to major in education.

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.

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 & 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 & 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. REQUIRED: ELEM451 must be taken concurrently with or prior to this course.

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.

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. REQUIRED: ELEM462 must be taken concurrently with or prior to this course.

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

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

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.

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.

ELHT330 2 2 0 0 0
Digital Circuits 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; COREQUISITE: ELHT363

ELHT332 3 3 0 0 0
Digital Electronics 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, counters, and microprocessors. COREQUISITE: ELHT364

ELHT340 3 3 0 0 0
Microprocessors Voc/Tech
 This course covers two major areas of microcomputers and microprocessors. The first is an investigation of the specific architecture of microprocessors and fundamental microcomputer hardware. The second area is software and studies specific assembly language instructions for common routines and program structures. PREREQUISITES: ELHT330, 362, COREQUISITE: ELHT341

ELHT341 5 0 10 0 0
Microprocessors Lab Voc/Tech
 Includes experiments which exercise microprocessor instruction sets and microcomputer central processing units, memory, and I/O devices. Routines and subroutines are written in assembly language, assembled, downloaded and tested. 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.

ELHT346 3 3 0 0 0
Microcomputer Operating Systems Voc/Tech
 This course is a user's introduction to the Windows, MS, DOS, and UNIX Operating Systems. Objectives are to enable the user to load and execute programs, create and modify files, and maintain an orderly file system.

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Course Descriptions

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 decoders, encoders, counters, and multiplexers. COREQUISITE: 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; COREQUISITE: ELHT331

ELHT364 3 0 6 0 0
Digital Electronics 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, encoders, counters, multiplexers, and microprocessors. COREQUISITE: ELHT332

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 speakers 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. REQUIRED: Minimum scores on the TOEFL or Michigan Test.

ENGL085*** 3 2 2 0 0
Read English as a Second Language Adaptor
 This course is designed for nonnative speakers of English. Reading comprehension skills are developed through vocabulary work, guided reading activities and discussion. Reading material is intellectually stimulating but not beyond the students' level of comprehension. REQUIRED: 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 are designed to meet the needs of ESL students preparing to take basic writing.

ENGL090*** 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 ENGL091 & 117.

ENGL091*** 3 3 0 0 0
Writing Skills Review Adaptor
 An introductory course which prepares students for college-level writing. Confidence and skills are built as students write and revise 4-6 essays, learning to develop and organize material to support main ideas. Students review sentence and punctuation patterns and learn to proofread. For students who have taken ENGL090 or meet that course's objectives.

ENGL117 3 3 0 0 0
Composition I Core
 Designed to help students read and write effectively. Exploration of the relationship of audience to writer and material. Emphasis on developing concrete detail to support main ideas. REQUIRED: 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. Admittance to this course is by permission of instructor only.

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. Admittance to this course is by permission of instructor only.

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. REQUIRED: MATH123 must be taken concurrently with or prior to this course.

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. REQUIRED: MATH123 must be taken concurrently with or prior to this course.

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. REQUIRED: MATH123 must be taken concurrently with or prior to this course.

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. REQUIRED: MATH130 must be taken concurrently with or prior to this course. PREREQUISITE: PHYL121

ESST376 3 3 0 0 0
Electro-Mechanical Systems Voc/Tech
 The basic theories, concepts, and principles of electromechanical devices such as relays, contactors, and DC/AC motors will be covered, as well as the basic principles of mechanical relationships including gears, pulleys, belt drives, wheel and axle, inclined plane, screw, wedge, and levers. Pneumatic devices such as compressors, motors, valves and actuators are covered. Basic sensors will also be covered. PREREQUISITES: ELHT331, 363 COREQUISITE: ESST377

ESST377 3 0 6 0 0
Electro-Mechanical Systems Lab Voc/Tech
 Application of the basic theories, concepts, and principles of electromechanical devices. Projects are applications of principles used in business machines, security systems, and medical electronics systems including construction of various examples of compound machines using wheel and axle, gears, levers and belt drives. Projects using basic sensors, pneumatic valves, cylinders, and actuators will be constructed. PREREQUISITES: ELHT331, 363 COREQUISITE: ESST376

ESST378 2 2 0 0 0
Basic Imaging Devices Voc/Tech
 Analysis of various imaging systems, including laser printers, copiers, fax machines, scanners, and accessories such as document feeders and sorters, monitors, cameras, LCD displays. PREREQUISITES: ELHT331, 363 COREQUISITE: ESST379

ESST379 2 0 4 0 0
Basic Imaging Devices Lab Voc/Tech
 Experience in troubleshooting, service, and repair of copiers, laser printers, fax machines, scanners, and peripherals, monitors, cameras, LCD displays. PREREQUISITES: ELHT331, 363 COREQUISITE: ESST378

ESST380 3 3 0 0 0
Communications Systems Voc/Tech
 The analysis of communications systems including transmission and reception of AM and FM radio, television, satellite, and microwave including antenna and transmission line theory. PREREQUISITES: ELHT331, 363 COREQUISITE: ESST381

ESST381 3 0 6 0 0
Communications Systems Lab Voc/Tech
 Laboratory experiments in radio, television, satellite, and microwave systems including the construction and alignment of a broadcast radio receiver. PREREQUISITES: ELHT331, 363 COREQUISITE: ESST380

ESST382 2 2 0 0 0
Security Systems Voc/Tech
 Analysis of video monitoring systems, fire and intruder alarm systems, climate control systems. PREREQUISITES: ESST376, 377 COREQUISITE: ESST383

ESST383 2 0 4 0 0
Security Systems Lab Voc/Tech
 Installation, maintenance, and troubleshooting of various security systems. PREREQUISITES: ESST376, 377 COREQUISITE: ESST382

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Course Descriptions

ESST384 2 2 0 0 0
Medical Electronics Systems Voc/Tech
 This course trains the student in electrical safety testing and the repair, calibration, and preventative maintenance of patient monitoring equipment such as ECG, blood pressure, defibrillators, ICU, CCU central station monitoring systems, and the respiratory instrumentation. Included will be a self-paced study of medical terminology. PREREQUISITES: ESST376, 377 COREQUISITE: ESST385

ESST385 2 0 4 0 0
Medical Electronics Systems Lab Voc/Tech
 Repair calibration, and preventative maintenance of critical care, diagnostic, life support equipment in a "hands-on" environment. PREREQUISITES: ESST376, 377 COREQUISITE: ESST384

ESST386 2 2 0 0 0
Systems Troubleshooting Voc/Tech
 A study of electronic systems troubleshooting theory, methods, and techniques. PREREQUISITES: ESST378, 379, 380, 381, 382, 383 COREQUISITE: ESST387

ESST387 5 0 10 0 0
Systems Troubleshooting Lab Voc/Tech
 A "hands-on" experience troubleshooting and repairing a variety of electronic equipment such as copiers, security monitors and cameras, radio, televisions, and satellite systems. PREREQUISITES: ESST378, 379, 380, 381, 382, 383 COREQUISITE: ESST386

ESST388 5 0 0 0 20
Internship Voc/Tech
 A semi-structured experience in the student's chosen field working as an intern with a sponsoring organization. Student has the opportunity to network with professionals and employers in his field. Student will write a resume suitable for employment applications. REQUIRED: ESST378, 379, 380, 381, 382, 383

EXSP145 2 2 0 0 0
First Aid General
 Discussion and application of the basic techniques in administering first aid will be covered in this course. Cardiopulmonary resuscitation will be covered and other emergency situations will be discussed. Red Cross certification will be awarded to those who qualify.

EXSP220 2 2 0 0 0
Physical Fitness & Conditioning Open
 Development of personal fitness using a variety of conditioning and exercise techniques, including weight training, aerobics and aquatic fitness. Instruction on acute and chronic responses to exercise, and the role of exercise in health promotion and weight management.

EXSP221 2 2 0 0 0
Leadership Tech for Fitness Programs Open
 This course covers the development of exercise leadership skills for a variety of activities. Includes the planning and promotion, as well as the teaching techniques for developing fitness in others using a variety of exercise modalities. Aerobics, weight training and aquatic fitness are included. PREREQUISITE: EXSP220

EXSP250 3 3 0 0 0
Intro to Exercise Physiology Open
 This course is designed to introduce students to the basic concepts of exercise physiology. Students will study the control of body movements and how normal body functions are altered, and subsequently restored in response to the stress of exercise. PREREQUISITE: BIOL154

FIRE241 3 3 0 0 0
Fire Behavior & 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 or SFTY301

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.

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. REQUIRED: FREN101 or permission of instructor

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. REQUIRED: FREN102 or permission of instructor

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. REQUIRED: FREN103 or permission of instructor

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, prepress 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 conventional prepress techniques. Students will receive hands on training in basic process camera, film assembly and contacting techniques. This course will involve the student in spot color, work and turn, and step and repeat film assembly. Contacting and various plates and plate-making techniques will also be studied. PREREQUISITES: GRPH400, 401

GRPH413 4 2 4 0 0
Graphic Prepress II Voc/Tech
 A continuation of Graphic Prepress I, students will study more advanced film assembly, plate making and proofing techniques. This hands-on workshop environment will focus on multi-colored, multi-page projects. PREREQUISITES: GRPH400, 401, 412

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. PREREQUISITE: DKTP40 1

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

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Course Descriptions

GRPH421 4 2 4 0 0
Electronic Prepress I Voc/Tech
 This course is an introduction to electronic prepress. Students will study desktop publishing and electronic prepress systems and procedures and learn to operate electronic prepress equipment. Color science, calibration techniques, digital scanning, and halftone imaging will also be studied. PREREQUISITES: GRPH400, 401, DKTP401

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. PREREQUISITES: DKTP401, GRPH416

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
 This course is a continuation of electronic Prepress I. Students will study more in-depth principles of electronic prepress including digital workflows, file analysis and repair, and digital scanning techniques. Students learn to operate electronic prepress equipment in a workshop setting. PREREQUISITES: GRPH 421

GRPH434 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: GRPH410, 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: GRPH410, 412, 413

HACR451 5 2 6 0 0
Fundamentals of Refrigeration Voc/Tech
 This course consists of the principles of refrigeration, domestic systems and equipment.

HACR452 3 1 4 0 0
Trade Skills I Voc/Tech
 This course covers all types of soldering and brazing used in the heating, air conditioning, refrigeration industry.

HACR453 5 2 6 0 0
Electricity Voc/Tech
 A study of basic electricity principles including Ohm's law, series and parallel circuits as applied to HVAC and refrigeration. Course also includes hands-on practice with training boards in the lab.

