Des Moines Area Community College

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1992

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DMACC

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CATALOG

An Official Publication of Des Moines Area Community College

AWARD WINNING
EDUCATION

Your Personal Guide to Career Planning

Grants and Scholarships . . . . Apply Yourself!

How to Graduate with Honors

Table of Contents

On the cover... Des Moines Area Community College was awarded this trophy in 1991 by the Motor Vehicle Manufacturers' Association and the Industry Planning Council of the American Vocational Association as the number one Automotive Technology Program in the nation. Automotive Technology is just one of the many award winning educational programs at DMACC.

Photography by Mike Dixon, Dixon Photography

Programs Avaliable

Program	Award	Campus
ASEP - General Motors	AAS	Ankeny
ASSET - Ford	AAS	Ankeny
Accounting Advanced	Certificate	Boone, Urban
Accounting Basic	Certificate	Boone, Urban
Accounting Specialist	AAS	Boone, Urban
Administrative Support	Certificate	All Campuses
Agri-Business	AAS	Ankeny
Airbrush Art	Certificate	Ankeny
Architectural Drafting	Diploma	Ankeny
Auto Collison Technology	AAS	Ankeny
Paint	Diploma	Ankeny
Metals	Diploma	Ankeny
Auto Mechanics Technology	AAS	Ankeny
Auto Chassis & Power Train	Diploma	Ankeny
Auto Engines & Tune-up	Diploma	Ankeny
Bookkeeping & Accounting	Diploma	Boone, Urban
Building Maintenance	Certificate	Ankeny
Building Trades	Diploma	Ankeny
Business & Computers	AS	Boone
Business Administration	AS	All Campuses
Chemical Dependency Counseling	Certificate	Ankeny
Child Care Specialist I	Certificate	Ankeny
Child Care Specialist II	Certificate	Ankeny
Child Care Specialist III	Certificate	Ankeny
Child Development	Diploma	Ankeny
Child Development Associate	AS	Ankeny
CIM- Manufacturing Resource Planning	Certificate	Ankeny
CIM- Product Engineering	Certificate	Ankeny
CIM- Shop Floor Control	Certificate	Ankeny
Clerical Specialist	Certificate	All Campuses
Commercial Art	AAA	Ankeny
Commercial Horticulture	AAS	Ankeny
Computer Languages	Certificate	Ankeny
Computer Programming	AAS	Ankeny
Conditioned Air	Diploma	Ankeny
Credit Union Operators	Certificate	Ankeny
Criminal Justice	AS or AA	Ankeny
Culinary Arts	AAS	Ankeny
Data Entry	Certificate	All Campuses
Dental Assistant	Diploma	Ankeny
Dental Hygiene	AAA	Ankeny
Die Making	Diploma	Ankeny
(see Tool & Die Making)		
Diesel Technology	AAS	Ankeny
Dietary Manager	Certificate	Ankeny
Electronics Maintenance	AAS	Ankeny
Emergency Med Tech Ambulance	Certificate	Ankeny
Fashion	Certificate	Ankeny
Fashion Merchandising Management	AAS	Ankeny
Fashion Merchandising Sales	Diploma	Ankeny
Fire Science Technology	AS	Ankeny
Fire Specialist	Certificate	Ankeny
Health Care Administration	AS	Ankeny
High Tech Elec-Biomedical	Certificate	Ankeny
High Tech - Biomedical	AAS	Ankeny
High Tech - Computers	AAS	Ankeny
High Tech - Robotics/Automation	AAS	Ankeny
Hospitality Apprentice	Diploma	Ankeny
Hotel & Restaurant Management	AAS	Ankeny
Human Services	AS	Ankeny, Urban
Insurance Sales	Certificate	Ankeny
Job Shop Machinist	Diploma	Ankeny
(see Tool & Die Making)		
Legal Assistant	AS	Urban

Program	Award	Campus
Legal Assistant	Certificate	Urban
Legal Office Technology	AAS	Urban
(see Secretarial Careers)		
Leisure Studies - Holistic Wellness	AS	Boone
Leisure Studies - Rec Leadership	AS	Boone
Machine Drafting	Diploma	Ankeny
Management	Certificate	Ankeny
Management & Supervision	AAS	Ankeny
Medical Assistant	Diploma	Ankeny
Medical Laboratory Technology	AAS	Ankeny
Medical Office Technology	AAS	Ankeny
Medical Office Technology	Diploma	Ankeny
(see Secretarial Careers)		
Medical Transcriptionist	Certificate	Ankeny
Microcomputers	Certificate	Ankeny
Microcomputer Application	Certificate	All Campuses
Nursing - Advanced Standing	AAA	Ankeny, Boone
Nursing - Associate Degree	AAA	Ankeny, Boone, (Carroll Terms 1-2-3)
Nursing - Practical	Diploma	Ankeny, Boone, Carroll
Nursing Home Administrator	Certificate	Ankeny
Office Management	AAS	Boone, Urban
Office Technology	AAS	All Campuses
	Diploma	All Campuses
Phlebotomy	Certificate	Ankeny
Printing	Certificate	Ankeny
Printing Technology	AAS	Ankeny
Printing Technology	Diploma	Ankeny
Production Art	Certificate	Ankeny
Purchasing	Certificate	Ankeny
Real Estate Sales	Certificate	Ankeny
Residential Care Facility Adm.	Certificate	Ankeny
Respiratory Therapy	AAS	Ankeny
Retailing	Certificate	Ankeny
Retail Marketing & Management	AAS	Ankeny
Retail Merchandising	Diploma	Ankeny
Sales	Certificate	Ankeny
Sales & Management	Diploma	Ankeny
Secretarial Careers		
Legal Office Technology	AAS	Urban
Medical Office Technology	Diploma	Ankeny
Medical Office Technology	AAS	Ankeny
Office Technology	Diploma	All Campuses
Office Technology	AAS	All Campuses
Small Business	Certificate	Ankeny
Small Business Management	Diploma	Ankeny
Supervision	Certificate	Ankeny
Technical Management	Certificate	Ankeny
Telecommunications Technology	AAS	Ankeny
Travel Personnel	Certificate	Ankeny
Tool & Die Making	AAS	Ankeny
Upholstery	Diploma	Ankeny
Upholstery I	Certificate	Ankeny
Upholstery II	Certificate	Ankeny
Upholstery III	Certificate	Ankeny
Welding	Diploma	Ankeny
Welding - Oxy-acetylene Welding	Certificate	Ankeny
Welding - Shielded Metal Arc Welding	Certificate	Ankeny
Welding - Gas Metal Arc Welding	Certificate	Ankeny
Welding - Gas Tungsten Arc Welding	Certificate	Ankeny
Welding - Blueprint Reading	Certificate	Ankeny
Welding - Structural Welding	Certificate	Ankeny
Welding - Pipewelding	Certificate	Ankeny
Word Processing	Certificate	All Campuses

AA = Associate in Arts Degree   *AS = Associate in Science Degree*   *AGS = Associate in General Studies*

Ankeny Campus

2006 South Ankeny Boulevard
Ankeny, Iowa 50021
(515) 964-6200 or, toll-free in Iowa
1-800-362-2127
1-800-362-2976
FAX: 515-964-6655

Boone Campus

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

Carroll Campus

906 N. Grant Road
Carroll, Iowa 51401
(712) 792-1755 or, toll-free in Iowa
1-800-622-3334
FAX: 712-792-6358

Urban Campus

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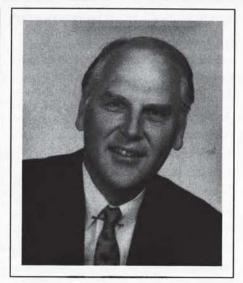Des Moines, Iowa 50314
(515) 244-4226
FAX: 515-248-7253

Board of Directors

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

The official catalog of Des Moines Area Community College contains general information regarding fees, curriculum, and related policies and procedures. Every effort has been made to make this catalog accurate as on the date of publication. However, all policies, procedures, fees and charges are subject to change at any time, by appropriate action of the Board of Directors if required.

Des Moines Area Community College shall not illegally discriminate on the basis of race, color, national origin, creed, religion, sex, age, or disability in its educational policies, programs

Joseph A. Borgen, President
Des Moines Area Community College

and services or its employment policies and practices in accordance with all applicable local, state and federal civil rights laws, rules and regulations. Individuals who believe they have been discriminated against may file a complaint through the College Discrimination Complaint Procedure. Complaint forms may be obtained from the Human Resources Department, the campus Dean's office, or the EEO/AA Coordinator. Persons who wish additional information or assistance may contact the EEO/AA Coordinator, Dr. Fred D. Gilbert, Jr., Executive Director, Research and Federal Affairs, (Bldg. 20, 964-6431.)

History

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

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

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

In 1968, the Board of Directors adopted Des Moines Area Community College as the official

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 the providing of personalized liberal arts curricula and hi-tech vocational education.

We believe, however, that our job goes beyond the simple offering of good classroom instruction and learning experiences. Accordingly, 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.

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.

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.

- prepare students for transfer, typically as juniors, to four-year colleges and universities.

- 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 student support services which improve a student's chances for success in their educational endeavors.

- provide learning experiences and cocurricular activities which promote the personal, social, academic, and vocational development of students.

- 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. The College is also approved by the Iowa State Department of Education and the Iowa Board of Regents. College transfer curricula meet the requirements of four-year colleges and universities. Both career option and college transfer curricula carry the approval of the United States Department of Education and are approved for veterans.

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

The Campuses

Ankeny Campus is located on a 320 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 23-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 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 Seventh and Laurel Streets in Des Moines.

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.

Academic Calendar 1992-1993 (tentative)

Fall Semester - September, 1992

August 31, 1992	Fall Semester Begins (first day of classes)
September 7, 1992	Labor Day Holiday - No Classes - Offices Closed
*October 1, 1992	Application Deadline for Fall Graduates
October 23, 1992	MIDTERM
November 23, 1992	Last Day to Withdraw From Classes
November 26-28, 1992	Thanksgiving Holiday - No Classes - Offices Closed
December 18, 1992	Last Day of Fall Semester
December 24, 1992 to January 4, 1993	Christmas and New Year's Holidays - Offices Closed

Spring Semester - January, 1993

January 13, 1993	Spring Semester Begins (first day of classes)
January 18, 1993	Martin Luther King Holiday - No Classes - Offices Closed
February 1, 1993	Application Deadline for Spring Graduates
March 9, 1993	MIDTERM
March 22-26, 1993	Spring Break - No Classes - Offices Open
April 14, 1993	Last Day to Withdraw From Classes
May 7, 1993	Last Day of Spring Semester
	10:00 a.m. Boone Graduation
	7:00 p.m. Ankeny/Urban Graduation

Summer Semester - May, 1993

May 24, 1993	Summer Semester Begins (first day of classes)
May 31, 1993	Memorial Day Holiday - No Classes - Offices Closed
June 15, 1993	Application Deadline for Summer Graduates
June 29, 1993	MIDTERM
July 5, 1993	Independence Day Holiday - No Classes - Offices Closed
July 20, 1993	Last Day to Withdraw From Classes
August 4, 1993	Last Day of Summer Semester
August 5, 1993	Ankeny/Urban Graduation, 7:00 p.m.
August 6, 1993	Carroll Graduation, 6:30 p.m.