HACR454 5 2 6 0 0
Residential Heating & AC Voc/Tech
 Residential heating and cooling basics. Study of installation and service procedures through class and lab practices. PREREQUISITE: HACR451

HACR455 5 2 6 0 0
Electrical Controls & Circuits Voc/Tech
 The application of control circuits used in the HVAC/R field. These applications include contactors, starters, starting relays, interlocks, relays, thermostats, split phase, shaded pole, capacitor start motors and three-phase motors. PREREQUISITE: HACR453

HACR456 3 1 4 0 0
Trade Skills II Voc/Tech
 This course covers all types of sheet metal fabrications pertaining to the HVAC profession. PREREQUISITE: HACR452

HACR457 5 2 6 0 0
Applied Heating & AC Voc/Tech
 This course covers installation and troubleshooting techniques dealing with residential heating and cooling systems. PREREQUISITE: HACR454

HACR458 4 0 0 0 16
HVAC Internship Voc/Tech
 On the job training for Heating, Air Conditioning, Refrigeration Technology program students who have a "C" average or better in the program. REQUIRED: Valid driver's license; PREREQUISITES: HACR454, 455, 456

HACR459 5 2 6 0 0
Advanced Heating & AC Voc/Tech
 This course covers installation, advanced troubleshooting, maintaining, and repairing of geo-thermal heat pumps, gas, fuel oil, and electric furnaces. PREREQUISITE: HACR457

HACR460 3 1 4 0 0
Advanced Sheetmetal Voc/Tech
 This course covers all types of sheetmetal fabrication pertaining to the HVAC profession. PREREQUISITE: HACR456

HACR461 3 2 2 0 0
Air Distribution Voc/Tech
 This course 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. PREREQUISITE: HACR457

HACR462 5 2 6 0 0
Commercial HVAC & Refrigeration Voc/Tech
 This course covers basic commercial refrigeration systems, components and their use, applications, methods of installation, maintenance, diagnosis and repairs. PREREQUISITES: HACR459, 461

HACR463 2 1 2 0 0
Computer Load Calculations Voc/Tech
 Course is designed to deliver instruction in the area of heating/cooling load calculations, air flow, blueprint reading and air supply/return layout. Extensive use of computers and CAD systems will be incorporated to enhance student productivity. PREREQUISITE: HACR461

HACR464 5 2 6 0 0
Environmental Controls Voc/Tech
 This course covers basic understanding of building environmental and energy management systems, computerized (DDC), pneumatic, and electro-mechanical controls. PREREQUISITES: HACR451, 455, 461 COREQUISITE: HACR462

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 perspectives that may be encountered. Special attention will be given to the integration of community based services.

HCAD238 3 3 0 0 0
Health Care Financial Management Open
 Emphasis on financial practices in the long-term care facility, health care facilities and health care organizations. Cost and labor hour controls, third party payment, evaluation of profit/loss and fiscal reports will be addressed. PREREQUISITE: ACCT301 or ACCT101

HCAD239 2 1 2 0 0
Information Systems in Health Care Open
 Emphasis will be on the analysis of health care information needs and the development of methods to meet these needs. Fundamental components of health care computer systems will be addressed including administrative application, specialized information systems and patient rights issues. REQUIRED: Computer literacy, including word processing, data management, and spreadsheet analysis.

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/Gov't 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.

HCAD260 - ADJUNCT**** 3 0 0 0 12
Health Services Management Field Exp. Open
 An opportunity to gain in-depth knowledge and apply theoretical principles in a supervised work experience. This will require instructor approval of the health care organization, clinic, or agency. The emphasis is placed on management principles, human resources, customer service, and interfacing with other health services. PREREQUISITE: HCAD274, 278, 279, 280

HCAD265 1 1 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. (Must be taken 3 times for a total of 3 credits.)

HCAD274 3 3 0 0 0
Law & Ethics in Health Care Open
 An introduction to law and ethics and how they relate to the health care industry. A study of case law, court structure and procedures, torts, litigation, contracts and record keeping. Additional topics include decision making power, health care fraud, individual rights and other ethical concerns in health care.

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Course Descriptions

HCAD277 5 5 0 0 0
Service Delivery Systems-MH/MR/DD Open
 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.

HCAD278 3 3 0 0 0
Management in Health Care Open
 Relates fundamental management principles in the health care setting. Focuses on management processes and organizational behavior in health care organizations, facilities, and services.

HCAD279 3 3 0 0 0
Health Care Human Resources Open
 Study of the policies, procedures and the processes in human resources planning. This would include securing, developing and maintaining human resources, labor laws and employee/management rights.

HCAD280 2 2 0 0 0
Health Care Delivery Systems Open
 Provides a comprehensive overview of the delivery systems and services. Includes studies in accessing and financing health care services and evaluating the delivery of care.

HCAD282 2 2 0 0 0
Services for Long-Term Care Open
 Relates physical, psychological and sociological needs of residents to services provided in a long-term care setting. Includes services in a therapeutic environment: nursing, dietary, environmental, activities and social services enhanced by quality assurance.

HCAD283 2 2 0 0 0
Regulatory Management Open
 Emphasis on the changing dynamics of health care and the regulatory system. Special attention will focus on the federal and state regulations which govern the industry. This will include the agencies which originate, implement and monitor the regulations.

HCAD284 1 1 0 0 0
Long-Term Care: A Capstone Open
 Assess the changing roles, concepts, trends and practices of governing agencies, administrators and residents. Emphasis on principles and practices involved in long-term care administration and resident services with special attention to review of federal and state regulations, study guides, testing experience and future trends.

HCAD285 2 2 0 0 0
Case Management Open
 Emphasis will include the purpose and types of case management, the key terms used and the role of restructuring for effective outcomes of care and efficient use of resources.

HCAD293 - ADJUNCT**** 3 3 0 0 0
Job Coaching Open
 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.

HCAD294 - ADJUNCT**** 3 0 0 0 12
Job Coaching Field Experience Open
 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. RE-QUIRED: One year of experience working with people with disabilities.

HIST121 4 4 0 0 0
Western Civ Beg to 1715 Core
 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.

HIST122 4 4 0 0 0
Western Civ 1715 to Present Core
 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.

HIST124 4 4 0 0 0
American History 1492 To 1877 Core
 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 pre-settlement, Colonial, Revolutionary, Antebellum Civil War and Reconstruction eras.

HIST125 4 4 0 0 0
American History 1877 To Present Core
 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.

HIST126 3 3 0 0 0
Iowa History General
 A broad survey of Iowa history from Indian cultures and pioneer farming through modern agriculture, gradual social changes and long-term political trends.

HIST139 3 3 0 0 0
African-American History General
 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.

HLCR307 6 4 4 0 0
Emergency Medical Tech Basic Voc/Tech
 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.

HLCR308 3 2 2 0 0
First Responder Voc/Tech
 A 60 hour emergency care course which emphasizes life threatening emergencies, wounds, fractures, medical and environmental emergencies and other emergency situations as outlined by the U.S. Department of Transportation.

HLCR314 1 1 0 0 0
Emergency Care Voc/Tech
 Learn to perform care for medical emergencies: fractures, burns, resuscitation, basic CPR (Cardio-Pulmonary Resuscitation, American Heart Level II standards) certification.

HLCR322 - ADJUNCT**** 1 1 0 0 0
Survey of Health Careers Voc/Tech
 This course introduces both the variety and requirements for health care careers. Basic core knowledge and professional expectations common to all health careers are explored. Workplace safety, and an overview of the health system and current trends are also covered.

HLCR324 - ADJUNCT**** 6 5 0 3 0
Nursing Assistant 120 Hours Voc/Tech
 Learn skills to seek employment in a hospital, doctor's office, long-term care facility, home health agency or human service organization.

HLSC202 - ADJUNCT**** 3 3 0 0 0
Introduction to Health Careers Voc/Tech
 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.

HNRS100 2 2 0 0 0
Honors Seminar General
 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. Admission is by permission of instructor only.

HRMT315 2 2 0 0 0
Sanitation & Equipment Voc/Tech
 Principles and methods of sanitation safety and equipment. Equipment selection and facilities planning. Also includes preventive maintenance.

HRMT316 3 3 0 0 0
Food Preparation I Voc/Tech
 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

HRMT319 1 0 2 0 0
Sanitation & Equipment Lab Voc/Tech
 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)

HRMT320 3 0 6 0 0
Food Preparation I Lab Voc/Tech
 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

HRMT321 2 0 4 0 0
Dining Room Fundamentals Voc/Tech
 A dining room service course in an actual restaurant experience with emphasis on using sound management techniques and quality customer service.

HRMT326 2 2 0 0 0
Food Preparation II Voc/Tech
 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

HRMT328 2 0 4 0 0
Food Preparation II Lab Voc/Tech
 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

HRMT330 2 2 0 0 0
Intro to Hospitality Industry Voc/Tech
 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.

HRMT334 3 3 0 0 0
Human Nutrition General
 Understanding and implementing present day knowledge of nutrition; the use of food for health and satisfaction of the individual and the family.

HRMT335 2 2 0 0 0
Restaurant Management Voc/Tech
 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: HRMT326, 328

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Course Descriptions

HRMT347 3 0 0 0 12
Work Experience Voc/Tech
 An approved program of experience in one of the many hospitality areas: restaurant, hospital, club, school food service, hotel, or motel. (P/F)

HRMT348 2 2 0 0 0
Food Service Purchasing Voc/Tech
 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.

HRMT350 2 2 0 0 0
Nutrition Voc/Tech
 An overview of nutrition-related topics including the psychology of eating and evaluation of food intake.

HRMT351 2 2 0 0 0
Menu Planning Voc/Tech
 Course applies the principles of menu planning & layout to the development of menus for a variety of types of facilities and service.

HRMT357 3 0 6 0 0
Culinary Skill Development Voc/Tech
 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 and intermediate culinary preparation techniques. PREREQUISITES: HRMT326, 328

HRMT364 2 2 0 0 0
Hotel Administration Voc/Tech
 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.

HRMT366 5 0 0 0 20
Hotel Services Internship Voc/Tech
 An approved program of work experience in one of the many hotel/motel properties in the area. PREREQUISITE: HRMT330 COREQUISITE: HRMT368

HRMT367 2 2 0 0 0
Beverage Seminar Voc/Tech
 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.

HRMT368 2 2 0 0 0
Hotel Services Voc/Tech
 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.

HTCT353 3 3 0 0 0
Microprocessor Interfacing Voc/Tech
 A study of microprocessor/microcomputer interface methods. It includes parallel interfacing using the 8255 PPI and serial interlacing using UART and USARTS. Digital-to Analog and Analog-to-Digital converters are also examined. PREREQUISITE: ELHT340, 341, COREQUISITE: HTCT354

HTCT354 4 0 8 0 0
Microprocessor Interfacing Lab Voc/Tech
 An evaluation of microprocessor interface techniques. The experiments include parallel devices such as 8255 Programmable Peripheral Interface chip, UART and USART serial devices, D/A and A/D converters. 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 & 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

HTCT351 3 3 0 0 0
Hydraulics & 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. COREQUISITE: HTPC352

HTPC352 2 0 4 0 0
Hydraulics & 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 actuators are evaluated in the lab. 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 and 345 or 346; 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.

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. 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. COREQUISITE: HTPC363

HTPC382 2 2 0 0 0
Control Systems Overview Voc/Tech
 An overview of control systems in an industrial environment including hydraulic, pneumatic, and electrical/electronic systems. Topics include valves, actuators, motor starters, relays, timers and programmable controllers.

HUMN115 3 2 2 0 0
Introduction to Film Core
 An introduction to the conventions, scope, purposes, and techniques of films. Includes viewing and writing about a variety of films.

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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.

HUMN132 - ADJUNCT**** 3 3 0 0 0
Art of Being Human General
This telecourse explores themes from both Eastern and Western cultures. Themes include aesthetics, myth, morality, love and death which are explored through art, music, literature, philosophy, drama and religion.