*Fall Graduates will attend Spring Graduation

Important Phone Numbers

General College Information 515-964-1000

Admissions	515-964-6495	**Housing**	
Alumni Affairs	515-964-6376	Ankeny	515-964-6374
Bookstore	515-964-6302	Boone	515-432-7203
College Information Centers		Iowa College Aid Commission	515-281-3501
Ankeny	515-964-6241	Job Placement	515-964-6215
Boone	515-432-7203		
Carroll	712-792-1755	**Learning Centers**	
Urban	515-244-4226	Ankeny	515-964-6255
Continuing Education	515-964-6404	Boone	515-532-7203
Counseling, Advising & Placement		Carroll	712-792-1755
	515-964-6246	Urban	515-248-7204
Credentials/Evaluation	515-964-6647	Library	515-964-6317
Day Care Services	515-964-6238	Nurse	515-964-6352
Economic Development	515-964-6397	Student Accounts	515-964-6446
Evening/Weekend College	515-964-6286	Student Records	515-964-6224
Financial Aid	515-964-6282	Veterans' Affairs	515-964-6284
GED	515-964-6384	Vocational Rehabilitation	515-964-6366
Handicapped Services	515-964-6628	**Toll-Free**	
Security	515-964-6259	Ankeny & Boone	1-800-362-2127
Security Cellular Phone	515-964-6500	Carroll	1-800-622-3334

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

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

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

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

Admissions Requirements and Procedures

New Students

Admissions materials are to be submitted to:
Admissions Office,
Des Moines Area Community College
2006 South Ankeny Boulevard
Ankeny, Iowa 50021

Application steps:
1. Submission of a completed DMACC "Application for Admission," including payment of a non-refundable $10.00 processing fee.

2. Submission of high school transcript or GED scores.

3. Completion of required assessment. (As per notification after completing steps #1 and #2.)

4. Completion of any other program or course prerequisites for the specific program for which application has been made.

An applicant is to declare his/her program/major on the "Application for Admission." Undecided applicants are to contact the Counseling and Placement 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 served basis. If a program is filled at the time of completion of steps 1-4 (above), the applicant is notified that he/she has been placed on a stand-by status.

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

International Students
International applicants requesting admission must:

1. Complete an application for admission to the college.

2. Submit a completed and notorized statement of Financial Support to show evidence of ability to meet educational and living expenses while attending the college.

3. Provide official evidence of the English proficiency required by the college by sending one of the following:

    A. TOEFL scores (Test of English as a Foreign Language/offered worldwide).

    B. MICHIGAN scores (test is administered at American institutions worldwide, and at the Learning Centers at DMACC).

    C. Official transcript showing completion of Freshman level English at an approved U.S. college or university.

4. Complete an International Student Data sheet.

5. Make a deposit of $2,000 (U.S dollars) per semester, to cover admission and educational costs while attending the college.

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

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

High School Students
A. The College offers the opportunity for qualified high school students to enroll in credit classes when recommended and approved by the student's parents and principal or guidance counselor and the College.

B. Eligible high school students may be accepted for admissions to DMACC under Iowa's Postsecondary Enrollment Options Act. Approval by the high school is man-

datory before any high school student may be accepted under this program. If approved and accepted, the high school pays up to $250.00 per course of the cost of tuition, fees, books, materials and supplies.

C. DMACC has entered into specific course joint enrollment agreements with some of the high schools in the merged area. These courses are offered in the high schools under curriculum guidelines jointly approved by DMACC and the high school.

    The student pays DMACC's admission fee and a fee for each course enrolled.

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 through the Information Office at the Ankeny Campus or through the Student Services Offices on the Boone, Carroll 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. Normal admission procedures will be waived. "Guest student" status can be claimed for one term only.

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. 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 and submit it to the Student Records and Enrollment Services Office for approval with their voters registration or permanent residential alien registration card and two of the following supporting documents:

- 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.

Program with Selective Admissions

Dental Hygiene Program
The College selects a maximum of 20 individuals for admissions to the Dental Hygiene Pro-

gram each year. New students enter the program fall semester only. In order to be considered for admission, applicants must submit a high school transcript or GED completion and official college transcripts. A cumulative college grade point average of 2.0 and completion of college General Chemistry I and General Anatomy and Physiology with a "C" or better (DMACC equivalent course numbers are CHEM 131 and BIOL 154) are required.

On February 1 and June 15, Dental Hygiene applications and documentation will be reviewed. Applicants who have completed the program entry requirements will be accepted by date of application to the Dental Hygiene Program until such time as the program has filled. Applicants will be notified in writing and will be given 7 working days to accept or deny their acceptance in the class.

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

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

Academic Achievement Centers

The Academic Achievement Centers located on each campus are available to all students and staff members. 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 .

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, program prerequisites or enrichment.

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

Contact the Academic Achievement Centers at the Ankeny, Boone, Carroll and Urban Campuses for additional information.

Tutoring Program

The Peer Tutoring Program is offered for all students. One-on-one tutoring is available for students having difficulty in course materials. Peer tutors are required to complete a training program that emphasized active learning and academic independence. Contact the tutoring services program in the Academic Achievement Center at the Ankeny Campus or the Student Life Offices at the Boone, Carroll, & Urban Campuses.

Assessment Centers

Ankeny Campus provides assessment services for current and prospective students. Some of the assessment services available are ASSET testing, diagnostic testing for placement, CLEP testing and other tests used for counseling, academic advising, and educational or career planning. Assessment services are also available on the Boone, Carroll and Urban Campuses.

Support Services

Supplemental support services are available to students who are enrolled in a vocational program. Students may request individual or small group, scheduled tutorial sessions with either peer or professional tutors. Lab assistants are available to aid students in the lab setting. Services of readers and interpreters are also offered. Students desiring any one or a combination of these support services need to contact the Academic Achievement Center, Ankeny Campus or the Student Life Offices on the Boone, Carroll and Urban Campuses.

Services for Students with Disabilities

Services are available for students who have mental, physical or learning disabilities. Students who need academic accommodations and assistance should contact the Academic Achievement Center, Ankeny Campus or the Student Life Offices on the Boone, Carroll and Urban Campuses.

Through a special agreement with the Iowa Division of Vocational Rehabilitation Services, a rehabilitation counselor is assigned to the College on the Ankeny Campus to provide rehabilitation services to eligible handicapped 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 problems.

Counseling Services

The Counseling staff provides a wide range of services to assist students in gaining the maximum benefit from their college experience. Counseling services include self understanding, personal counseling, crisis intervention and referral, career planning and decision making, college major selection and college adjustment. Workshops are offered for personal growth, assertiveness, career exploration, stress management and test anxiety. Career or personality testing is available as well as individual counseling sessions.

Academic Advising

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

Placement Services

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

Individualized placement services are offered to persons identified as special needs students (i.e. mentally and physically handicapped or those who experience learning disabilities.) For specific information contact the Counseling, Advising, and Placement Office, Ankeny Campus or the Student Life Offices on the Boone, Carroll and Urban Campuses.

College Tours

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

Libraries

Ankeny Campus

The library at the Ankeny Campus provides printed and non-printed resources material to students and staff members. The library collection of 55,000 volumes relates to the humanities, social science, natural and health science, business and technology. In addition, the library maintains subscriptions to approximately 600 current periodicals and houses collections of audiovisual materials including videotapes of TV courses. Materials from other libraries can also be borrowed by the library for use by DMACC students.

Boone Campus

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

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

The Boone Campus Library has been a full

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 parttime employment. Some Specialist Certificates are not eligible for Federal or State Financial Aid.

Single File-USAF, Inc.

How to Apply: One application is all it takes. Applications are available at all DMACC campus.

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

Grants & Scholarships

Pell Grants are based on financial need and are available if you have applied and show financial need and are an undergraduate enrolled at least one-half time. Maximum amount $2,190 for a full-time student.

Supplemental Education Opportunity Grants (SEOG): SEOG is available if you have completed an application and show financial need and are an undergraduate enrolled at least one-half time. Maximum amount $400 for a full-time student.

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

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 or sophomore at DMACC, and (3) plan to enroll full-time. See your high school counselor for assistance. Maximum amount $600.

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 Aids Office, Building 1, Ankeny Campus, or the Business offices at the Urban, Boone and Carroll Campuses.

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

Loans

Perkins Student Loans (formerly NDSL): To be eligible you need to attend DMACC one-half time and show financial need. These loans are made through DMACC's Financial Aid Office. Repayment and interest (5 percent) begin after a student is no longer enrolled one-half time. Maximum $2,000 yearly for full-time student. Entrance and exit interviews are required.

Stafford Student Loans (formerly Guaranteed Student Loans): These are loans available by obtaining an application from your bank or credit union. Interest and repayment begin six months after terminating enrollment or a student is no longer enrolled one-half time. Loans are for students who attend college at least one-half time and complete a financial aid application. Entrance and exit interviews are required. Checks are held 30 days if student is first time borrower.

Nursing Loans: These are 5 percent interest loans made to Nursing students enrolled at least one-half time showing financial need. Entrance and exit interviews are required.

Emergency Student Loan Fund: Seventy-five dollars is available to a student enrolled one-half time or more, and has earned a cumulative grade point average of 2.00 or greater. These loans are interest free. Payment in full is due within four weeks from the date of the loan.

Parent Loans for Undergraduate Students (PLUS) and Supplemental Loans for Students (SLS): A PLUS loan is a variable interest rate loan available to parents of dependent students and a SLS loan is a variable interest rate loan available to independent students. Maximum is $4,000 per year with an aggregate total of $20,000. Students must be enrolled at least one-half time. SLS requires a student to first apply for Stafford loan. Checks are held 30 days if student is first time borrower.

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

Employment

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

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

Satisfactory Academic Progress

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

Academic Achievement Centers

The Academic Achievement Centers located on each campus are available to all students and staff members. 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 .

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, program prerequisites or enrichment.

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

Contact the Academic Achievement Centers at the Ankeny, Boone, Carroll and Urban Campuses for additional information.

Tutoring Program

The Peer Tutoring Program is offered for all students. One-on-one tutoring is available for students having difficulty in course materials. Peer tutors are required to complete a training program that emphasized active learning and academic independence. Contact the tutoring services program in the Academic Achievement Center at the Ankeny Campus or the Student Life Offices at the Boone, Carroll, & Urban Campuses.

Assessment Centers

Ankeny Campus provides assessment services for current and prospective students. Some of the assessment services available are ASSET testing, diagnostic testing for placement, CLEP testing and other tests used for counseling, academic advising, and educational or career planning. Assessment services are also available on the Boone, Carroll and Urban Campuses.

Support Services

Supplemental support services are available to students who are enrolled in a vocational program. Students may request individual or small group, scheduled tutorial sessions with either peer or professional tutors. Lab assistants are available to aid students in the lab setting. Services of readers and interpreters are also offered. Students desiring any one or a combination of these support services need to contact the Academic Achievement Center, Ankeny Campus or the Student Life Offices on the Boone, Carroll and Urban Campuses.

Services for Students with Disabilities

Services are available for students who have mental, physical or learning disabilities. Students who need academic accommodations and assistance should contact the Academic Achievement Center, Ankeny Campus or the Student Life Offices on the Boone, Carroll and Urban Campuses.

Through a special agreement with the Iowa Division of Vocational Rehabilitation Services, a rehabilitation counselor is assigned to the College on the Ankeny Campus to provide rehabilitation services to eligible handicapped 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 problems.

Counseling Services

The Counseling staff provides a wide range of services to assist students in gaining the maximum benefit from their college experience. Counseling services include self understanding, personal counseling, crisis intervention and referral, career planning and decision making, college major selection and college adjustment. Workshops are offered for personal growth, assertiveness, career exploration, stress management and test anxiety. Career or personality testing is available as well as individual counseling sessions.

Academic Advising

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

Placement Services

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

Individualized placement services are offered to persons identified as special needs students (i.e. mentally and physically handicapped or those who experience learning disabilities.) For specific information contact the Counseling, Advising, and Placement Office, Ankeny Campus or the Student Life Offices on the Boone, Carroll and Urban Campuses.

College Tours

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

Libraries

Ankeny Campus

The library at the Ankeny Campus provides printed and non-printed resources material to students and staff members. The library collection of 55,000 volumes relates to the humanities, social science, natural and health science, business and technology. In addition, the library maintains subscriptions to approximately 600 current periodicals and houses collections of audiovisual materials including videotapes of TV courses. Materials from other libraries can also be borrowed by the library for use by DMACC students.

Boone Campus

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

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

The Boone Campus Library has been a full

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

Carroll Campus

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

Urban Campus

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

Food Services

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

College Bookstores

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

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

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

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

Students whose books do not qualify for a refund are encouraged to use our book buyback at the end of each semester. Notices will be posted at least four weeks before the end of the semester with all necessary information.

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

Students receiving financial aid, loans, or grants must authorize payment for tuition and fees in the Student Accounts office before purchasing books and supplies.

Student Housing

Student Housing for 200 students is located on the Ankeny Campus. This housing is owned and operated by a private firm. For information about this housing contact Vista Property Management, 1001 Office Park Rd., Suite 100, West Des Moines 50265, (515) 225-1800. 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 Carroll and Boone campuses is available from the Student Services Offices at the respective campuses.

Parking and Traffic Regulations

Parking regulations will vary at the Ankeny, Boone, Carroll and Urban Campuses. The registered holder of a 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

For permits and information, contact the Security Office or Reception/Student Service Assistants on the Ankeny Campus or the Business Office on the Boone, Carroll and Urban Campuses.

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 and to act as a liaison between the student and the Veterans Administration.

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 course type, and number of hours enrolled. Details may be obtained at the Office of Veterans Services, Ankeny Campus, 964-6284 or 1-800-362-2127 extension 6284.

Health Services
(Campus Nurse)

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

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

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

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

Student Activities

Much of a student's growth is the result of participation in activities, clubs and organizations. It is the philosophy of the College that co-curricular activities complement the academic program. The activities are financed by your activity 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 this activity fee.

Student Centers

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

Student Action Board

The Student Action Board, as the primary student representative body, is an integral part of the College. Through its work, you are provided an opportunity to participate in the democratic process. Meetings are held regularly. The Board serves as a liaison between the administration/faculty/staff and the student body in areas of mutual interest. The purposes of the organization are to promote College spirit, provide a focal point for discussions between students and the College staff, and to give you a representative voice in College affairs. Any student, administrator, or faculty member may attend meetings of the Student Action Board and take part in discussion, but only members may vote. The Board offers to students activities and services in four areas: campus life, professional development and programming.

Student Identification

If you attend classes for credit at the Ankeny, Boone and Urban locations, you are required to

have a Des Moines Area Community College student ID/Activity card. The ID/Activity card will be mailed to each student usually four to five weeks after the term begins. You should carry your ID/Activity card with you at all times. It is required for services at various College offices and by campus security.

Alumni Association

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

Student Clubs and Organizations

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

1. Pre-professional and Departmental Clubs are joined by students wishing to pursue interests which contribute to the development of career fields.

2. Service Organizations have as their primary purpose activities which will contribute positively to the College and the community.

3. Scholastic Honorary Organizations offer membership on the basis of academic excellence and performance.

4. Special Interest Organizations are planned by students who desire to develop or broaden their interest in some particular aspect of their lives.

Student Publications

The "Campus Chronicle" on the Ankeny Campus and the "Bear Facts" on the Boone Campus are the two student newspapers at Des Moines Area Community College. The newspapers emphasize news, features entertainment, sports and campus events. For additional information contact the newspaper office.

Student Handbook

The Student handbook is developed to assist you in becoming informed about Des Moines Area Community College. You should be familiar with its contents, which include a general overview of College policies and procedures as they relate to you and your college life student conduct and discipline, grievances and other items of student concern.

Intercollegiate Athletics, Intramural Sports, and Recreational/Wellness Program

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

Intramural

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

Intercollegiate

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

Recreation/Wellness Program

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

Student Records, Confidentiality

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

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

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

Student Rights and Responsibilities

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

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

Student Conduct, Discipline and Appeals

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

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

Student Academic Appeals

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

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

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

Economic Development Group

The Economic Development Group of Des Moines Area Community College assists in growth and development of business enterprises, government agencies, communities, and individuals in central Iowa by providing quality training.

Contracted Training - Programs and materials are customized to meet specific needs of a client. From confidential job procedures to management skills; flexible scheduling provides training at the worksite, on a campus, or out-of-state.

New Jobs Training Program

This unique program, offered through Des Moines Area Community College, is available as an incentive to expanding central Iowa companies and employers new to central Iowa who create new jobs. This college-business partnership brings together the full resources of DMACC to assist businesses in training new employees to be productive.

Job Re-training Program

This program is offered through Des Moines Area Community College to central Iowa companies who are upgrading, modernizing, or expanding a business to increase production or efficiency. The purpose of the retraining program is to upgrade existing employees with the skills necessary to function in today's workplace.

Transportation Institute

The Des Moines Area Community College Transportation Institute offers inexperienced drivers an opportunity to become professional commercial vehicle operators. This eight-week industry approved program includes extensive behind-the-wheel experience, with a ratio of two students per truck. Participating companies screen and sponsor enrollees and upon successful program completion, placement is guaranteed.

Evening/Week-end Off Campus College

The Evening/Weekend Off Campus College (EWOCC) is responsible for coordinating all instructional services during evenings and weekends at the Ankeny Campus. EWOCC also schedules credit classes in several local schools throughout the district. The mission of this unit is to assist students who wish to attend classes outside the day class schedule. In some cases students can complete program requirements totally by enrolling in these classes.

The department also provides technical support to the other campuses on issues related to evening and weekend operation.

Continuing Education

Public seminars, workshop classes and conferences are offered throughout the district in cooperation with local schools and organizations. The department offers a variety of continuing education classes in business/management, office occupations, community education, health, insurance, industry and technology, and computer applications. Classes are also provided for meeting the continuing education requirement for licensure in several areas including cosmetology, insurance and real estate.

The Conference Center on the Ankeny Campus provides a setting for conferences, workshops, and seminars. The facility is available to business and community groups. A variety of DMACC workshops are also offered.

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 Standard credit with the exception of transfer credit will be included on the student's permanent record after 12 semester hours of credit has 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. A minimum of 12 semester hours of credit must be successfully completed at DMACC before AP credit may be applied to the student's permanent record.

College Level Examination Program (CLEP)

Des Moines Area Community College will award credit based on scores obtained on the General examinations and the 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 before the credit may be applied to the student's permanent record.

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

For detailed information contact the Credentials 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. Students interested in taking a test-out examination should contact the appropriate department for specific information. A fee is charged for each examination.

If the examination is passed, a grade of "T" will be placed on the students' permanent academic record after they have successfully completed a minimum of 12 semester credit hours at DMACC. "T" grades are not used in computing students' grade point averages, but the credit does become part of the students' permanent record.

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. A maximum of four hours of 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 midterm date of the following term. Should there be an unusual emergency, 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. When another grade is earned in a previously failed course, 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. Any student may repeat courses taken at DMACC in which they have earned a grade of "C" or less. When a course is repeated only the grade point value of the final grade earned will be included in calculating the cumulative average.

Adding Courses

Students may add courses through the first five class days each term. Students desiring such a change should obtain a "Drop-Add Notice" from the counselor, advisor, or the Student Records and Enrollment Services Office.

Dropping Courses

Students may drop a course at any time prior to the close of the 60th class day during all normal-length terms. A grade of "W" will be recorded. For summer sessions, the last date to drop a course may vary depending upon the length of the session. In such cases, the appropriate date will be publicized. "Drops" are not effective or valid until a drop notice, or written notification is received in the Student Records and Enrollment Services Office.

Withdrawal from College

Students may withdraw from college at any time prior to the close of the 60th class day in all normal-length terms and receive a grade of "W" for all courses.

Withdrawals are not effective or valid until written notification is received in the Student Records and Enrollment Services Office. If a grade of "W" is to be recorded, the notification must be received by the deadline date.

In unusual circumstances (death, disability, etc.), the College may initiate withdrawal for a student retroactively.

Auditing Courses

A student may enroll in any course on an audit basis if space is available. Priority is given to students who wish to enroll for credit. Each audited course will appear on the student's transcript with no credit or grade. 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 60th day in normal length terms. The completion of a Drop-Add Notice" form is required.

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. 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 granting credit.

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

Upon completion of the transfer credentials evaluation, students will receive a copy of the Transfer Credit Evaluation form and a Graduation Analysis 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 policies of the college.

Credit for Educational Experience in the Armed Forces Credit earned through educational experiences in the armed forces can be validated and accepted by the college. An American Council on Education (ACE) publication, "Guide to the Evaluations of Educational Experiences in the Armed Services," is generally used in making these determinations.

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

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

Grading System

The grading scale is as follows:

A - Superior
B - Above Average
C - Average
D - Below Average
F - Failing
W - Dropped or Withdrew
I - Incomplete
N - Audit, No Credit
X - Course Repeated
T - Credit by Testing
P - Pass
L - Credit for prior educational or occupational experience
S - Satisfactory (CEU courses)
U - Unsatisfactory (CEU courses)

Grade Reporting

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

Requests for Transcripts

Transcripts of work taken at Des Moines Area Community College are issued upon written request by the student or former student to the Office of Academic Records. Transcript request forms are available at each DMACC campus in the Student Services/Records Office. While enrolled in the College, transcripts are 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.

New Start on Academic Record

A student who has changed their program of study and is either on or in danger of probation due to unsatisfactory grades earned in their previous program may request a "New Start" on their academic record. No grades are removed from the transcript record by a "New Start". Although, if granted, grades earned for the term(s) specified in the request, as well as all preceeding terms, will not be included in the computation of the student's cumulative grade point average.

The "New Start" is a one time option only and the student may not apply for a "New Start" until they have successfully completed at least 6 semester hours of program requirements in their new program. If interested in the "New Start", students should contact the Counseling/Advising office on their campus.

Classification of Students

Freshman - a student who has earned less than 32 semester hours of credit towards the completion of an AA, AS or AGS degree, a student enrolled in a one-year career program or certificate program, or a student who has not yet enrolled in the 2nd year of an AAS or AAA program.

Sophomore - a student who has earned 32 or more semester hours towards the completion of an AA, AS or AGS degree, or a student enrolled in the 2nd year of an AAS or AAA program.

Full-time - a student registered for 12 or more semester credits (8 in the summer term).

Part-time - a student registered for 11 or fewer semester credits (7 or fewer in the summer term).

Guest - a full-time credit student attending DMACC on an interim basis who has already been accepted for admission to another college or whose primary enrollment is at another college. Normal admission procedures will be waived. Guest student status can be claimed for one term only.

Scholastic Standards

Associate Degree Programs: The cumulative grade point average (GPA) must be 2.0 in all course work taken at DMACC which is applicable to that particular degree.