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. REQUIRED: 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 systems, 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. REQUIRED: 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: HUMS205 COREQUISITES: HUMS208

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: HUMS205 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. REQUIRED: Admission-Powell CDC at Iowa Lutheran Hospital. PREREQUISITE: HUMS205

HUMS214 3 0 0 0 12
Pract: Chemical Depend Counsel II Open
 Supervised experience in one of the following treatment programs for chemically dependent people: inpatient, outpatient, residential, adolescent, or family services. REQUIRED: Admission - Powell CDC or Iowa Lutheran Hospital. PREREQUISITE: HUMS205

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 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.

ITNA310 4 2 4 0 0
Network Technologies Voc/Tech
 This course provides the student a technical level of understanding in the areas of PC and mainframe networking connectivity, data communications concepts and protocol communication concepts. PREREQUISITE: ELHT346

ITNA320 3 2 2 0 0
Technology Implementation Voc/Tech
 This course is an examination and discussion of industry-standard methods for the evaluation of technology and technology products. Methods of product examination and benchmarking will be demonstrated.

ITNA330 4 4 0 0 0
Network Applications Voc/Tech
 This course provides the student with an understanding of the software systems and applications which provide network services across differing networks and operating system platforms. PREREQUISITE: ITNA310, COREQUISITE: ITNA332

ITNA332 2 0 4 0 0
Network Applications Lab Voc/Tech
 This course will provide the student with hands-on experience in installing and configuring the software systems and applications that provide network services across differing networks and operating system platforms. PREREQUISITE: ITNA310, COREQUISITE: ITNA330

JNAD120 3 3 0 0 0
Intro to Mass Communication Open
 An 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.

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.

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 & 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. REQUIRED: instructor permission or LEGA240, 260

LEGA243 3 3 0 0 0
Torts & Litigation II Open
 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

LEGA244 3 3 0 0 0
Family Law Open
 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. REQUIRED: instructor permission or LEGA240, 260

LEGA246 3 3 0 0 0
Business & Corporate Law I Open
 Study of fundamentals of law of contracts, uniform commercial code and rights of creditors in transactions.

LEGA247 3 3 0 0 0
Business & Corporate Law II Open
 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

LEGA248 3 3 0 0 0
Real Estate Law Open
 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. REQUIRED: instructor permission or LEGA240, 260

LEGA249 3 3 0 0 0
Probate Procedure Open
 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. REQUIRED: instructor permission or LEGA240, 260

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Course Descriptions

LEGA250 4 1 0 0 15
Legal Internship & Ethics Open
 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) REQUIRED: Minimum of "C" in all LEGA courses & complete minimum 8 LEGA classes

LEGA251 3 3 0 0 0
Wills, Estate Planning & Taxation Open
 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

LEGA252 3 3 0 0 0
Administrative Practice Open
 A study of administrative law and procedures for administrative hearings in various governmental agencies. Drafting and researching administrative rules and regulations will be covered. REQUIRED: instructor permission or LEGA240, 260

LEGA254 3 3 0 0 0
Evidence: Theory & Practice Open
 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. REQUIRED: instructor permission or LEGA242

LEGA256 3 3 0 0 0
Debtor/Creditor Law Open
 Procedures in non-bankruptcy debt collection. Fundamentals of bankruptcy law and bankruptcy procedure. Examination of alternatives to formal bankruptcy proceedings. REQUIRED: instructor permission or LEGA240, 260

LEGA258 1 1 0 0 0
Computerized Legal Research Open
 Introduction to computer assisted legal research. Training in legal research search strategies using both the Lexis and Westlaw systems. PREREQUISITE: LEGA260

LEGA259 3 3 0 0 0
Adv Legal Research & Writing Open
 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

LEGA260 3 3 0 0 0
Legal Research & Writing I Open
 The nature of legal authority and tools and techniques of basic legal research and writing. Emphasis will be on Iowa law. Degree Students: If transcript has not been submitted, you must contact the registration office to register for this course. PREREQUISITE: ENGL117

LEGA261 3 3 0 0 0
Legal Research & Writing II Open
 Advanced application of principles of legal research. Preparation of interoffice memorandums and demand letters. Out of state and federal law. PREREQUISITES: LEGA240, 260

LEGA265 3 3 0 0 0
Mediation Open
 Classroom study of mediating legal disputes. Students will study the purposes of mediation using "objective" criteria, impediments to resolution, moving beyond impasse and reaching an agreement. REQUIRED: LEGA240, 260 and or instructor permission

LIBS120 1 1 0 0 0
Library Instruction General
 Study of classification systems, use of library resources and the compilation of bibliographies.

LIBS123 1 1 0 0 0
Internet Research Techniques General
 Students will learn how information resources are organized on the Internet, how to reference and evaluate information on particular topics. PREREQUISITES: Basic computer literacy

LITR120 3 3 0 0 0
Intro to Literature Core
 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.

LITR121 3 3 0 0 0
Major British Writers Core
 Introduction to the study and appreciation of major British writers particularly from the post-Renaissance through the contemporary period. Basic critical approaches are emphasized.

LITR122 3 3 0 0 0
Major American Writers I Core
 Study of works of selected major writers (including Native American) particularly from Puritan times to 1865. Basic critical approaches are emphasized.

LITR123 3 3 0 0 0
Major American Writers II Core
 Examines American literature from early 20th Century through contemporary America. Emphasizes major literary works and their social and cultural contexts.

LITR124 3 3 0 0 0
Children's Literature General
 Study historical, sociocultural 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.

LITR125 3 3 0 0 0
Contemporary Literature Core
 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.

LITR130 3 3 0 0 0
Science Fiction Core
 A critical survey of speculative fiction. Primarily, short literacy works are used to examine basic issues and themes pertaining to humankind.

LITR131 3 3 0 0 0
Detective Fiction Core
 Introduction to the study and appreciation of detective fiction. A literary investigation of the components of detective fiction and basic critical approaches are emphasized.

LITR132 3 3 0 0 0
Humor Core
 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.

LITR133 3 3 0 0 0
Black American Literature Core
 Introduction to the study and appreciation of literature written by African-American writers. A broad range of Black American authors will be presented.

LITR134 3 3 0 0 0
Women's Literature Core
 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.

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. REQUIRED: 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. REQUIRED: 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. REQUIRED: 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. Same content as BSAD152, credit will not be granted for both BSAD152 and MATH121. REQUIRED: 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. REQUIRED: 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. REQUIRED: 2 years H.S. algebra, department permission or MATH094

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Course Descriptions

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. REQUIRED: MATH123 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. REQUIRED: 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. REQUIRED: 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. REQUIRED: MATH130 or equivalent must be taken concurrently with or prior to this course

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

MCSE305 3 3 0 0 0
Networking Essentials Voc/Tech
 This course covers the current curriculum in Microsoft Certified Professional Networking Essentials. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: A+ certification or working knowledge of personal computer operation, systems and hardware.

MCSE310 4 2 4 0 0
MS Windows Workstation and Server Voc/Tech
 This course covers the current curriculum in Microsoft courses for Windows workstation and server. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE305 or Microsoft exam for Networking Essentials

MCSE312 2 2 0 0 0
Designing MS Directory Service Voc/Tech
 This course covers the current curriculum for designing MS directory services. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program)

MCSE314 2 2 0 0 0
Designing Security for MS Network Voc/Tech
 This course covers the current curriculum for Designing Security for an MS Network. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE316 2 2 0 0 0
Designing MS Net Infrastructure Voc/Tech
 This course covers the current curriculum for Designing the MS Network Infrastructure. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE318 3 3 0 0 0
Upgrading from WIN NT 4.0 Voc/Tech
 This course covers the current curriculum for upgrading to the newest version of Windows Workstation/Server software from WIN NT 4.0. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE320 3 2 1 0 0
Windows Server Enterprise Voc/Tech
 This course covers the current curriculum on Windows Server Enterprise Technologies. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310 or Microsoft Enterprise certification

MCSE322 3 3 0 0 0
Design/Implement Data Warehouse Voc/Tech
 This course covers the current curriculum for Designing and Implementing MS Data Warehouse. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE330 3 3 0 0 0
Internetworking MS TCP/IP Voc/Tech
 This course covers the current curriculum in Microsoft courses for Internetworking TCP/IP. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE335 3 3 0 0 0
Supporting MS Windows 95 Voc/Tech
 This course covers the current curriculum in Microsoft Windows 95. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE340 4 3 2 0 0
Microsoft Exchange Server Voc/Tech
 This course covers the current curriculum in the Microsoft Exchange Server series. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE345 3 3 0 0 0
Supporting MS Windows 98 Voc/Tech
 This course covers the current curriculum in Microsoft Windows 98. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE350 3 3 0 0 0
Supporting MS SNA Server Voc/Tech
 This course covers the current curriculum in Supporting Microsoft SNA Server Operation. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE355 4 3 2 0 0
MS Systems Management Server Voc/Tech
 This course covers the current curriculum in administering and deploying the Microsoft Systems Management Server. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE360 2 2 0 0 0
MS Internet Information Server Voc/Tech
 This course covers the current curriculum for creating and managing a web server. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE350

MCSE365 1 1 0 0 0
Microsoft Proxy Server Voc/Tech
 This course covers the current curriculum for MS Proxy Server. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE360

MCSE370 1 1 0 0 0
Implementing MS Internet Explorer Voc/Tech
 This course covers the current curriculum for implementing MS Internet Explorer. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE375 3 3 0 0 0
Implementing an SQL Database Voc/Tech
 This course covers the current curriculum for implementing a database in Microsoft SQL Server. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE310

MCSE380 3 3 0 0 0
MS SQL System Administration Voc/Tech
 This course covers the current curriculum for System Administration on Microsoft SQL Server. For more information contact the Advanced Technology Center or www.dmaccc.cc.ia.us (ITNA program) REQUIRED: MCSE375

MEDA461 4 4 0 0 0
Human Body-Health & 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.

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.

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Course Descriptions

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 & Disease II Voc/Tech
 The study of the body systems is completed. REQUIRED: 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: MEDA464

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, and recordkeeping. Through computer applications and practice sets, the student keeps patients' medical and financial records and transcribes medical dictation. REQUIRED: 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. REQUIRED: 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, pulmonary functions, bandaging and patient education. REQUIRED: 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. REQUIRED: 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. REQUIRED: Grade of "C" or better in MEDA473

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. 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. There is no financial remuneration. REQUIRED: Satisfactory completion of all courses in first 2 terms. COREQUISITE: MEDA482

MGMT101 3 3 0 0 0
Supervisory Management Open
 A unique view of organizational structure, the managerial function, and the role of the supervisor as it relates to the human relationship between supervisors, peers, and subordinates and the practice of sound personnel techniques.

MGMT102 3 3 0 0 0
Introduction to Management General
 Explore basic management principles, concepts, and practices in the areas of planning, organizing, leading, and controlling. Paradigm shifts include motivation, leadership, group dynamics, job design, organizational structure, decision making, social responsibility and global competition.

MGMT103 3 3 0 0 0
Sales Management Open
 Expands on the selling process by training the trainer in functional aspects of sales force management. Emphasis on recruitment, selection and training procedures; motivation, group presentations, and meeting management; compensation plans, territory management, forecasting, and performance evaluation.

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.

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.

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) COREQUISITE: MGMT344

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) COREQUISITE: MGMT348

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. (P/F) COREQUISITE: MGMT353

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) COREQUISITE: MGMT367

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Course Descriptions

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) COREQUISITE: MGMT356

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) COREQUISITE: MGMT369

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: MGMT367

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
Relationship Strategies in Business Voc/Tech
 Includes the awareness of communication styles and how to manage successful interpersonal and organizational relationships.

MGMT407 1 1 0 0 0
Leadership Strategies in Business 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.

MILL440 3 2 2 0 0
Blueprint Reading and Layout Voc/Tech
 An introduction to blueprint reading and layout and the application of this knowledge with the use of specific tools.

MILL441 3 2 2 0 0
Material Identification and Usage Voc/Tech
 An introduction to the materials used in making architectural millwork products.

MILL442 3 2 2 0 0
Introduction to Portable Tools Voc/Tech
 An introduction to safe use and the proper care and selection of power tools.

MILL443 4 2 4 0 0
Stationary Equipment Voc/Tech
 The purpose of this course is to train the student in the identification, operation and maintenance of stationary equipment.

MILL444 3 2 2 0 0
Advanced Equipment Techniques Voc/Tech
 This course will provide the students with maintenance experience and advanced machining skills. PREREQUISITE: MILL440, 441, 442, 443

MILL445 3 2 2 0 0
32 Millimeter Cabinet Techniques Voc/Tech
 This course is an introduction to the rationale of cabinet making and millwork. PREREQUISITE: MILL440, 441, 442, 443

MILL446 3 2 2 0 0
Millwork Techniques Voc/Tech
 This course is an introduction to the initial steps of applying various millwork techniques to projects. PREREQUISITE: MILL440, 441, 442, 443

MILL447 3 2 2 0 0
Introduction to Application Voc/Tech
 This course will allow students to begin combining their knowledge of the previous courses in Architectural Millwork to produce mock up projects. PREREQUISITE: MILL440, 441, 442, 443

MILL448 5 1 8 0 0
Advanced Millwork Application I Voc/Tech
 This course will combine the skills learned from the previous courses to begin producing completed projects. PREREQUISITE: MILL444, 445, 446, 447

MILL449 5 1 8 0 0
Advanced Millwork Application II Voc/Tech
 This course will combine the students' previous courses to produce a completed project from beginning to installation. PREREQUISITE: MILL448

MKTG102 3 3 0 0 0
Principles of Marketing General
 Explore the role of marketing in our society. Markets, marketing environments, market analysis, buyer behavior, strategy and decision making, with emphasis on product, price, promotion, and distribution marketing functions.

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.

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
Business Marketing Open
 Presents functional methods of business-to-business marketing. Examines all forms of wholesaler service and manufacturer type marketing activities.

MKTG231 3 3 0 0 0
Fashion Analysis & Design Voc/Tech
 Emphasis is on how the fashion business works, from concept to consumer. The fashion business entails buying supplies, creating and developing a new product and marketing the product. Fashion designers, manufacturers, buyers, as well as retailers work together to develop and sell "good" design. Focus is on analyzing styles and creating and implementing the principles of design into product development as well as researching past and present designers to understand their contribution to fashion.

MKTG232 3 3 0 0 0
Advanced Selling Strategies Voc/Tech
 Explores strategies related to working effectively with high-level decision makers. Focuses on the individual adding value to the transaction to become the supplier of choice. Examines sales automation in depth. Experienced individuals may contact the instructor to gain admittance to this class. PREREQUISITES: MKTG103

MKTG233 3 3 0 0 0
Design Concepts Voc/Tech
 Includes a study of the history of fashion design, the effective use of design principles and analysis of future fashion trends. New industry based computer design software will be used to design contemporary fashion apparel for women, men or children.

MKTG234 3 3 0 0 0
Interior Design Analysis Voc/Tech
 Acquiring knowledge and expertise to create pleasing and effective interior design will be emphasized. Focus will be on space planning, furniture styles, color schemes, wall coverings, and floor and window treatments. Also includes exploration of the interior design profession and related career areas.

MKTG235 3 3 0 0 0
Interior Design Planning Voc/Tech
 Focuses on the development of interior design plans and the execution of these plans. Builds upon knowledge acquired in Interior Design Analysis through analyzing client needs and creating design boards and presentations to meet those needs. Experienced individuals may contact the instructor to gain admittance to this class. PREREQUISITE: MKTG234

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
 Fashion moves quickly and the buyer must be in tune with current trends, and suppliers who can provide the best quality merchandise, delivery and pricing. Vender analysis, open-to-buy and timing are studied, including the development of a six-month merchandise plan.

MKTG331 3 3 0 0 0
Fashion Coordination/Promotion Voc/Tech
 Focus is on researching, analyzing and forecasting fashion trends. Information on emerging fashion trends is communicated through a power point computer presentation. Use of this information results in creation of a promotional plan to establish fashion leadership. PREREQUISITE: MKTG231

MKTG332 3 3 0 0 0
Textiles Voc/Tech
 Focus will be on an application oriented study of natural and manufactured fibers. Popular weaves, technologies used to produce, qualities achieved, and costs incurred will be analyzed. Printing and dyeing processes, in addition to the finishes available today will be studied.

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. Experienced individuals may contact the instructor to gain admittance to this class. PREREQUISITES: MKTG231

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. REQUIRED: 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

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Course Descriptions

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. REQUIRED: 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. REQUIRED: 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. REQUIRED: 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. REQUIRED: Completion of first four terms of MLTS curriculum; PREREQUISITE: MLTS442

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. COREQUISITE: MLTS455

MLTS461 1 1 0 0 0
Medical Laboratory Review Open
 Medical laboratory subjects are reviewed; a mock registry examination is given.

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. COREQUISITE: MLTS461

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 and a major emphasis on listening.

MUSI131 3 3 0 0 0
Introduction to Music Core
 This course introduces students to the elements of music through performance on recorder and piano. Includes instruction in teaching the elements of music to pre-school and elementary school children.

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. REQUIRED: Audition with director; COREQUISITES: MUSI 144

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 include ear training, sight singing, keyboard training 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. REQUIRED: Approval of instructor

NECP301 1 1 0 0 0
Internet Business Strategies Voc/Tech
 Novell Course 660 teaches how to place a business on the Internet and how to manage the development of a web site from inception to evaluation. PREREQUISITE: Working knowledge of personal computer operation systems, and hardware.

NECP302 1 1 0 0 0
Mastering the Net/Netscape Voc/Tech
 Novell Course 650. Browse the web, create HTML documents, participate in conference collaborative computing. Students will use Netcaster to view active content "pushed" to their PCs. PREREQUISITE: NECP301

NECP303 1 1 0 0 0
Web Authoring & Publishing Voc/Tech
 Novell Course 654. Design and publish web documents using HTML and CGI scripts such as PERL and BASIC. Create objects using NetObjects Fusion. PREREQUISITE: NECP302

NECP304 1 1 0 0 0
Advanced Web Authoring Voc/Tech
 Novell Course 655. Learn to use and modify many types of scripts and commands to enhance a web site. PERL, SSI, JavaScripts and Java Applets. PREREQUISITE: NECP303

NECP305 1 1 0 0 0
Designing Effective Web Sites Voc/Tech
 Novell Course 660 Addresses concepts involved in completing job tasks web designers accomplish every day. Includes principles of web design, implementing your web site. PREREQUISITE: NECP304

NECP306 2 2 0 0 0
Java Programming Voc/Tech
 Novell Course. Learn to program in Java for developing active web sites. PREREQUISITE: NECP301, 302

NECP307 2 2 0 0 0
Advanced Java Programming Voc/Tech
 Novell Course. Advanced Java programming for developing active web sites. PREREQUISITE: NECP306

NECP308 1 1 0 0 0
Web Server Management Voc/Tech
 Novell Course 656. Learn how to configure a NetWare server for Internet access and publishing. PREREQUISITE: NECP304, 401 or 501

NECP311 1 1 0 0 0
NetWare TCP/IP Transport Voc/Tech
 Novell Course 605. Learn how to install and configure NetWare TCP/IP software on a NetWare server. PREREQUISITE: CNE certification

NECP312 1 1 0 0 0
Fundamentals of Internetworking Voc/Tech
 Novell Course 216. Learn the internetworking devices and protocols commonly used to connect networks. PREREQUISITE: NECP311

NECP313 1 1 0 0 0
DNS & FTP Server Installation Voc/Tech
 Novell Course 658. Learn to incorporate internet technologies with existing network infrastructures. PREREQUISITE: NECP312

NECP314 2 2 0 0 0
Securing Intranets Voc/Tech
 Novell Course 770. Learn to implement Border Manager as part of an intranet security solution. PREREQUISITE: NECP313

NECP341 2 2 0 0 0
NetWare 4.11 Administration Voc/Tech
 Novell Course 520, Test 50-613 provides knowledge and skills to perform competently the role of Network Administrator or System Manager for NetWare 4.11. PREREQUISITE: Working knowledge of personal computer operation systems, and hardware, or A+ certification.

NECP342 2 2 0 0 0
Networking Technologies Voc/Tech
 Novell Course 200, Test 50-147. Course covers basics of computer networking including terms and concepts. "Core" requirement for CNE certification. PREREQUISITE: Working knowledge of personal computer operation systems, and hardware, or A+ certification.

NECP343 2 2 0 0 0
NetWare 4.x Advanced Admin. Voc/Tech
 Novell Course 525, Test 50-614. Advanced administrative skills such as tuning the network and server for better performance and managing complex tree structures. PREREQUISITE: NECP341, 342

NECP344 2 2 0 0 0
NetWare 4.x Design & Implement Voc/Tech
 Novell Course 532, Test 50-601. Work as a design team using a case company. Create a design document for IntranetWare and create an implementation schedule. PREREQUISITE: NECP343

NECP345 1 1 0 0 0
NetWare 4.x Install & Configure Voc/Tech
 Novell Course 804. Install IntranetWare, determine appropriate settings for installation, and create and manage NDS Building Intranet. PREREQUISITE: NECP344

NECP346 2 2 0 0 0
Novell Service & Support Voc/Tech
 Novell Course 801, Test 50-636 focuses on the prevention, diagnosis, and resolution of hardware-related problems network professionals encounter while working with the network. PREREQUISITE: NECP345

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Course Descriptions

NECP347 2 2 0 0 0
IntraNetWare Integrating NT Voc/Tech
 Novell Course 555, Test 50-636. Integrate a Windows NT environment with an IntranetWare environment. Streamline NT administration by using NDS for NT. PREREQUISITE: NECP343

NECP351 2 2 0 0 0
NetWare 5 Administration Voc/Tech
 Novell Course 560, Test 50-639 provides knowledge and skills to perform competently in the role of network administrator or system manager for NetWare 5. PREREQUISITE: Working knowledge of personal computer operation systems, and hardware, or A+ certification.

NECP352 2 2 0 0 0
NetWare 5 Advanced Administration Voc/Tech
 Novell Course 525, Test 50-640. Advanced administrative skills to design, configure and administer a complex NetWare 5 network. PREREQUISITE: NECP351, NECP342

NRAO301 - ADJUNCT**** 3 2 0 3 0
Nurse Aide 75 Hours Voc/Tech
Entry level skills to seek employment in Iowa skilled facilities. Meets OBRA87 standards.