Diploma Programs: Passing grades are required

in all courses as outlined in the program of study. The cumulative grade point average must be 2.0 in all course work taken at DMACC which is applicable to the diploma.

Certificate of Specialization: Passing grades must be received in all required courses as outlined in the program of study. The cumulative grade point average of 2.0 in all course work applicable to the certificate is required for satisfactory completion.

Students who have completed in 12 or more credits at Des Moines Area Community College are subject to the following academic progress standards:

A. Any student maintaining a cumulative grade point average of 2.0 or higher is considered in "good academic standing." Individual programs of study may require a cumulative GPA higher than 2.0 or may specify additional requirements. In such programs, the program chair will notify enrolled students of such requirements.

B. If a student's cumulative GPA falls below 2.0 at the end of any term, the student is placed on "probationary status." A probationary student is eligible to re-enroll for the subsequent term, but is urged to seek help with his/her course load and course selection from the Counseling, Advising and Placement staff.

Any student on probationary status will continue on probationary status if his/her term GPA for the term following placement on probationary status is 2.0 or higher, but the cumulative GPA remains below 2.0. The same rule will apply for subsequent terms.

C. A student on probationary status who earns a term GPA of less than 2.0 will be placed on "suspended" status. A student on suspended status will not be allowed to re-enroll in credit classes at Des Moines Area Community College for a period of one term except for purposes of remediation. Approval from designated officials will be required for the exception.

After one term, a student on suspended status may be readmitted to a career education or paraprofessional program of study if he/she meets the standards for readmission established by that program. A student will be eligible for readmission to a general studies program after one term of suspended status.

In all instances, a suspended student who is subsequently readmitted will be placed on probationary status.

D. A student placed on either probationary or suspended status, may appeal that placement to the College's judicial committee by following the procedures established by that committee.

This section contains information on ...
Programs of Study
Transfer Information
   • Articulation Agreements -
    Transfer Plans
Graduation Analysis Report (GAR)
Graduation Application
Commencement
Academic and Graduation Honors
   • Phi Theta Kappa (Boone Campus)
   • Dean's List
   • President's List
   • Graduation with Honors
Degrees/Diploma/Certificates
   • Associate in Arts Degree (AA)
   • Associate in Science Degree (AS)
   • Associate in Applied Arts Degree
    (AAA)
   • Associate in Applied Science Degree
    (AAS)
   • Associate in General Studies Degree
    (AGS)
   • Diploma
   • Certificate of Specialization
   • Certificate of Completion

Programs of Study

Des Moines Area Community College offers instruction in a variety of courses and programs to meet the diverse needs of its students.

Students may engage in areas of study which emphasize:

College Transfer

- **General Education** courses are designed for students who intend to transfer to a four year institution. Students may also take these courses for enrichment or with the intention of terminating 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.

Career Education

- **Vocational/Technical** courses are designed for students who intend to teach the essential skills and operational theory needed by the student to ensure occupational competency. The Vocational/Technical programs and certificates are designed to fulfill the unique 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 mathematic skills. ABE services are provided to adults who are seeking high school completion, vocational advancement, further training, English as a Second Language, and general improvement of everyday living skills. Classes are offered in many locations throughout the College District.

Adult High School Diploma program is designed for adult students seeking a diploma. Courses required of all students enrolled in the program are:
- Two credits in American History
- One credit in American Government
- Two credits in Mathematics
- Two credits in Science
- Four credits in English

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

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

Transfer Information

Des Moines Area Community College 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 academic 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

Articulation Agreements - Transfer Plans

Articulation agreements and 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.

General articulation agreements available are:
- Buena Vista
- College of Osteopathic Medicine & Surgery
- Creighton University
- Drake University
- Grand View College
- Iowa State University
- Marycrest College
- Missouri Western State College
- Morningside College
- Northeast Missouri State University
- Northwest Missouri State University
- Simpson College
- University of Northern Iowa
- University of Iowa

Transfer plans available are:
- Business
- Chiropractic
- Computer Programming
- Computer Science
- Dentistry
- Education
- Engineering
- Hotel & Restaurant Managment
- Journalism
- Law
- Medicine
- Mortuary Science
- Nursing
- Pharmacy
- Physicians Assistant
- Social Work
- Veterinary Medicine

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

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

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

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

Graduation Requirements

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

Full requirements of the chosen program must be met; adjustments will be made in instances where program curriculum has changed and courses are no longer available.

Graduation Analysis Report

A graduation analysis report is mailed to students during each term of enrollment. This report assists the student in determining progress toward completion of requirements for a particular program of study.

Graduation Application

Candidates for graduation must submit an Application for Graduation along with the appropriate fee to the Graduation Analysis Office during the first month of the semester of graduation.

Commencement

Commencement ceremonies are held at the end of

spring and summer terms for Ankeny and Urban Campus graduates. Boone Campus ceremonies are held at the end of spring term and Carroll Campus ceremonies at the end of summer term.

ACADEMIC AND GRADUATION HONORS

Phi Theta Kappa

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

Dean's List

Full-time students who earn a 3.50 to 3.99 grade point average in any term are honored by being named to the Dean's List. Part-time students shall be considered once they have accumulated 12 or more semester credits. The students shall continue to be eligible for honors status each time they accumulate an additional 12 or more semester credits.

President's List

Full-time students who earn a 4.0 grade point average in any term are honored by being named to the President's List. Part-time students shall be considered once they have accumulated 12 or more semester credits. The students shall continue to be eligible for honors status each time they accumulate an additional 12 or more semester credits.

Graduation With Honors

Candidates for graduation who earn a cumulative grade point average of at least 3.50 in their program of study will be graduated with honors.

Degrees Awarded

Des Moines Area Community College awards the Associate in Arts (AA), Associate in Science (AS), Associate in Applied Arts (AAA), Associate in Applied Science (AAS), and Associate in General Science (AGS) degrees; Diploma and Certificate of Specialization.

DEGREES 490100

Associate in Arts Degree (AA)

The Associate in Arts (AA) Degree at Des Moines Area Community College is primarily a general education degree intended for transfer. General education is education which is baccalaureate oriented and includes courses within communications, social and behavioral sciences, mathematics and sciences, and humanities.

To receive an AA degree a student must:

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

B. Complete at DMACC a minimum of 1/3 of the semester credit hours applicable to the degree being pursued.

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

D. Complete a minimum of 64 semester credit hours.

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

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

Core Requirements - 48 Credits

A. Communications - 9 credits

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

> ENGL 117
> and
> ENGL 118 or ENGL 115
> and
> SPCH 110 or SPCH 111 or SPCH 117

B. Social and Behavioral Sciences - 9 credits

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

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

C. Mathematics and Sciences - 9 credits

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

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

> BIOL 118 & 119, 126, 127, 145, 146, 147, 149, 154
> BSAD 152
> CHEM 120, 131, 132, 151, 152, 161, 162
> MATH 115, 118, 121, 122, 123, 124, 129, 130, 132
> PHYL 102, 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 Requirements - 12 credits

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

F. Electives - 16 credits

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

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

Total AA Degree Requirements - 64 credits

Associate in Science Degree (AS)

The Associate in Science (AS) degree at Des Moines Area Community College is a college transfer degree designed especially for students desiring additional career specialization during their first two years of college. Curricular offerings include all of the college's general education courses plus collegiate level courses designed to fulfill a variety of professional and occupational goals. This degree is especially appropriate for students wishing to complete a paraprofessional or college parallel/career option program with the intention of either seeking employment or continuing studies at a baccalaureate degree-granting institution.

To receive an AS degree a student must:

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

B. Complete at DMACC a minimum of 1/3 of the semester credit hours applicable to the degree being pursued.

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

D. Complete a minimum of 64 semester credit hours.

E. Include at least 24 semester credit hours of core courses.

F. Include at least 40 semester credit hours of elective credit.

Core Requirements - 24

A. Communications - 9 credits

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

> ENGL 117
> and
> ENGL 118 or ENGL 115
> 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

1. Student must take one MATH or BSAD course and one science, BIOL, CHEM or PHYL listed below.

> BIOL 118, 119, 126, 127, 145, 146, 147, 149, 154

BSAD 152
CHEM 120, 131, 132, 151, 152, 161, 162
MATH 115, 118, 121, 122, 123, 124, 129, 130, 132
PHYL 102, 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. Electives - 40 credits

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

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

Total AS Degree Requirements - 64 credits

Associate in Applied Arts Degree or Associate in Applied Science Degree

The Associate in Applied Arts (AAA) degree or the Associate in Applied Science (AAS) degree is awarded to those individuals who satisfactorily complete an approved two year preparatory vocational/technical program. Specific program descriptions will indicate the degree awarded. While some courses required in these programs may transfer to four-year colleges/universities, students are cautioned that these degrees are not intended as transfer degrees. Students should check carefully with institutions to which they intend to transfer to determine the specific credits that will be accepted and how those credits will be applied to degrees awarded at the receiving institution.

To receive an Associate in Applied Arts (AAA) or Associate in Applied Science (AAS) degree the student must:

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

B. Complete at DMACC a minimum of 1/3 of the semester credit hours applicable to the degree being pursued.

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

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

Associate in General Studies Degree (AGS) 490100-G

The Associate in General Studies (AGS) degree is designed for those individuals who wish to choose a vocational/technical course of study suited to

their unique needs. While some courses taken to complete this degree may transfer to four-year colleges/universities, students are cautioned that this degree is not intended as a transfer degree; nor does this degree represent a specific course of study. Students should check with potential employers and institutions to which they might transfer to determine if the AGS degree will be compatible with their future goals.

To receive an AGS degree a student must:

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

B. Complete at DMACC a minimum of 1/3 of the semester credit hours applicable to the degree being pursued.

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

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

E. Complete a minimum of 64 semester credit hours.

F. Include at least 12 semester credit hours of core courses.

G. Include at least 52 semester credit hours of elective credit.

Core Requirements - 12 credits

A. Communications - 3 credits

ENGL 115, 117, 118, 410,
OFFC 205

B. 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
PLSC 111, 112, 121, 122, 126
PSCH 101, 103, 104, 105, 106, 108
SOCY 101, 102, 103, 105
SPAN 101, 102, 103, 104

C. Mathematics or Sciences - 3 credits

BIOL 118, 119, 126, 127, 132, 133, 134, 145, 146, 147, 149, 154
BSAD 152
CHEM 120, 131, 132, 151, 152, 161, 162,
ELEM 450
ELHT 313, 323
MATH 115, 118, 121, 122, 123, 124, 129, 130, 132, 410, 411
PHYL 102, 106, 111, 112, 121, 122, 401

D. Distributed Requirement - 3 credits

Select one course from 1, 2, or 3 above or SPCH 110 or SPCH 111 or SPCH 117

E. Electives - 52 credits

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

Total AGS Degree Requirements - 64 credits

Diploma

The diploma is awarded to those individuals who complete an approved program of at least 30 semester credit hours of credit. Specific requirements for the programs leading to diplomas are listed elsewhere in the catalog.

To receive a diploma the student must:

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

B. Complete at DMACC a minimum of 1/3 of the semester credit hours applicable to the degree being pursued.

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

D. Complete all required courses in a particular program of study. (Minimum of 30 semester credit hours.)

Certificate of Specialization

The certificate of specialization is awarded to those individuals who satisfactorily complete a curriculum of study in selected areas of study. Specific requirements for the programs leading to certificates of specialization are listed elsewhere in this catalog.