NURS221 3 1 2 3 0
Health Assessment Open
 Introduces basic techniques of client health assessment emphasized across the life-span, an organized holistic body system approach. Screening exams, environmental and safety assessments, and diagnostic tests commonly performed are also introduced.

NURS222 3 3 0 0 0
Foundation of Nursing Practice Open
 Introduces the art and science of nursing practice across the life-span. Nursing heritage, professionalism, nursing roles, ethical and legal aspects will be emphasized. The concepts of nursing process, communication, management, safety, pharmacology, nutrition, and health care services are introduced.

NURS223 3 1 2 3 0
Skills and Technology Open
 Focuses on the introduction of skills and technology utilized in the routine nursing care of clients in traditional and community-based healthcare settings. Principles and safe implementation are emphasized.

NURS224 5 3 0 6 0
Health: Birth to Middle Adult Open
 Promotion of health from birth to middle age is discussed. Issues of normal pregnancy, child rearing, and common illnesses of this age group are included. A holistic viewpoint including the influence of the family will be maintained. The student participates in health and illness care in a variety of settings. PREREQUISITES: NURS221, 222, 223, PSCH101, 103

NURS225 4 2 0 6 0
Older Adult Health Open
 Introduces the normal aging process and common health conditions of the older adult. Holistic nursing care for the individual is promoted through use of the nursing process. The student participates in health and illness care for the individual in a variety of settings. PREREQUISITES: NURS221, 222, 223, PSCH101, 103

OFFC204 3 2 2 0 0
Office Procedures Voc/Tech
 Office Procedures is the integration of knowledge and skills needed to function in an office environment. Topics include telecommunication techniques, components of customer relations, and various responsibilities of the administrative assistant. PREREQUISITES: OFFC205, 305

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
Business Correspondence Tech Voc/Tech
 Principles and procedures of effective business communication. The student is required to be computer literate as computer software programs are used to develop communication skills for office correspondence and presentations. Recommend keyboarding skills of at least 25 NWPM. PREREQUISITE: OFFC205, 355

OFFC207 3 2 2 0 0
Administrative Office Applications Voc/Tech
 This course incorporates simulated office activities into realistic workplace integration. Students use integrated software to complete specialized tasks. Workplace basic skills including interpersonal skills, communication, teamwork, creative thinking and problem solving will be developed. PREREQUISITE: OFFC204, 356

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 body functions.

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, nervous, 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 with a variety of dictating styles. PREREQUISITE: OFFC431

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 305

OFFC305 4 2 4 0 0
Word Processing Skill Dev I Voc/Tech
 Review of alphabetic and numeric keyboard reaches using a computer. Develop a strong keyboarding foundation using the touch method while utilizing correct techniques. Introduces fundamental word processing functions. Instruction covers word processing concepts, terminology, features and other related skills. Must key at least 25 NWPM for 3 minutes

OFFC306 3 2 2 0 0
Word Processing Skill Dev II Voc/Tech
 Emphasis on developing speed, accuracy and proofreading techniques in preparation of business documents using word processing software. Students develop a broader understanding of software capabilities as they continue to study concepts, vocabulary and additional features. Continued development of speed and accuracy is emphasized. PREREQUISITES: OFFC305 or 325

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. Recommend keyboarding skills of at least 30 NWPM

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 training. Drug terminology is added, as well as 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 prations.

OFFC325 3 2 2 0 0
Medical Computer Applications Voc/Tech
 This course presents basic word processing, computer language and applications, including medical management software required in various medical settings. Theory and hands-on experience will be included.

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: 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 job 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.

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, 306, 331

OFFC333 3 3 0 0 0
Citations & 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

OFFC349 1 0 2 0 0
WORD Voc/Tech
 Hands-on instruction using Word in the Windows environment. Special features include working with windows, speller, Thesaurus, merge and sort.

OFFC350 1 0 2 0 0
PowerPoint Voc/Tech
 Introduction to presentation software. Topics include creating, enhancing, embellishing and illustrating a presentation with charts, graphs, special effects; converting existing material, printing presentations, speaker's notes and handouts.

OFFC351 1 0 2 0 0
Access Voc/Tech
 Introduction to Access database management system. Topics include creating, editing, querying, using forms, reports, customizing and managing data and files.

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Course Descriptions

OFFC352 1 1 0 0 0
CPS Review Sec. I-Economics & Law Voc/Tech
 Section I assists students to pass part one of the Certified Professional Secretary Examination by reviewing economic, accounting and business law fundamentals. In addition to 1 hour of credit, students will be awarded 1.5 CEUs.

OFFC353 1 1 0 0 0
CPS Review Sec. II - Office Systems Voc/Tech
 Section II assists students to pass part two of the Certified Professional Secretary Examination by reviewing office technology, administration and communications. In addition to 1 hour of credit, students will be awarded 1.5 CEUs.

OFFC354 1 1 0 0 0
CPS Review Sec. III - Management Voc/Tech
 Section III assists students to pass part three of the Certified Professional Secretary Examination by reviewing behavioral science in business and human resource management. In addition to 1 hour of credit, students will be awarded 1.5 CEUs.

OFFC355 3 2 2 0 0
Computer Applications Voc/Tech
 The focus of this course is to use computer hardware and software as business productivity tools. Training includes a hands-on introduction to computer applications vital in today's business and industry. Course covers operating system, e-mail, internet, word processing, spreadsheet, database and presentation applications.

OFFC356 3 2 2 0 0
Advanced Computer Applications Voc/Tech
 Develop a proficiency in decision-making using computer software applications. Producing final documents for real business applications such as file integration, on-line forms, linked spreadsheets, and desktop publishing are emphasized. PREREQUISITES: OFFC355 or COMS181

OFFC357 3 3 0 0 0
Emerging Technologies Voc/Tech
 Students will explore changing trends in peripheral equipment and software, review technology within the framework of today's business environment and analyze the future of hardware and software usage in various business fields.

OFFC405 3 3 0 0 0
Professional Development Voc/Tech
 Designed to make students aware of their personal strengths and identify areas for improvement. Concentrates on helping students develop marketable personal and professional skills. Presents strategies to assist students in maintaining employment and in demonstrating a professional image and work behavior.

OFFC410 2 0 0 0 8
Office Internship Voc/Tech
 Practical experience through on-the-job training in an approved business setting. Tasks will be consistent with student's career objectives, skills and knowledge. (P/F) PREREQUISITE: OFFC205, 305, 355; COREQUISITE: OFFC411

OFFC411 1 1 0 0 0
Office Seminar Voc/Tech
 An examination of topics relevant to the office internship experience, sharing work place problems encountered, and the solutions found to those problems. PREREQUISITE: OFFC205, 305, 355; COREQUISITE: OFFC410

OFFC421 4 0 0 0 16
Legal Internship Voc/Tech
 Part-time placement in a legal environment working with an employer and under the supervision of legal teaching coordinators. (P/F) PREREQUISITES: OFFC306, COOP220

OFFC430 3 2 2 0 0
Medical Transcription I Voc/Tech
 Designed to prepare the student to transcribe from physician dictation. The course covers the various medical specialties and introduces the student to a variety of formats for medical materials. REQUIRED: OFFC205, 221, 325 and 329 must be taken concurrently with or prior to this course.

OFFC431 3 2 2 0 0
Medical Transcription II Voc/Tech
 A continuation of Medical Transcription I. PREREQUISITE: OFFC430

OFFC433 3 3 0 0 0
Medical Techniques Voc/Tech
 A study of medical science, ethics and medical law. Various management duties and responsibilities, such as filing, insurance processing, mail schedules, computerized accounting, and telephone procedures. PREREQUISITES: OFFC221, 306

PHIL110 3 3 0 0 0
Introduction to Philosophy Core
 Exploration of basic questions in epistemology, metaphysics and ethics. Emphasis on western philosophy tradition.

PHIL111 3 3 0 0 0
Introduction to Logic 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 3 3 0 0 0
Ethical Problems Core
 Comparative study of different traditional moral theories. Application of moral theories to different contemporary moral problems.

PHIL113 3 3 0 0 0
Comparative Religions Core
 Study of major living religions; commonalities and contrasts. How these religions enrich human lives.

PHLE310 4 2 2 0 6
Phlebotomy with Practicum 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 3 2 2 0 0
Principles of Photography Open
 Students will learn the basic principles of photography. Topics will include basic camera operation, film developing, darkroom techniques and special effects. The camera will become an instrument to explore and communicate ideas, goals, and visions effectively.

PHOT106 3 2 2 0 0
Advanced Photography Open
 For students who have mastered basic photographic principles and processes. Topics will include photographic lighting and filtration, photojournalism, documentary photography, advanced darkroom techniques, print finishing, and display. PREREQUISITE: PHOT105

PHOT210- ADJUNCT**** 3 2 2 0 0
Travel Photography Open
Advanced principles of image making, printing and presentation will be explored with spirit and knowledge that is expected to engender an appreciation for photography, travel and the state of Iowa. PREREQUISITE: PHOT105

PHOT407 3 2 2 0 0
Studio Photography Voc/Tech
 Students will learn to compose a photograph in a deliberate process. Students will arrange and analyze elements in a scene and use artificial light to produce the desired effect. Projects will test for student imagination, creativity, technical skills and willingness to experiment, while improving their photographic expertise. PREREQUISITE: PHOT106

PHYE128 3 1 4 0 0
Lifeguard Train/Water Safety Instruction 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 1 0 2 0 0
Advanced Lifesaving 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. REQUIRED: Students must pass a swim test

PHYE130 1 0 2 0 0
Physical Fitness Open
 Various exercises and activities to improve physical fitness.

PHYE133 1 0 2 0 0
Bowling Open
 Beginning skills only

PHYE135 1 0 2 0 0
Cheerleading Open
 Men and women desiring to be basketball cheerleaders for Varsity Basketball season.

PHYE136 1 0 2 0 0
Weight Training Open
 Introduction to basics of weight training. Emphasizes increasing physical capacity, that is increased muscular strength and power.

PHYE137 1 0 2 0 0
Recreational Swimming Open
 Recreational swimming at Heartland Health Center. Some swimming experience expected--lessons not provided.

PHYE138 1 0 2 0 0
Varsity Men's Basketball Open
 For students on Varsity Men's Basketball team only. May be repeated for a maximum of 2 credits.

PHYE139 1 0 2 0 0
Varsity Women's Basketball Open
 For students on Varsity Women's Basketball team only. May be repeated for a maximum of 2 credits.

PHYE140 3 3 0 0 0
Sports Officiating 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 1 0 2 0 0
Varsity Baseball Open
 For students on Varsity Baseball team only. May be repeated for a maximum of 2 credits.

PHYE143 1 0 2 0 0
Varsity Women's Softball Open
 For students on Varsity Women's Softball team only. May be repeated for a maximum of 2 credits.

PHYE144 3 3 0 0 0
Intro to Physical Education 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.

PHYE146 3 3 0 0 0
Personal/Community Health Open
 Provides the student with information on physical, emotional, and social factors as they relate to our state of personal health. Course will help students to better understand and aid in alleviation of communicable and chronic diseases, drug use, and environmental problems.

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Course Descriptions

PHYE149 3 3 0 0 0
Wellness Prog/Planning/Organization 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 3 3 0 0 0
Fitness Testing/Programming 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 2 1 2 0 0
Introduction to Athletic Training 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 1 0 2 0 0
Golf 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.

PHYE164 ADJUNCT**** 2 2 0 0 0
Personal Wellness General
This course will aid in the enhancement of knowledge, skills and attitudes necessary to promote positive life-long wellness decisions. Students will look at the physical, social, intellectual, emotional, occupational, and spiritual components of wellness.

PHY106 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. REQUIRED: MATH123 or high school 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. REQUIRED: PHYL111 or equivalent

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. REQUIRED: MATH129 or equivalent must be taken concurrently with or prior to this course

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 & 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 neurobiology, 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. Recommend PSCH101 be taken prior to this course.

PSCH104 3 3 0 0 0
Abnormal Psychology Core
 An introduction to the study of abnormal behavior, with emphasis on anxiety, depression, schizophrenia and personality disorders. Includes the dynamics of mental disorder along with the biopsychosocial factors involved in the etiology and treatment of disorders. Recommend PSCH101 be taken prior to this course.

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.

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.

PSCH108 3 3 0 0 0
Human Sexuality & 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, physiological/psychological reactions to stress, measurement of stress reactions, and application of stress reduction.

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. REQUIRED: Compass score of 35 or higher on COMR

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. REQUIRED: READ087 or a Compass score of 57 or higher on COMR

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, levels of difficulty, and reading purposes. REQUIRED: READ088 or a Compass score of 81 or higher on COMR or ACT score of 19 or higher on ACTR

RESP300 3 3 0 0 0
Fundamentals of Respiratory Therapy Open
 This initial course in the Respiratory Therapy program emphasizes the assessment and evaluation of patients. Also included will be a history of health care, medical specialties, communication skills, and medical terminology. Students must demonstrate skill in the assessment of patient vital signs. PREREQUISITES: CHEM131 and BIOL133 or BIOL134

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Course Descriptions

RESP302 4 3 2 0 0

Gas, Humidity & 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. REQUIRED: RESP300 must be taken concurrently with or prior to this course; COREQUISITE: RESP304

RESP304 4 3 2 0 0

Cardiopulmonary Therapeutics Open
This course will teach basic patient care techniques of hyperinflation therapy, secretion clearance, airway care, patient assessment, pulmonary rehabilitation, subacute respiratory care and assessment of the effectiveness of therapies. Students will be required to demonstrate competence in procedures to succeed in course. REQUIRED: RESP300 must be taken concurrently with or prior to this course; 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 pH data will be taught. PREREQUISITES: RESP304, BIOL134 or BIOL154

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: RESP304, BIOL134 or BIOL154

RESP320 5 4 2 0 0

Advanced Respiratory Therapy Open
Techniques initiating, monitoring, maintenance and discontinuation of mechanical ventilation in a variety of care settings will be taught. Students will develop skill in ABG analysis and electrocardiography. Adjuncts for advanced life support will be taught. Students will become proficient in the analysis of arterial blood gases and basic techniques of electrocardiography. Students will learn the use of adjuncts for the treatment of cardiopulmonary arrest. PREREQUISITES: BIOL134 or 154, 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 or 154, 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 or 154, PHYL106, RESP310, 315

RESP335 3 3 0 0 0

Respiratory Therapy Mgmt & 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 4 2 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: RESP 352

RESP372 7 2 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; REQUIRED: RESP330 must be taken concurrently with or prior to this course

RESP392 5 2 0 12 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

SFTY301 3 3 0 0 0

Introduction to Safety Science Voc/Tech
This course will cover the introduction to safety in business and industry. It will familiarize students with economic, social, environmental, ethical and regulatory pressures regarding occupational safety. Overview of physical safety, protection and chemical, biological, mechanical hazards.

SFTY302 3 3 0 0 0

Accident Invest & Worker Comp Voc/Tech
This course addresses the requirements and important procedures regarding worker compensation laws and guidelines. The basics of worker compensation are emphasized including accident reporting, completing worker compensation forms, investigating accidents and implementing corrective actions.

SFTY310 3 3 0 0 0

Regulatory Safety Standards & Req Voc/Tech
This course will cover the regulatory agencies and their standards to which all businesses are required to conform. Standards such as those promulgated by OSHA, EPA and ISO will be reviewed. Emphasis will be placed on understanding the regulations.

SFTY311 3 3 0 0 0

Safety Program Management Voc/Tech
Course provides a background in creating, implementing and maintaining an effective safety program. Topics include effective management techniques of safety awareness, employee training, safety inspections and audits. Program development is stressed. PREREQUISITE: SFTY301

SFTY315 3 2 2 0 0

Ergonomics in the Workplace Voc/Tech
Course provides students with the background for assessing proper ergonomic practices in any business. Emphasis is on prevention as well as investigation and corrective action. Focus includes back injury, cumulative trauma and repetitive motion disorders. PREREQUISITE: SFTY301

SFTY331 3 2 2 0 0

Industrial Hygiene-Chemical Haz Voc/Tech
This course will address chemical and biological hazards in the work environment. Air sampling techniques and problem analysis is used to evaluate the workplace for airborne contaminants such as dusts, vapors, gases and fibers. Various body systems affected by these contaminants is also studied. PREREQUISITE: CHEM131, SFTY301

SFTY332 3 2 2 0 0

Industrial Hygiene-Physical Haz Voc/Tech
This course will address physical hazards in the work environment. Instrumentation and problem analysis is used to evaluate the workplace for proper illumination, ventilation, temperature, noise levels and non-ionizing radiation. PREREQUISITE: SFTY301

SFTY390 4 1 0 9 0

Safety Science Internship Voc/Tech
This course allows the student to demonstrate the knowledge and experiences gained through the safety science program. The internship must involve a faculty pre-approved business/industry. The student will conduct the project with the business/industry partner and present it to a panel of DMACC ATC faculty/industry representatives. PREREQUISITE: SFTY311, 315

SOCY101 3 3 0 0 0

Introduction to Sociology Core
The study of human interaction, groups and society. Topics included are culture, socialization, organizations, deviance, inequality, institutions, health, population, ecology, social change and research methods.

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 & 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 & 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. 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. REQUIRED: SOCY101 or instructor permission

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Course Descriptions

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. REQUIRED: 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.

SOCY205 2 2 0 0 0
Issues in Aging Open
 This course will address the issues of aging: in transition, explore the conflicts of change, and examine the needs and strategies to best meet the demands and challenges presented to this fast-growing segment of our population.

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. REQUIRED: SPAN101 or instructor's permission

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. REQUIRED: SPAN101 or instructor's permission

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. REQUIRED: SPAN101 or instructor's permission

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. REQUIRED: SPCH110

SPCH117 3 3 0 0 0
Interpersonal & 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
Telecommunications I Voc/Tech
 Provides an overview of telecommunications and covers basic telecommunication circuits, equipment and diagnostic procedures for lines, basic key systems, station carrier and associated equipment.

TELE411 6 0 12 0 0
Telecommunications 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
Telecommunications II Voc/Tech
 Covers basic telecommunication equipment used by businesses and its connection to a switched public or private network. Covered subjects include electronic key systems, private branch exchange systems (PBX), trunks and associated equipment. Analog and digital communications and associated equipment are also covered. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITES: TELE410

TELE421 7 0 14 0 0
Telecommunications Experience II Voc/Tech
 Provides hands-on training on a private branch exchange system, and user data modification for a digital central office; switch, analog and digital key systems and associated equipment. Experiences include wiring, call routing, fault isolation, and modular splicing. PREREQUISITES: TELE411; COREQUISITE: TELE420

TELE430 3 3 0 0 0
Telecommunications 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. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITE: TELE420

TELE431 6 0 12 0 0
Telecommunications 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. PREREQUISITE: TELE421; COREQUISITE: TELE430

TELE432 3 3 0 0 0
Data Communications Voc/Tech
 An introduction to data communications and data networks. Includes digital communications, analog communications LAN, WAN and Packet Networks. PREREQUISITES: TELE420

TELE440 3 3 0 0 0
Telecommunications IV Voc/Tech
 Covers new and emerging technologies including LSDN, SONET, XDSL, Frame Relay, ATM, STM, wireless and computer telephony technologies. Experienced individuals may contact the instructor to gain admittance to this course. PREREQUISITES: TELE430. It is recommended that students take ELEM462 prior to this course.

TELE441 3 0 6 0 0
Telecommunications Experience IV Voc/Tech
 Provides hands-on learning experiences on digital carrier, fiber optics, local area networks, and computer telephony. PREREQUISITES: TELE431.

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, 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 tools and benchwork. Lab activities in safety, layout and tool grinding operations on saws, drill press, and lathes. REQUIRED: TOOL484 must be taken concurrently with or prior to this course

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. REQUIRED: TOOL485 must be taken concurrently with or prior to this course. PREREQUISITE: TOOL486

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. REQUIRED: TOOL491 must be taken concurrently with or prior to this course. PREREQUISITE: TOOL487

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

TOOL497 1 0 2 0 0
Basic Lathe Operation Voc/Tech
 This course covers set-up and operation of the metal lathe including lathe parts, materials and safety procedures.

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Course Descriptions

TOOL498 1 0 2 0 0
Vertical Mill Operation Voc/Tech
 Vertical mill operation is explained and reinforced with practical experience using vertical milling machines.

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

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. Safety is emphasized.

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. Safety is emphasized.

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. Safety is emphasized.

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 horizontal position. Safety is emphasized. 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. Safety is emphasized. 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. Safety is emphasized.

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. Safety is emphasized. 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. Safety is emphasized. 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. Safety is emphasized. 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. Safety is emphasized. PREREQUISITE: WELD473

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. Safety is emphasized. 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. Safety is emphasized. 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. Safety is emphasized. PREREQUISITE: WELD498