To receive a certificate the student must:

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

B. Complete at DMACC a minimum of 1/3 of the semester credit hours applicable to the certificate being pursued.

C. Complete the number of semester credit hours required in a particular program of study.

D. Complete all required courses in a particular program of study.

Certificate of Completion

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

Accounting Specialist *500200*

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

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

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

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

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

Option Courses . . . Select 1 Course From Each Option
ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
OFFC301	Typing Skill Development I	Opt2	2
OFFC329	Keyboarding I	Opt2	1
COMS181	Intro To Computer Literacy	Opt3	3
OFFC340	Intro To Office Computer Application	Opt3	3
OFFC341	Advanced Office Computer Application	Opt3	2
ENGL115	Technical & Business Writing	Opt4	3
ENGL118	Composition II	Opt4	3
ENGL410	Communication Skills	Opt4	3
MGMT203	Human Relations In Business	Opt5	3
PSCH101	General Psychology	Opt5	3
BSAD243	Quantitative Methods	Opt6	4
MATH121	Elementary Statistics	Opt6	4

Elective Courses
	Electives	3

Agri-Business *540200*

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

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

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

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

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

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

Term 1
AGRI201	Feeding & Animal Nutrition I		3
AGRI219	Soils & Fertilizers		5
AGRI206	Crop Management		3
COOP220	Career-Seeking Skills		2
SPCH110	Fundamentals Of Speech		3

Term 2
AGRI204	Animal Science I		3
AGRI205	Commodities I		3
AGRI421	Chemical Technology		3
AGRI430	Employment Experience I		4
COMS181	Intro To Computer Literacy		3

Term 3 . . . Select Option 1 Or Option 2
AGRI202	Soil Fertility		3
AGRI215	Commodities II		3
AGRI333	Petroleum Products in Agriculture	Opt1	3
MGMT203	Human Relations In Business	Opt1	3
AGRI304	Swine Production and Management	Opt2	3
AGRI305	Beef Production and Management	Opt2	3

Term 4 . . . Select 1 Course From Each Option
AGRI207	Livestock Disease Prevention		3
AGRI411	Agricultural Economics		3
AGRI436	Grain Management		2
MATH410	Mathematics for Technicians I	Opt3	3
MATH115	Finite Mathematics	Opt3	4
ACCT301	Accounting Fundamentals	Opt4	3
ACCT101	Principles Of Accounting I	Opt4	4
ENGL410	Communication Skills	Opt5	3
ENGL117	Composition I	Opt5	3

Term 5 . . . Select Option 6 Or Option 7
AGRI203	Feeding & Animal Nutrition II		3
AGRI454	Agriculture Seminar		1
BUSL101	Business Law I		3
AGRI455	Employment Experience II		4
AGRI322	Agribusiness Management	Opt6	3
MKTG103	Principles Of Selling	Opt6	3
AGRI323	Farm Management	Opt7	3
AGRI306	Advanced Crop Management	Opt7	3

Architectural Drafting *530400*

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

Graduates are employed by architects, structural, mechanical and electrical engineers, contractors, subcontractors, building equipment and material suppliers, and building code officials. Students periodically visit construction sites to observe actual construction practices.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Submit evidence of grade "C" or better in one year high school algebra or the equivalent (Academic Achievement Center Algebra

I & II or MATH 092). Students start summer term.

Graduation Requirements

To earn an Architectural Drafting diploma, complete all course work as prescribed and maintain a 2.0 grade point average.

Term 1 ... Select 1 Course From Option 1

ARCH410	Architectural Drafting I		2
ARCH460	Architectural Drafting Lab I		3
ARCH464	Construction Techniques I		2
ARCH472	Construction Estimating		2
MGMT203	Human Relations In Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3

Term 2

ARCH420	Architectural Drafting II	2
ARCH461	Architectural Drafting Lab II	3
ARCH470	Construction Techniques II	2
ARCH473	Building Equipment Techniques I	2
CADD401	Intro to Computer Aided Drafting-CAD	3
ENGL410	Communication Skills	3
MATH410	Mathematics for Technicians I	3

Term 3

ARCH462	Architectural Drafting III	2
ARCH463	Architectural Drafting Lab III	3
ARCH465	Building Equipment Techniques II	2
ARCH471	Construction Techniques III	3
ARCH475	Technical Report & Specs	2
CADD403	Intermediate CADD-Architectural	3
MATH411	Mathematics for Technicians II	3

Architecture-Preparation 020200

Students planning to major in architecture at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or the Associate in Science degree. 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 Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

ASEP - General Moters 530600-G

The Automotive Service Educational Program (ASEP), co-sponsored by DMACC and General Motors, is a two-year automotive program designed to upgrade the technical competence and professional level of the incoming GM dealership technician. The curriculum, designed by General Motors and DMACC, leads to the associate degree in Automotive Technology. The program involves classroom lecture, laboratory experiences, and a dealership sponsored work experience.

Location: Ankeny

Program Entry Requirements

Complete an application, aptitude and ability tests and be accepted by General Motors as a participant. In addition, all program participants must be sponsored by a General Motors automotive dealership.

Graduation Requirements

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

Required Courses

ASEP312	GM Specialized Electronics Training	3
ASEP317	GM Shop Fundamentals & Minor Svc	3
ASEP318	GM Steering/Suspension/Brake Systems	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 Sys	3
ASEP330	Technical Internship II	3
ASEP333	Major Service Procedures/GM Engines	3
ASEP336	GM Carb & Fuel Induction Systems	3
ASEP337	GM Tune-Up Proc & Emission Control	4

ASEP340	Technical Internship III	3
ASEP343	GM Transmissions & Transaxles	8
ASEP350	Technical Internship IV	3
ASEP354	Advanced GM Motors Systems	5
AUTO464	Automotive Measurement & 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 & Adj	3
RCEL401	Basic Electricity & Magnetism	1

ASSET - Ford 530600-F

The Automotive Student Service Educational Training Program (AS-SET), 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/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 experiences, and a dealership sponsored work experience.

Location: Ankeny

Program Entry Requirements

Complete an application, aptitude and ability tests and be accepted by Ford Motor Company as a participant. In addition, all program participants must be sponsored by a Ford Motor Company automotive dealership.

Graduation Requirements

To earn an Automotive Technology 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	3
ASST317	Ford Shop Fund & Minor Service	3
ASST318	Ford Steering/Suspension/Brakes	4
ASST320	Technical Internship I	3
ASST326	Ford Auto Air Conditioning Systems	3
ASST327	Minor Service & Repair-Ford Engines	3
ASST328	Diagnosis/Repair Ford Elec System	3
ASST330	Technical Internship II	3
ASST333	Major Serv Procedures/Ford Engines	3
ASST336	Ford Carb & Fuel Induction System	3
ASST337	Ford Tune Up Proc & Emission Control	4
ASST340	Technical Internship III	3
ASST343	Ford Transmissions & Transaxles	8
ASST350	Technical Internship IV	3
ASST354	Ford Advanced Engine Controls, Elect	5
AUTO464	Automotive Measurement & 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 & Adj	3
RCEL401	Basic Electricity & Magnetism	1

Auto Collision Technology 53060AC

The Auto Collision Technology program is designed to prepare students for employment in the new technological auto collision industry and to update those already employed.

There are two separate diploma options which can be taken individually or in combination. One option prepares graduates for entry in auto collision jobs related to paint and refinishing. The other option prepares graduates for auto collision jobs related to major structural repairs. By completing both diploma options plus three courses, students may receive an AAS degree.

In addition, individual courses may be taken to satisfy the person wanting only specific segments of the complete program.

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall or spring term.

Graduation Requirements

To earn an Automotive Collision Technology diploma or AAS degree, a

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

AUTO COLLISION - PAINT *530600-5*

Required Courses

AUTC403	Basic Shop Safety	2
AUTC405	Basic Shop Operations/Metal	5
AUTC408	Basic Shop Operations/Paint	5
AUTC410	Basic Estimating	2
AUTC412	Get Ready For Paint	6
AUTC413	Plastic Repair and Refinishing	4
AUTC420	Advanced Refinishing	6
AUTC421	Adv Estimating/Ownership/Managership	3
COOP220	Career-Seeking Skills	2
HLCR314	Emergency Care	1
ENGL410	Communication Skills	3
MATH410	Mathematics for Technicians I	3
WELD468	Related Welding - Auto Collision	2

AUTO COLLISION - METAL *530605-M*

Required Courses

AUTC403	Basic Shop Safety	2
AUTC405	Basic Shop Operations/Metal	5
AUTC408	Basic Shop Operations/Paint	5
AUTC410	Basic Estimating	2
AUTC414	Collision Analysis and Measuring	2
AUTC430	Suspension and Brakes	6
AUTC432	Auto Collision/Electrical Systems	4
AUTC440	Frame and Unibody Structural Repair	5
AUTO472	Auto Air Conditioning & Heating	4
COOP220	Career-Seeking Skills	2
ENGL410	Communication Skills	3
MATH410	Mathematics for Technicians I	3
HLCR314	Emergency Care	1
UPHL433	Auto Upholstery Installation	2
WELD468	Related Welding - Auto Collision	2

AUTO COLLISION TECHNOLOGY

Required Courses

PHYL401	Physics For Technicians	3
PSCH106	Psychology Of Human Relations & Adj	3

Option Courses . . . Select 1 Course From Option 1

BSAD234	Principles of Claims Adjusting	Opt1	3
BUSL101	Business Law I	Opt1	3
MGMT229	Small Business Management	Opt1	3

Auto Mechanics Technology *530600*

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 and attend any required orientation/information sessions. Students start fall or spring terms.

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 *530600-1*

Required Courses

PHYL401	Physics For Technicians	3
AUTO466	Fuel Systems	3
AUTO468	Automotive Electricity	6
AUTO472	Auto Air Conditioning & Heating	4
AUTO474	Automotive Engine Fundamentals	3
AUTO476	Electronic Engine Control	5

AUTO478	Advanced Tune Up	4
AUTO479	Service Management	2
AUTO482	Advanced Engines	3
ENGL410	Communication Skills	3
COOP220	Career-Seeking Skills	2
MATH410	Mathematics for Technicians I	3

AUTO CHASSIS & POWER TRAIN *530600-2*

Required Courses . . . Select 1 Course from Option 1

AUTO464	Automotive Measurement & 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
COOP220	Career-Seeking Skills		2
HLCR314	Emergency Care		1
MGMT203	Human Relations In Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3

AUTOMOTIVE MECHANICS TECHNOLOGY

WELD467	Related Weld-Transportation Trades	2

Bookkeeping & Accounting *500200-3*

The Bookkeeping and Accounting program prepares students for a career in the field of bookkeeping and recordkeeping. Upon graduation, the successful candidate will be able to distinguish, analyze, summarize, communicate, and record economic events for a profit oriented entity as an entry-level bookkeeper. The student will show sensitivity and awareness of interpersonal relationships with co-worker, supervisors, and the public.