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Faculty/Staff

- Adhav, Jagdeesh, 1980**, *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
- Alexander, Jeffrey H., 1998**, *Computer/Information Technology*. University of Iowa, Drake University
- Allbee, Dawn M., 1995**, *Child Development Specialist*. A.S., Des Moines Area Community College
- Amdahl, Maynard, 1978**, *Tool & Die*. Diploma, Dunwoody Industrial Institute; Certificate, U.S. Department of Labor Journeyman Tool & Diemaker
- Anderson, Patricia A., 1999**, *Accounting*. B.S.B.A., M.Ac., University of Arizona
- Anderson, Robert L., 1974**, *Hospitality Careers*. A.O.S., Culinary Institute of America; Mankato Area Vocational Technical Institute; C.C.E.; C.E.C.
- Anderson, Ron D., 1999**, *HVAC*. A.A., Arapahoe Community College; B.S. University of Colorado-Denver
- Arbuckle, John, 1969**, *Electronics*. A.A.S., B.S., M.S., Iowa State University
- Armbrecht, Mark A., 1994**, *Automotive Technology*. A.A.S., Hawkeye Institute of Technology
- Baker, Dorothy, 1986**, *Counselor*. B.S., Upper Iowa University; M.S. Drake 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., Wartburg College; M.A., University of Northern Iowa
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- Bennett, James, 1980**, *Data Processing*. B.S., Northwest Missouri State University; A.A., Des Moines Area Community College; Iowa State University
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- Bishop, Patrick J., 1995**, *Diesel*. A.A.S., Des Moines Area Community College; Iowa State University
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- Corwin, Marilyn K., 1984**, *Dental Hygiene*. B.A., University of Iowa; Drake University; Iowa State University
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- Schon, Renee L., 1988**, Coordinator, Iowa New Choices. B.S., Iowa State University
- Schreurs, Christian, 1973**, Coordinator, Recreation and Wellness. B.A., Wayne State College
- Schroeder, Larry M. 1997**, Educational Advisor. B.S., Northwest Missouri State University
- Schulte, M. Anne, 1988**, Social & Behavioral Sciences. B.A., Creighton University; M.A., California State University-Fullerton
- Schulze, Dyanne L., 1994**, P.C. Applications. A.A.S., Des Moines Area Community College; B.A., University of Iowa; Drake University
- Sconiers-Chapman, Mary, 1990**, Executive Dean, Urban Campus. B.S., Drake University; M.S.E., Iowa State University; Ed.S., Drake University; Ed.D., Vanderbilt University
- Seaman, Greg A., 1994**, Automotive Technology. A.A.S., Des Moines Area Community College
- Shaffer Lilienthal, Robin K., 1997**, Educational Advisor. B.A., M.S., Iowa State University
- Sheaff, James, 1974**, Criminal Justice. B.A., Creighton University; M.A., Boston University; University of Nebraska
- Shields, Walter C., 1995**, Ford ASSET. B.S., University of Missouri; M.A., Drake University
- Shriver, Burgess, 1970**, Academic Dean, Sciences and Humanities. B.S., University of Oklahoma; M.S., Iowa State University
- Shuman, Ann S., 1994**, Commercial Art. A.A., Des Moines Area Community College; B.F.A., University of Nebraska
- Siemann, Carolyn M., 1989**, Academic Achievement Center. B.A., University of Iowa; M.S.; Iowa State University
- Silberhorn, George, 1972**, Counselor. A.A., Muscatine Community College; B.S.E., M.S.E., Drake University; Iowa State University
- Silberhorn, Virginia A., 1987**, Academic Achievement Center. B.S., M.A., Iowa State University
- Silver, Richard, Sr., 1976**, Tool and Die. Iowa State University; University of Northern Iowa; Des Moines Area Community College
- Simanski, Julie A., 1995**, Speech Communication. B.A., University of Northern Iowa; M.A., Mankato State University; Ph.D., Iowa State University
- Slater, Benita Y., 1996**, Coordinator, Upward Bound Program. B.S., Drake University
- Slinkard, Sharron S., 1992**, English. B.A., University of Wisconsin; M.A., University of Wisconsin-Milwaukee
- Slykhuis, Lynn, 1990**, Correctional Education Program. B.A., Upper Iowa University
- Smith, Bradley J., 1997**, Accounting.
- Smith, Randall R., 1994**, Mathematics. B.S., M.S.M., Iowa State University
- Sommerville, Abraham D., 1984**, Educational Advisor. A.A., Des Moines Area Community College; B.A., Drake University
- Sorenson, Shirley K., 1987**, Program Coordinator, Health Care/H COP. R.T., St. Joseph Mercy Hospital; B.S., College of St. Francis; M.S., University of Osteopathic Medicine and Health Science
- Spry-Knutsen, Jennifer, 1995**, Recreation/Wellness Assistant. B.A., Iowa State University; M.A., University of Iowa
- Stahr, Curtis B., 1989**, Photography. A.A., Ellsworth Community College; B.F.A., Peru State College
- Stasko, Gary F., 1986**, B. Holst/Economics. B.S., M.S., Iowa State University
- Stende, Catherine J., 1999**, Nursing. B.S.N., University of Iowa; M.S., M.S.N., Drake University
- Stende, Keith A., 1992**, Career Education. B.A., St. Olaf College; M.S.E., Drake University
- Sterk, Merideth A., 1999**, College Recruiter. A.A., Des Moines Area Community College, B.A., University of Northern Iowa

Faculty/Staff

- Stewart, Cindy K., 1988, Marketing. B.S., Upper Iowa University**
- Stick, James W., Jr., 1984, English. B.A., M.A., University of Iowa**
- Stiles, Betty A., 1983, Management Support Systems. A.A., Des Moines Area Community College; B.S., Drake University**
- Stillinger, Jane M., 1999, HCOP Program Advisor. B.S., Peru State College; M.S., Drake University**
- Stone, Margaret, 1987, Coordinator, Iowa New Choices. A.A., Boone Junior College; B.S., University of Iowa**
- Streff, Leigh, 1989, English. B.A., M.A., Iowa State University**
- Strom, Byron M., 1975, Chemistry. B.S., Sioux Falls College; M.S., Iowa State University**
- Suby, Allen, 1968, Associate Dean, Off-Campus Credit. B.S., M.S., Iowa State University**
- Sullivan, Jane, 1987, Commercial Art. A.A.A., Des Moines Area Community College**
- Swan, Susan J., 2000, Nursing. B.S.N., Cornell University; M.S.N., Northern Illinois University**
- Thieben, Patricia A., 1994, Assistant to the Senior Vice President, Academic Affairs. B.A., University of Northern Iowa; M.S., Iowa State University**
- Trief, Richard T., 1985, Economics. B.A., Simpson College; M.S., Iowa State University**
- Trotter, William L., 1986, Biology. B.A., M.A., Drake University**
- Trumpy, Franklin, 1972, Physics. B.S., Western Illinois University; M.S., Iowa State University**
- Turner, Thomas, 1974, Accounting. B.S., University of Dubuque; University of Northern Iowa; Iowa State University**
- Twedt, Arlen, 1973, Counselor. B.B.A., University of Iowa; M.A.Ed., University of Northern Iowa; Grand View College; Chapman College; Iowa State University; Drake University; North-east Missouri State**
- Twedt, John, 1980, Building Trades. B.S., Iowa State University**
- Valentine, Terri L., 1999, Academic Achievement Center. B.A., Grandview College**
- Van Ast, Pamela, 1980, Academic Dean, Health and Public Services. A.A., R.N., University of South Dakota; B.L.S., University of Iowa; M.S., Iowa State University; Economic Development Institute, University of Oklahoma**
- Vander Ploeg, Diane, 1977, Medical Assistant. B.B.A., M.S., Iowa State University**
- Vanderlinden, David W., 1998, Chemistry. B.S., Valparaiso University; M.A., Drake University**
- VanderWilt, Suellen, 1993, Nursing. Diploma, West Suburban Hospital School of Nursing; B.S.N., University of Iowa; M.Ed., Pennsylvania State University; M.S.N., Drake University**
- Vandivier, Curt, 1972, Vice President, Student Services. B.S., Westmar College; M.S., Iowa State University**
- Van Dorin, Robert, 1990, Career Education. B.A., Iowa Wesleyan College**
- Van Meter, Karin, 1992, Biology. Ph.D., Paris-Lodron University**
- Van Veen, Neal V., 1992, Commercial Horticulture. B.A., Central College; B.S., Iowa State University**
- Verhulst, Susan L., 2000, Management. B.A., University of Northern Iowa; M.B.A., Drake University**
- Verrips, Patricia, 1989, Instructional Assistant, B.A., Dorât College; Des Moines Area Community College; Upper Iowa University**
- Videbeck, Sheila L., 1999, Nursing. Diploma, Iowa Methodist School of Nursing; B.S.N., University of Missouri, Columbia; M.S.N., University of Minnesota, Ph.D., Iowa State University**
- Vogel, Judith A., 1999, Speech. B.A., M.A., Purdue University**
- von Walden, Tara R., 1991, Educational Interpreter. A.A.S., Iowa Western Community College.**
- Wager, Susan E., 1976, Director, Nursing Education. R.N., B.S.N., M.A., University of Iowa**
- Wagner, Richard, 1971, History/Geography. B.S., Wisconsin State University; M.A., University of Wisconsin; University of Iowa; Iowa State University; Western Illinois University; University of Chicago; University of Colorado**
- Wangerin, Virginia S., 1989, Nursing. R.N., Iowa Lutheran Hospital Schools of Nursing; B.S., M.S.N., Drake University**
- Wardyn, Jennifer J., 1994, Child Development Specialist. A.S., Des Moines Area Community College**
- Warren, Donalla, 1986, STRIVE. B.S., Drake University**
- Watts, Ann L. 1994, Librarian/Media Specialist. B.S., Iowa State University; M.A., University of Iowa**
- Whalen, Jerold, 1975, Electrical Trades. A.A., Iowa Central Community College; B.A., University of Northern Iowa; Iowa State University**
- Whitaker, Christine A., 1989, LAN Equipment Specialist.**
- Whitehurst, Calvin L., 1987, Academic Achievement Center. B.A., M.A., University of Northern Iowa**
- Whittaker, David L., 2000, Director, Transportation Institute. Associate, Arizona Automotive Institute**
- Wickham, Susan, 1975, Academic Achievement Center. B.A., M.S.E., Drake University**
- Wiese, Sharon, 1998, Child Development Specialist**
- Wiley, Don, 1998, Architectural Millwork**
- Wilk, Mary Beth, 1975, English/Speech Communication. B.A., University of Nebraska; M.A., University of New Mexico; Ph.D., University of Massachusetts**
- Wilson, Delores, 1990, Academic Achievement Center. B.S., Iowa State University; M.A., Marycrest College**
- Wilson, Sherrie A., 1998, Fine Arts. B.F.A., University of Northern Iowa; M.S., Illinois State University**
- Winter, Janis, F. 1989, Coordinator, Computer Lab. B.S., Peru State College**
- Wisnieski, Gerald, 1970, Mathematics. B.A., Wayne State; M.N.S., University of South Dakota; Ph.D., Iowa State University; Ohio State University; University of Chicago**
- Wisnosky, Nancy K., 1995, Assistant Registrar. B.A., Western Illinois University; University of Illinois; North Dakota State University**
- Witty, Sharon K., 1993, English. B.A., University of Northern Iowa; M.A., Iowa State University**
- Wolf, Laurie A., 1998, Director, Enrollment Management. B.A., Iowa Wesleyan College; M.A., University of Iowa**
- Wollaston, Robert, 1982, Academic Achievement. B.A., St. Vincent College; M.S., Clarion State College; Iowa State University**
- Wong, Siew-San, 1997, Associate Dean, Student Services. B.A., University of Nebraska - Omaha; M.B.A., Kansas State University**
- Wood, Amy, 1988, Educational Advisor. B.B.A., University of Iowa**
- Wood, Christine, 1977, Nursing. A.A.S., Iowa Central Community College; B.S.N., University of Iowa; M.S.N., Drake University.**
- Woods, Nancy A., 1987, Mathematics/Physics. B.S., B.A., University of Nebraska at Omaha; M.S., M.S.M., Iowa State University**
- Wright, Evelyn, 1972, Counselor. B.S., Mount Mercy College; M.S.E., Drake University**
- Yerty-Olmstead, Paula J., 1994, English. B.A., St. Francis College; M.A., Indiana University of Pennsylvania**
- Zarr, Harold, 1989, Manufacturing Management. B.S., Iowa State University; M.B.A., Drake University**
- Zhang, William W. 1998, English. B.A., Northeast Normal University; M.Ed., Rhode Island College; Edinburgh University; Ph. D., Indiana University of Pennsylvania**
- Zimmerman, Mary Kathleen, 1994, P.C. Applications. A.A.A., Ottumwa Heights College; B.B.A., University of Iowa**

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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
	<input type="checkbox"/> MALE <input type="checkbox"/> FEMALE

ETHNIC INFORMATION (OPTIONAL)

1. WHITE NON-HISPANIC
2. BLACK NON-HISPANIC
3. HISPANIC
4. ASIAN/PACIFIC ISLANDER
5. AMERICAN INDIAN/ALASKAN NATIVE
6. RACE/ETHNICITY/UNKNOWN

RESIDENCY

ARE YOU A U.S. CITIZEN? YES NO

IF NO, ARE YOU A PERMANENT RESIDENT OF THE U.S.? YES NO

IF NO, INDICATE TYPE OF VISA _____
IF YES, PRINT YOUR ALIEN REGISTRATION NUMBER _____

COUNTRY OF CITIZENSHIP _____

RESIDENCY STATEMENT - TO BE COMPLETED BY U.S. CITIZENS AND PERMANENT RESIDENTS ONLY!