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

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

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

Graduation Requirements

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

Required Courses

ACCT101	Principles Of Accounting I	4
ACCT351	Financial Accounting/Microcomputers	3
ACCT403	Accounting Internship	3
ACCT404	Accounting Career Seminar	1
ACCT407	Accounting Professional Development	1
BKKA403	Accounting Procedures and Management	4
BKKA411	Payroll Accounting	2
BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2
DATA330	dBase An Introduction	1
OFFC324	Office Calculators	1

Option Courses . . . Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
OFFC301	Typing Skill Development I	Opt2	2
OFFC329	Keyboarding I	Opt2	1
COMS181	Intro To Computer Literacy	Opt3	3
OFFC340	Intro To Office Computer Application	Opt3	3
OFFC341	Advanced Office Computer Application	Opt3	3
ENGL115	Technical & Business Writing	Opt4	3
ENGL118	Composition II	Opt4	3
ENGL410	Communication Skills	Opt4	3
MGMT203	Human Relations In Business	Opt5	3

| PSCH101 | General Psychology | Opt5 | 3 |

Elective Courses

| Electives | | 3 |

Building Trades 531700

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 and attend any required orientation/information session. Students start fall or spring 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	3
MATH410	Mathematics for Technicians I	3

Term 2
BLDG461	Concrete Systems & Forming	4
BLDG462	Construction Drafting & Design	2
BLDG464	Interior Trim Practices	3
ENGL410	Communication Skills	3

Term 3
BLDG480	Construction Procedures & Applications I	5
BLDG481	Construction Procedures & Applications II	5
BLDG482	Construction Procedures & Application III	5

Business & Computers 510300 N

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

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Submit evidence of "C" or better in one year of high school Algebra or equivalent (Academic Achievement Center Algebra I & II or Math 092). Students start any term.

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

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

Option Courses ... Select 1 Course From Option 1
| COMS172 | Computer Programming-FORTRAN | Opt1 | 2 |
| DATA231 | RPG/II | Opt1 | 3 |

Elective Courses

| Electives | | 3 |

Business Administration-Preparation 050600

Students planning to major in business at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or the Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Business Administration 050600-A

The Business Administration program offers you 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 Counseling, Advising, and Placement Office can provide course check sheets from the various colleges identifying which DMACC courses should be taken for college transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.
Locations: Ankeny, Boone, Carroll, Urban

Program Entry Requirements
Complete an application and attend any orientation/information sessions. Students start any term.

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

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

Option Courses ... Select 4 Courses From Option 1
BSAD151	Personal Finance	Opt1	3
BSAD224	Introduction To Investments	Opt1	3
BSAD225	Principles Of Insurance	Opt1	3
BSAD243	Quantitative Methods	Opt1	4
BUSL102	Business Law II	Opt1	3
DATA103	BASIC	Opt1	3
MGMT102	Introduction To Management	Opt1	3
MGMT229	Small Business Management	Opt1	3
MKTG102	Principles Of Marketing	Opt1	3
MKTG103	Principles Of Selling	Opt1	3

Elective Courses

| Electives | | 5 |

Child Development 130500

The Child Development program prepares students for careers working with children. By the end of the program, they can assume a position of responsi-

bility in early childhood education.

Course work includes instruction in human development, observation and guidance techniques, curriculum planning, nutrition, and emergency care.

Students will have the opportunity each term to participate in the Des Moines Area Community College Day Care Center and will also complete a practicum for one-half of a term in a community child care program.

When course work is completed, students will be qualified to work in day care centers, preschools, or public and private schools working with infants, preschoolers, or school-aged children. This program also allows a graduate to become a nanny or day care home provider. A second career option, Child Development Associate, is also available.

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall term.

Graduation Requirements

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

Required Courses

CHLD170	Child Development	3
CHLD240	Emergency Care	1
CHLD260	Observation and Guidance of Children	3
CHLD262	Curriculum & Activities I	4
CHLD264	Child Nutrition & Health	3
CHLD265	Curriculum & Activities II	4
CHLD268	Professional Relationships	1
CHLD460	Student Participation I	3
CHLD461	Student Participation II	3
CHLD464	Practicum	2

Option Courses . . . Select 1 Course From Each Option

ENGL410	Communication Skills	Opt1	3
ENGL115	Technical & Business Writing	Opt1	3
ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
SOCY101	Introduction To Sociology	Opt2	3
PSCH101	General Psychology	Opt2	3
PSCH106	Psychology Of Human Relations & Adj	Opt2	3
MGMT203	Human Relations In Business	Opt2	3

Child Development Associate 130500-1

The Child Development Associate program is designed to build on those skills developed in the Child Development diploma program and to broaden the students' background in general education. Further competence in early childhood education is developed through course work in administration of programs for children and field practicum settings.

Students completing the Child Development diploma program plus the additional requirements listed, will earn a Child Development Associate in Science degree. They may choose to transfer to a four-year institution or take one of the many jobs available in early childhood education.

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements

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

Required Courses

	Complete AS Degree Core Requirements	24
CHLD170	Child Development	3
CHLD240	Emergency Care	1
CHLD260	Observation and Guidance of Children	3
CHLD262	Curriculum & Activities I	4
CHLD264	Child Nutrition & Health	3
CHLD265	Curriculum & Activities II	4
CHLD266	Admin Of Programs/Children	3
CHLD268	Professional Relationships	1

CHLD460	Student Participation I	3
CHLD461	Student Participation II	3
CHLD464	Practicum	2
CHLD465	Child Development Assoc Practicum	3

Elective Courses

Electives	7

Chiropractic-Preparation 1206 AC

Students planning to major in pre-chiropractic may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements at the four-year institutions to which they plan to transfer.

The Counseling, Advising, Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students should contact a counselor or advisor for course planning assistance.

Commercial Art 501200

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

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

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

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

Location: Ankeny

Program Entry Requirements

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

Graduation Requirements

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

Required Courses

CART401	Commercial Art Orientation	3
CART403	Communication Design I	3
CART404	Typography II	3
CART405	Typography I	2
CART407	Production Art I	3
CART410	Illustration I	4
CART411	Communication Design II	3
CART414	Illustration II	4
CART415	Production Art II	3
CART421	Internship Preparation	2
CART426	Communication Design III	3
CART430	Production Art III	3
CART436	Portfolio Preparation I	3
CART437	Communication Design IV	3
CART440	Production Art IV	3
CART444	Portfolio Preparation II	3
DKTP401	Introduction to Desktop Publishing	3
ENGL117	Composition I	3
PHOT105	Principles Of Photography	3
SPCH110	Fundamentals Of Speech	3
CART424	Internship I	3

Option Courses . . . Select 12 Credits From Option 1 And 1 Course From Option 2

CART419	Lettering & Sign Art	Opt1	2

CART425	Commercial Art Internship II	Opt1	3
CART428	Illustration III	Opt1	3
CART442	Illustration IV	Opt1	3
CART449	Airbrush I	Opt1	4
CART451	Airbrush II	Opt1	4
CART459	Computer Graphics I	Opt1	3
CART462	Computer Graphics II	Opt1	3
PHOT106	Advanced Photography	Opt1	3
PRTG400	Introduction to Printing Technology	Opt1	4
PRTG415	Electronic Publishing	Opt1	3
MKTG104	Advertising & Sales Promotion	Opt1	3
ARTS101	Art Appreciation	Opt2	3
HUMN133	America In The Movies	Opt2	3
MUSI130	Music Appreciation	Opt2	3
PSCH101	General Psychology	Opt2	3
SOCY101	Introduction To Sociology	Opt2	3
MATH411	Mathematics for Technicians II	Opt2	3

Commercial Horticulture 540200-4

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.

Jobs the graduate will be capable of filling include: 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; 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; garden center merchandising and management; merchandising of flowers and foliage plants and their design.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

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

Term 1 . . . Select 1 Course From Option 1
COMH494	Horticulture Prod Alternatives	Opt1	1
COMH497	Floral Design I	Opt1	1
AGRI219	Soils & Fertilizers		5
COMH479	Nursery Production I		3
COMH488	Plant Materials & Landscape Drafting		3
ENGL410	Communication Skills		3
COMH450	Botany		2

Term 2
COMH410	Greenhouse Production I		3
COMH411	Horticulture Chemical Tech		2
COMH440	Landscape Design I		2
COMH437	Turf I		2
COMH454	Supervised Employment Experience I		3
COMH478	Plant Propagation I		2
MATH410	Mathematics for Technicians I		3

Elective Course
| COMH485 | Floral Design I | | 1 |

Term 3
COMH452	Arboriculture & Plant Prop. II		2
COMH453	Landscape Design/Plant Materials II		2
COMH455	Turf II		2
COMH490	Greenhouse Production II		3
COMH499	Supervised Employment Experience II		1
COMH496	Landscape Construction		1

Term 4 . . . Select 1 Course From Option 2
ACCT301	Accounting Fundamentals		3
COMH486	Horticulture Equipment Maintenance		1
COMH459	Interior Plantscaping		1
COMH484	Supervised Employment Exp III		4
COOP220	Career-Seeking Skills		2
COMS181	Intro To Computer Literacy	Opt2	3
DATA106	Microcomputers In Business	Opt2	3

| DKTP401 | Introduction To Desktop Publishing | Opt2 | 3 |

Term 5
BUSL101	Business Law I		3
COMH457	Fruit & Vegetable Science		2
COMH469	Garden Center Management		3
COMH498	Supervised Employment Experience IV		3
MGMT203	Human Relations In Business		3
MKTG103	Principles Of Selling		3

Computer Programming 510300

The Computer Programming curriculum prepares students for a position as 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 relates to specific business problems.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. 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
COOP220	Career-Seeking Skills		2
COMS181	Intro To Computer Literacy		3
DATA301	DOS Job Control		4
DATA304	COBOL/Beginning		4
DATA306	COBOL/Intermediate		4
DATA308	COBOL/Advanced		3
DATA310	Program Logic Design		4
DATA319	Assembler/Beginning		4
DATA321	Assembler/Intermediate		4
DATA334	Applications Programming		6
DATA341	Database Programming		3
DATA352	Telecommunications/CICS prog		4
DATA382	Systems Analysis		4
ENGL117	Composition I		3
OFFC329	Keyboarding I		1
SPCH110	Fundamentals Of Speech		3

Option Courses . . . Select 1 Course From Opt 1, 2 & 3
And 3 Credits From Opt 4
BSAD223	Business/Financial Math	Opt1	3
MATH	Any MATH 100 or above	Opt1	
MGMT203	Human Relations In Business	Opt2	3
PSCH101	General Psychology	Opt2	3
SOCY101	Introduction To Sociology	Opt2	3
DATA327	Assembler/Advanced	Opt3	4
DATA103	BASIC	Opt3	3
DATA104	BASIC/Advanced	Opt3	3
DATA110	Microcomputer Systems Design	Opt3	3
DATA211	FORTRAN	Opt3	3
DATA221	PL/I	Opt3	3
DATA318	INTRO "C" PROGRAM	Opt3	3
DATA231	RPG/II	Opt3	3
COMS174	Applied Programming I Pascal	Opt3	3
ENGL115	Technical & Business Writing	Opt3	3
DATA328	MS DOS An Introduction	Opt4	1
DATA329	MS DOS An Advanced Course	Opt4	2
DATA330	dBase An Introduction	Opt4	1
DATA331	dBase An Advanced Course	Opt4	2
DATA332	Lotus 123 - An Introduction	Opt4	1
DATA333	Lotus 123 - An Advanced Course	Opt4	2
DATA342	Word Star	Opt4	1
DATA343	Word Perfect	Opt4	1

Computer Science-Preparation 455000
Students planning to major in computer science at a four-year college may

complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Conditioned Air 531700 - 2

The Conditioned Air program provides the theory, knowledge, and skills of refrigeration, air conditioning, heating, and ventilation equipment for systems in residential and light commercial structures. Students in air conditioning and refrigeration are taught in the classroom and laboratory on models and equipment to prepare the student for satisfactory entrance and advancement in the conditioned air field.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start summer term.

Graduation Requirements
To earn a Conditioned Air diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

Term 1
CONA451	Fundamentals Of Refrigeration	3
CONA452	Electricity I	3
CONA454	Fundamentals Of Heating	3
MATH410	Mathematics for Technicians I	3

Term 2
CONA461	Advanced Refrigeration/Heating	5
CONA462	Year Round Air Conditioning I	8
CONA463	Blueprint Reading	2
PHYL401	Physics For Technicians	3

Term 3 ... Select 1 Course From Option 1
CONA471	Air Distribution		5
CONA472	Year Round Air Conditioning II		7
ENGL410	Communication Skills		3
MGMT203	Human Relations In Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3

Criminal Justice

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 basic Criminal Justice requirements, then select other Criminal Justice classes in areas of primary interest.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. 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.

CRIMINAL JUSTICE AA DEGREE 550500 - E

Required Courses
	Complete AA Degree Core Requirements	48
CRIM101	Intro To Criminal Justice	3
CRIM103	Community Relations	3
CRIM105	Constitutional Law	3
CRIM235	Survey/Crim 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

CRIMINAL JUSTICE AS DEGREE 550500

Required Courses
	Complete AS Degree Core Requirements	24
CRIM101	Intro To Criminal Justice	3
CRIM103	Community Relations	3
CRIM105	Constitutional Law	3
CRIM235	Survey/Crim 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

Elective Courses
	Electives	4

Culinary Arts 540400 - 5

The Culinary Arts program prepares the student to enter culinary positions with hotels, restaurants, clubs or institutions. Some select jobs in dining room service, catering, or management. By the end of the program, graduates will have taken courses in food preparation, sanitation and equipment, purchasing/cost control, and buffet decorating. 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 the student practical knowledge of the restaurant industry.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start fall term.

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

Term 1
HRMT316	Food Preparation I	3
HRMT320	Food Preparation I Lab	3
HRMT315	Sanitation & Equipment	2
HRMT319	Sanitation & Equipment Lab	1
MGMT203	Human Relations In Business	3
BSAD223	Business/Financial Math	3

Term 2 ... Select 2 Courses From Option 1
HRMT326	Food Preparation II		2
HRMT328	Food Preparation II Lab		2
HRMT348	Purchasing/Cost Control		3
HRMT349	Nutrition & Menu Planning		3
ENGL410	Communication Skills		3
CULA340	Baking	Opt1	2
CULA386	Buffet Decorating	Opt1	2
CULA332	Ala Carte Cooking	Opt1	2
OFFC329	Keyboarding I	Opt1	1

Term 3

HRMT347	Work Experience	5
HRMT342	Work Experience Seminar	1

Term 4

CULA456	International Cuisine	2
CULA446	International Cuisine Lab I	3
HRMT335	Restaurant Management	2
HRMT357	Culinary Skill Development	5
MGMT101	Personnel Supervision	3
COOP220	Career-Seeking Skills	2

Term 5 . . . Select 2 Courses From Option 2

CULA452	Advanced Culinary Cuisine		2
CULA451	Culinary Cuisine Lab		8
CULA349	International Cuisine Lab II	Opt2	3
CULA365	Advanced Baking & Buffet Decorating	Opt2	3
OFFC340	Intro To Office Computer Application	Opt2	3
HRMT360	Layout Equipment & Design	Opt2	3

Dental Assistant 520200

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 and attend any required orientation/information sessions. Typing skill of 35 wpm with no more than 5 errors 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 Procedure	2
ENGL117	Composition I	3

Term 3

DENA316	Ethics & Clinical Seminar	1
DENA318	Dental Assisting Clinical II	4
PSCH106	Psychology Of Human Relations & Adj	3
SPCH110	Fundamentals Of Speech	3

Dental Hygiene 520300-A

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 and the United States Department of Education. Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit proof of high school graduation or GED prior to enrollment. A cumulative college grade point average of 2.0 and completion of college level General Chemistry I and General Anatomy and Physiology with a "C" or better (DMACC equivalent course numbers are CHEM 131 and BIOL 154) are required. On February 1 and June 15, Dental Hygiene applications and documentation will be reviewed. Applicants who have completed the program entry requirements will be accepted by date of application to the dental hygiene program until such time as the program has filled. Students start fall term.

Graduation Requirements

To earn a Dental Hygiene AAA degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. Only one grade of "D" is allowed toward fulfilling the graduation requirement.

Term 1

	CPR Certification	
CHEM132	General Chemistry II	4
DENH208	Principles Of Dental Hygiene	2
DENH209	Principles Of Dental Hygiene Pract	3
DENH210	Oral Histology & Embryology	2
DENH230	Dental Anatomy	4
DENH257	Dental Radiography I	3

Term 2

BIOL149	General Microbiology	4
DENH228	Dental Hygiene I	2
DENH229	Dental Hygiene I Practicum	4
DENH240	Nutrition & Preventive Dentistry	4
DENH259	Dental Radiography II	2
DENH293	General & Oral Pathology	3

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

DENH290	Community Dentistry	3
DENH298	Dental Hygiene IV	2
DENH291	Dental Hygiene IV Practicum	5
SPCH110	Fundamentals Of Speech	3
ENGL117	Composition I	3

Dentistry-Preparation 120400

Students planning to major in pre-dentistry at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements at the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Diesel Technology 530700 (53070D)

The Diesel Technology program prepares students for a career in the area of diesel repair. Instruction is in the repair, maintenance, and testing of diesel engines, power trains, and components of trucks and heavy

construction equipment.

Employment opportunities exist in the servicing and repair of equipment such as buses, trucks, tractors, heavy construction equipment, etc.

By completing the first three terms plus ENGL 410, a student may receive the diploma option.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

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

Term 1
DISL401	Diesel Engines I	6
DISL402	Diesel Engines II	6
MATH410	Mathematics for Technicians I	3

Term 2
DISL404	Power Trains	6
DISL406	Hydraulics	3
DISL408	Basic Electricity	5

Term 3
DISL420	Air Conditioning	3
DISL428	Operation & Maintenance	6

Term 4
DISL407	Diesel Fuel Systems I	6
DISL414	Diesel Fuel Systems II	6
DISL409	Diesel Electronics	5

Term 5
DISL417	Heavy Equipment Repair	5
DISL418	Truck Repair	5
DISL470	Advanced Electricity	4
WELD467	Related Weld-Transportation Trades	2

Term 6
DISL460	Shop Management	2
ENGL410	Communication Skills	3
PSCH106	Psychology Of Human Relations & Adj	3

Education-Preparation 080100

Students planning to major in education at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements at the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Electronics Maintenance 531000-9

The Electronics Maintenance curriculum is designed to prepare the student for entry level positions as an electronics service person.

Students who have completed the program should be able to perform the routine maintenance of electronic systems. The curriculum places emphasis on servicing consumer products, i.e., color TV, radio, video cassette recorders, video discs, and other related consumer product devices.

Upon program completion, students seek employment in TV service shops, stereo shops, audio-visual businesses, major retail outlets, as well as other related electronic service positions.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start fall term.

Graduation Requirements
To earn an Electronics Maintenance AAS degree, a student must complete

all courses as prescribed and maintain a 2.0 grade point average.

Term 1 ... Select 1 Course From Option 1
ENGL115	Technical & Business Writing	Opt1	3
ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3
ELEM450	Related Math		3
ELEM451	DC & AC Fundamentals		3
ELEM452	DC & AC Fundamentals Lab		3
ELEM453	Basic Electrical Practices		3
ELEM454	Basic Electrical Practices Lab		3

Term 2
ELEM460	Applied Electronics	3
ELEM461	Applied Electronics Lab	3
ELEM462	Digital Electronics	3
ELEM463	Digital Electronics Lab	3
ELEM464	Industrial Electronics	3
ELEM465	Industrial Electronics Lab	3

Term 3 ... Select 1 Course From Option 2
PSCH106	Psychology Of Human Relations & Adj	Opt2	3
PSCH101	General Psychology	Opt2	3
SOCY101	Introduction To Sociology	Opt2	3
MGMT203	Human Relations In Business	Opt2	3
ELEM470	Communications		3
ELEM471	Communications Lab		2
ELEM472	Color Systems I		3
ELEM474	Color Systems I Lab		1

Term 4
ELEM480	Consumer Products	6
ELEM481	Consumer Products Lab	3
ELEM482	Color Systems II	6
ELEM483	Color Systems II Lab	3

Engineering Preparation 09.2500

Students planning to major in engineering at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Fashion Merchandising Management 531300

The Fashion Merchandising program appeals to the individual who has the drive to become a leader in business. Will a competitive atmosphere on the job or a willingness to take risks motivate you? The fashion business, whether it's clothing, accessories or home furnishings, is fast paced and challenging. You can be a decision maker, use your creativity and work closely with consumers as a consultant in helping satisfy their needs. This program will provide you with up-to-date sales and management instruction as well as cooperative work experience to receive training and enhance your skills. A fashion study tour is available as an elective activity in the program.

Specific fashion career opportunities include retail, wholesale or manufactuturer sales, fashion retail store management, buying, display, customer service, or small business ownership. Advanced management positions are available to those who demonstrate strong skills and know-ledge.

Upon successful completion of Terms 1, 2, and 3 (Fashion Merchandising Sales) curriculum, a student may receive a diploma. By completing the diploma and Terms 4 and 5, a student may receive an AAS degree.
Location: Ankeny

Program Entry Requirements
Fashion Merchandising Sales - Complete an application and attend any required orientation/information sessions. Students start any term.

Fashion Merchandising Management - Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements (50040FD)

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

Term 1

BSAD150	Intro To Business	3
MGMT203	Human Relations In Business	3
MGMT407	Professional Development Seminar	1
MKTG103	Principles Of Selling	3
MKTG231	Principles/Clothing Selection	3
MKTG321	Retail Management I	3

Term 2 ... Select 1 Course From Option 1

BSAD223	Business/Financial Math		3
COOP220	Career-Seeking Skills		2
MGMT406	Human Potential		2
MKTG102	Principles Of Marketing		3
MKTG323	Display & Visual Merchandising		2
MKTG332	Textiles		3
ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3

Term 3

MGMT341	Business Internship I	6
MGMT342	Internship Seminar I	2

Term 4 ... Select 1 Course From Each Option

MGMT101	Personnel Supervision		3
MGMT353	Business Internship II		4
MGMT358	Internship Seminar II		1
MKTG324	Buying & Merchandise Control		3
COMS181	Intro To Computer Literacy	Opt2	3
DKTP401	Introduction to Desktop Publishing	Opt2	3
OFFC340	Intro To Office Computer Application	Opt2	3
MGMT229	Small Business Management	Opt3	3
MKTG322	Retail Management II	Opt3	3

Term 5 ... Select 1 Course From Option 4

MGMT362	Business Internship III		4
MGMT367	Internship Seminar III		1
MKTG104	Advertising & Sales Promotion		3
MKTG331	Fashion Coordination & Promotion		3
SPCH110	Fundamentals Of Speech		3
ACCT101	Principles Of Accounting I	Opt4	4
ACCT301	Accounting Fundamentals	Opt4	3

Fire Science Technology 550700-F

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 and attend any required orientation/information sessions. 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

	Complete AS Degree Core Requirements	24
BSAD225	Principles Of Insurance	3
CHEM131	General Chemistry I	4
FIRE231	Intro To Fire Science	2
FIRE232	Fire Behavior	3
FIRE233	Building Construction	3
FIRE234	Fire Protection Systems	3
FIRE235	Hazardous Materials	3
FIRE236	Fluid Flows	3
FIRE237	Planning For Fire Protection	3
FIRE238	Fire Investigation	3

MGMT102	Introduction To Management	3
PHYL106	Survey Of Physical Science	4
PLSC112	State & Local Government	3
PSCH106	Psychology Of Human Relations & Adj	3

Health Care Administration 521800

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, directing and controlling the operation of a health care facility. Students in this program will explore specific health care administration areas i.e. management, services, financial, legal, regulations, and human relations.