- CHECK ONE
- I HAVE BEEN A RESIDENT OF IOWA SINCE BIRTH
- I HAVE BEEN A PERMANENT RESIDENT OF IOWA SINCE _____ MONTH _____ YEAR
- I AM NOT A RESIDENT OF IOWA

SAAADMS

ADMISSION INFORMATION

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"/> OTHER LOCATION									

I PLAN TO ENROLL FULL-TIME(12 CREDITS OR MORE) PART-TIME(11 CREDITS OR LESS) A schedule of 8 credits is full-time in the summer semester.

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

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

EMERGENCY INFORMATION

NAME SOMEONE TO CONTACT IN CASE OF AN EMERGENCY																			
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.
 I AGREE TO REPORT ALL CHANGES, INCLUDING NAME AND ADDRESS TO THE ADMISSIONS OFFICE WITH THE UNDERSTANDING THAT MY ADMISSIONS MAY BE DELAYED IF ALL CHANGES ARE NOT REPORTED.**

SIGNATURE OF APPLICANT _____ DATE _____

Des Moines Area Community College requests this information for the purpose of processing your application for admission. No persons outside the College are routinely provided this information. Responses to items marked "optional" are optional; responses to all other items are required. If you plan to receive financial aid assistance, additional applications must be completed and filed in a timely manner.

Des Moines Area Community College shall not illegally discriminate on the basis of race, color, national origin, creed, religion, sex, age or disability. Any inquiries may be directed to the EEO/AA Coordinator (515) 964-6408.

Des Moines Area Community College provides a wide array of support services to students with disabilities. If you have a need for accommodations due to a disability, please contact the campus you plan to attend.

FOR OFFICE USE ONLY

STATUS	EVALUATIONS

Please send completed Application for Admissions form to: DMACC, 2006 S. Ankeny Boulevard, Ankeny, Iowa 50021

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			

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SPAEMRG

EMERGENCY INFORMATION

NAME SOMEONE TO CONTACT IN CASE OF AN EMERGENCY																			
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.
 I AGREE TO REPORT ALL CHANGES, INCLUDING NAME AND ADDRESS TO THE ADMISSIONS OFFICE WITH THE UNDERSTANDING THAT MY ADMISSIONS MAY BE DELAYED IF ALL CHANGES ARE NOT REPORTED.**

SIGNATURE OF APPLICANT _____ DATE _____

Des Moines Area Community College requests this information for the purpose of processing your application for admission. No persons outside the College are routinely provided this information. Responses to items marked "optional" are optional; responses to all other items are required. If you plan to receive financial aid assistance, additional applications must be completed and filed in a timely manner.

Des Moines Area Community College shall not illegally discriminate on the basis of race, color, national origin, creed, religion, sex, age or disability. Any inquiries may be directed to the EEO/AA Coordinator (515) 964-6408.

Des Moines Area Community College provides a wide array of support services to students with disabilities. If you have a need for accommodations due to a disability, please contact the campus you plan to attend.

FOR OFFICE USE ONLY

STATUS	EVALUATIONS

Please send completed Application for Admissions form to: DMACC, 2006 S. Ankeny Boulevard, Ankeny, Iowa 50021

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

EMERGENCY INFORMATION

NAME SOMEONE TO CONTACT IN CASE OF AN EMERGENCY											
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.
 I AGREE TO REPORT ALL CHANGES, INCLUDING NAME AND ADDRESS TO THE ADMISSIONS OFFICE WITH THE UNDERSTANDING THAT MY ADMISSIONS MAY BE DELAYED IF ALL CHANGES ARE NOT REPORTED.**

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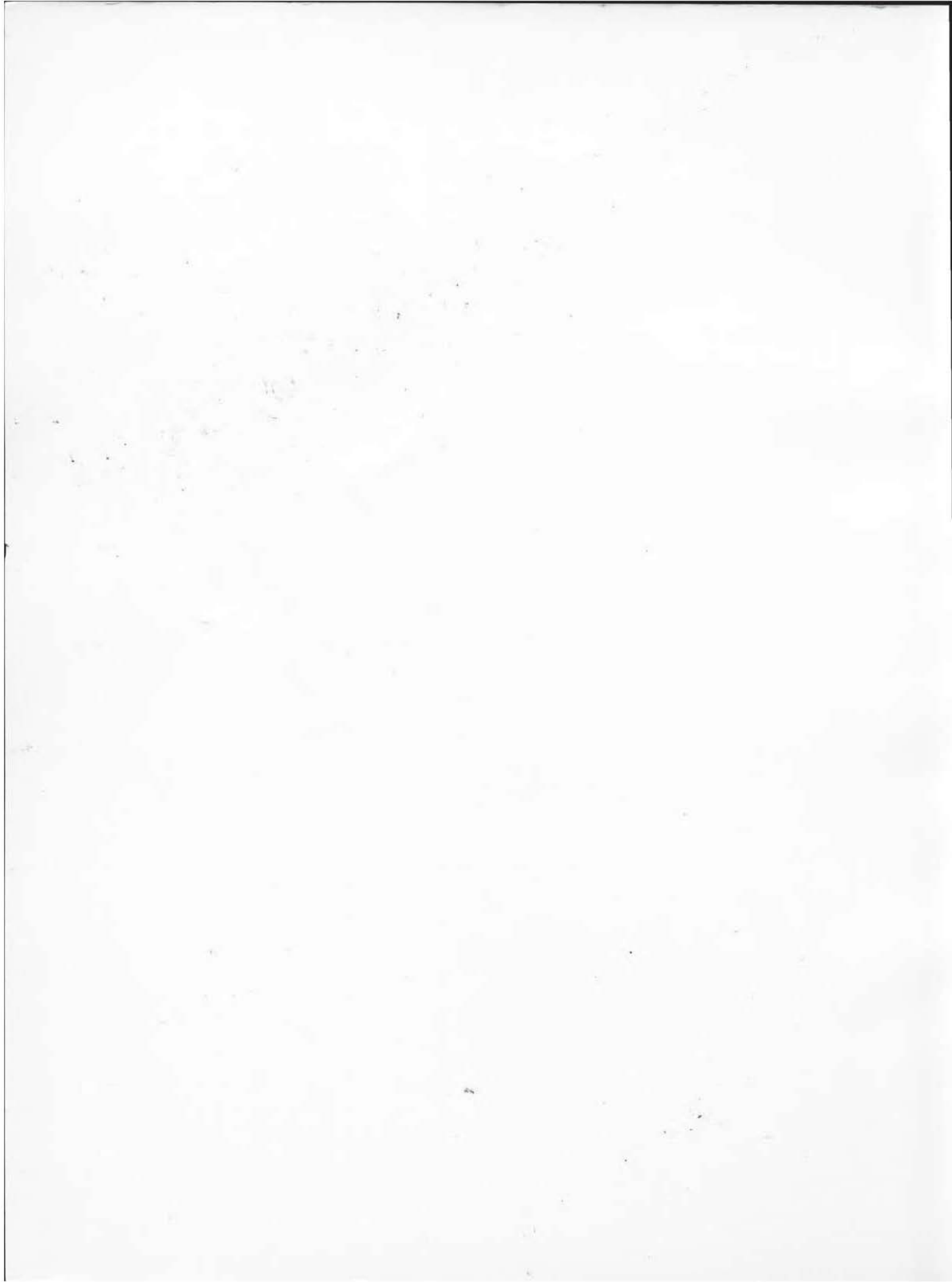
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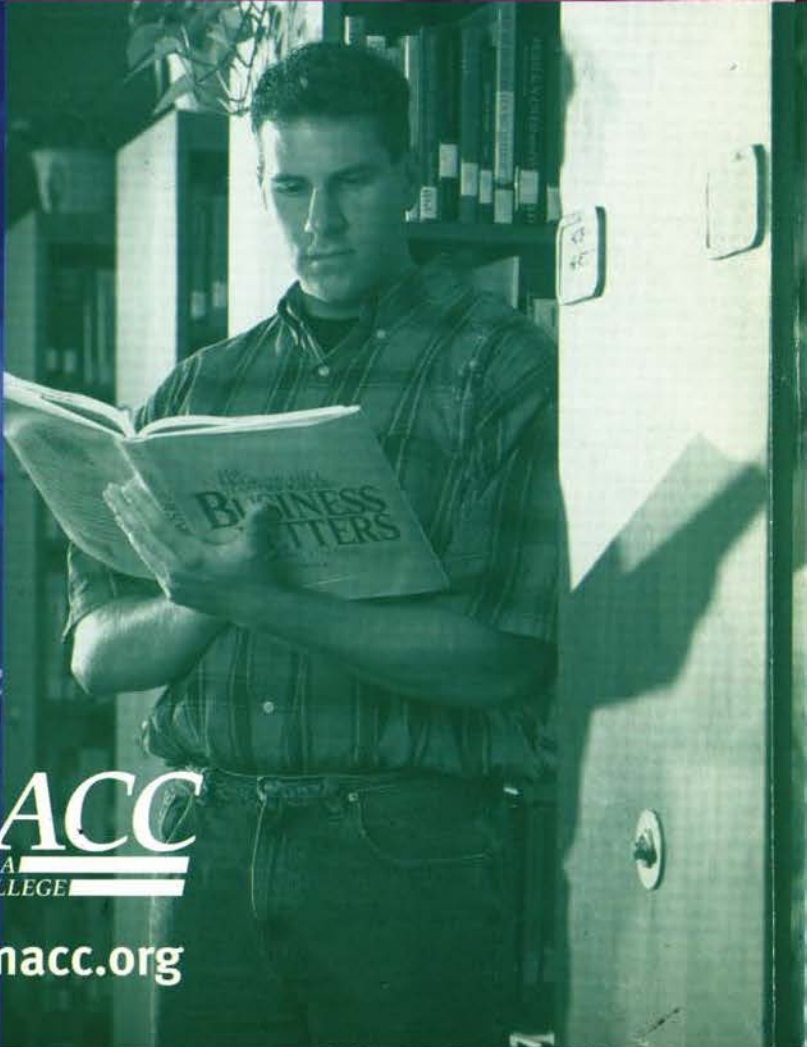
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DMACC
DES MOINES AREA
COMMUNITY COLLEGE

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