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

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

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements

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

Required Courses

	Complete AS Degree Core Requirements	24
HCAD271	Admin Long-Term Care Facilities	5
HCAD272	Services: Long-Term Care Residents	5
HCAD261	Pract: Long-Term Care Administration	3
HCAD264	Pract: Seminar	2
HCAD262	Pract: Long-Term Care Administration	3
HCAD264	Pract: Seminar	2
HCAD263	Pract: Long Term Care Administration	3
HCAD264	Pract: Seminar	2
HCAD281	Seminar In Health Care	3
SOCY204	Social Gerontology/Applications	4

Option Courses ... Select 1 Course From Each Option

ACCT101	Principles Of Accounting I	Opt1	4
ACCT301	Accounting Fundamentals	Opt1	3
BUSL101	Business Law I	Opt2	3
HCAD273	Law & Long-Term Care	Opt2	4
ACCT102	Principles Of Accounting II	Opt3	4
HCAD237	Long-Term Care Financial Management	Opt3	3

High Tech-Biomedical 531100-B

The High Tech-Biomedical program prepares you for a career as a biomedical electronic technician. By the end of the program you will be able to troubleshoot and repair medical electronic instrumentation such as patient monitoring EEG equipment as well as clinical lab instrumentation such as PH meters, spectrophotometers, and blood cell counters. The technical curriculum is also supported by courses from the health field such as health care delivery and integrated sciences.

Upon program completion you may seek employment in hospitals or as a technician for a manufacturer of medical electronic equipment.

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start fall or spring term.

Graduation Requirements

To earn a High Tech-Biomedical AAS degree, a student must complete the courses as prescribed and maintain a 2.0 grade point average.

Required Courses

ELHT311	Circuit Analysis I	3

ELHT312	Circuit Analysis I Lab	2
ELHT313	Technical Math I	3
ELHT315	Fabrication Techniques	3
ELHT321	Circuit Analysis II	3
ELHT322	Circuit Analysis II Lab	2
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
ELHT330	Digital Circuits I	2
ELHT331	Circuit Analysis III	3
ELHT362	Digital Circuits Lab	2
ELHT363	Circuit Analysis III Lab	3
ELHT340	Digital Circuits II	3
ELHT341	Digital Circuits II Lab	5
ELHT345	Operating Systems	2
ELHT346	Operating Systems Lab	2
HTBM353	Biomed Instrumentation I	3
HTBM354	Biomed Instrumentation I Lab	5
HTBM358	Internship	3
HTBM355	Electro-Mechanical Systems I	2
HTBM356	Electro-Mechanical Systems I Lab	2
HTBM362	Health Care Delivery	3
HTBM363	Biomed Instrumentation II	2
HTBM364	Biomed Instrumentation II Lab	2
BIOL127	Human Biology	3
CHEM120	Survey Of Chemistry	3
ENGL115	Technical & Business Writing	3

Option Courses ... Select 1 Course From Option 1

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

High Tech-Computers   531100-C

The High Tech-Computers program prepares you for a career as a computer technician. At the end of the program, you should be able to diagnose and repair digital electronic equipment, including computers, microprocessor-based instrumentation and peripheral equipment such as floppy disk drives, terminals, and computer networks. These skills will qualify you for positions such as computer field engineer, customer engineer, or as a test technician prototyping microprocessor-based instrumentation for a variety of industrial uses.

Highly technical courses will train you in state-of-the-art digital electronics and the use of specialized test equipment used for both circuit design and to diagnose and repair digital and microprocessor circuits.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start fall or spring term.

Graduation Requirements
To earn a High Tech-Computers AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

Required Courses

ELHT311	Circuit Analysis I	3
ELHT312	Circuit Analysis I Lab	2
ELHT330	Digital Circuits I	2
ELHT362	Digital Circuits Lab	2
ELHT313	Technical Math I	3
ELHT315	Fabrication Techniques	3
ELHT321	Circuit Analysis II	3
ELHT322	Circuit Analysis II Lab	2
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
ELHT340	Digital Circuits II	3
ELHT341	Digital Circuits II Lab	5
ELHT331	Circuit Analysis III	3
ELHT363	Circuit Analysis III Lab	3
ELHT345	Operating Systems	2
ELHT346	Operating Systems Lab	2
HTCT351	Major Computer Systems I	3
HTCT352	Major Computer Systems I Lab	4
HTCT353	Microprocessors	3
HTCT354	Microprocessors Lab	4
HTCT361	Major Computer Systems II	3
HTCT362	Major Computer Systems II Lab	2

HTCT364	Microcomputer Systems	3
HTCT365	Microcomputer Systems Lab	3
ENGL115	Technical & Business Writing	3

Option Courses ... Select 1 Course From Each Option

SOCY101	Introduction To Sociology	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
MGMT203	Human Relations In Business	Opt1	3
BSAD150	Intro To Business	Opt2	3
BUSL101	Business Law I	Opt2	3
ECON101	Principles Of Macro-Economics	Opt2	3

High Tech-Robotics/Automation 531100-R

The High Tech-Robotics program prepares you for a career as a technician in industrial manufacturing. At the end of the program, you 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 you 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 and attend any required orientation/information sessions. Students start fall or spring term.

Graduation Requirements
To earn a High Tech-Robotics AAS degree, a student must complete the courses as prescribed and maintain a 2.0 grade point average.

Required Courses

ELHT311	Circuit Analysis I	3
ELHT312	Circuit Analysis I Lab	2
ELHT330	Digital Circuits I	2
ELHT362	Digital Circuits Lab	2
ELHT313	Technical Math I	3
ELHT315	Fabrication Techniques	3
ELHT321	Circuit Analysis II	3
ELHT322	Circuit Analysis II Lab	2
ELHT323	Technical Math II	3
ELHT324	Computer Programming	3
ELHT331	Circuit Analysis III	3
ELHT340	Digital Circuits II	3
ELHT341	Digital Circuits II Lab	5
ELHT345	Operating Systems	2
ELHT346	Operating Systems Lab	2
ELHT363	Circuit Analysis III Lab	3
HTPC351	Hydraulics & Pneumatics	3
HTPC352	Hydraulics & Pneumatics Lab	2
HTPC354	Motor Control & PLC's	3
HTPC355	Process Control Instrumentation	2
HTPC356	Motor Control & PLC Lab	2
HTPC357	Process Control Instr Lab	2
HTPC363	Mechanisms	2
HTPC364	Mechanisms Lab	2
HTPC360	Industrial Electronics	2
CIM-404	Robotics	2
CIM-413	Introduction to FMS Cell	3
ENGL115	Technical & Business Writing	3

Option Courses ... Select 1 Course From Each Option

SOCY101	Introduction To Sociology	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
MGMT203	Human Relations In Business	Opt1	3
BSAD150	Intro To Business	Opt2	3
BUSL101	Business Law I	Opt2	3
ECON101	Principles Of Macro-Economics	Opt2	3

Hospitality Apprentice 501000-2

The Hospitality Apprentice 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

Food Preparation, Sanitation/Safety, Accounting, Purchasing/Cost Control, Business Math, and Career-Seeking Skills. Positions that are filled by graduates are: front desk clerk, night auditor, and cooks.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start fall term.

Graduation Requirements
To earn a Hospitality Apprentice 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 & Equipment		2
HRMT316	Food Preparation I		3
HRMT319	Sanitation & Equipment Lab		1
HRMT320	Food Preparation I Lab		3
MGMT203	Human Relations In Business		3

Term 2 . . . Select 3 Credits From Option 1
COOP220	Career-Seeking Skills		2
HRMT326	Food Preparation II		2
HRMT328	Food Preparation II Lab		2
HRMT349	Nutrition & Menu Planning		3
BSAD223	Business/Financial Math		3
CULA340	Baking	Opt1	2
CULA386	Buffet Decorating	Opt1	2
CULA332	Ala Carte Cooking	Opt1	2
HRMT330	Introduction To Hotel Operations	Opt1	2
OFFC329	Keyboarding I	Opt1	1

Term 3
HRMT347	Work Experience		5
HRMT342	Work Experience Seminar		1

Hotel & Restaurant Management 501000

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 take courses in Food Preparation, Sanitation and Equipment, Purchasing/Cost Control, Marketing, Principles of Accounting, and Hotel Administration.

Restaurant Management and Hotel Administration feature practical courses. These courses are management designed and offer the student practical knowledge of the hotel and restaurant management industry.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start fall term.

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

Term 1
BSAD223	Business/Financial Math		3
HRMT315	Sanitation & Equipment		2
HRMT316	Food Preparation I		3
HRMT319	Sanitation & Equipment Lab		1
HRMT320	Food Preparation I Lab		3
MGMT203	Human Relations In Business		3

Term 2 . . . Select 2 Courses From Option 1
ENGL410	Communication Skills		3
HRMT348	Purchasing/Cost Control		3
HRMT349	Nutrition & Menu Planning		3
SPCH110	Fundamentals Of Speech		3
HRMT330	Introduction To Hotel Operations	Opt1	2
OFFC329	Keyboarding I	Opt1	1
CULA340	Baking	Opt1	2
CULA332	Ala Carte Cooking	Opt1	2
CULA386	Buffet Decorating	Opt1	2
HRMT326	Food Preparation II	Opt1	2

HRMT328	Food Preparation II Lab	Opt1	2

Term 3
HRMT347	Work Experience		5
HRMT342	Work Experience Seminar		1

Term 4 . . . Select Option 2 Or Option 3
ACCT301	Accounting Fundamentals		3
MGMT101	Personnel Supervision		3
BSAD150	Intro To Business		3
HRMT364	Hotel Administration	Opt2	2
HRMT366	Hotel Administration Lab	Opt2	4
HRMT335	Restaurant Management	Opt3	2
HRMT357	Culinary Skill Development	Opt3	5

Term 5 . . . Select 1 Course From Option 4 And 3 Courses From Option 5
COOP220	Career-Seeking Skills		2
MKTG103	Principles Of Selling		3
OFFC340	Intro To Office Computer Application	Opt4	3
OFFC341	Advanced Office Computer Application	Opt4	3
COMS181	Intro To Computer Literacy	Opt4	3
CULA446	International Cuisine Lab I	Opt5	3
HRMT360	Layout Equipment & Design	Opt5	3
MGMT229	Small Business Management	Opt5	3
BUSL101	Business Law I	Opt5	3
MKTG102	Principles Of Marketing	Opt5	3

Human Services 550600-1

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, 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, community centers, and state or county departments of social services.
Locations: Ankeny, Urban

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

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

Required Courses
	Complete AS Degree Core Requirements	24
HUMS101	Introduction To Human Services	3
HUMS104	Community Organization	3
HUMS109	Survey Mental Health Treatment	3
HUMS202	Interviewing/Interper Relation	3
HUMS205	Intervention Theories/Practice I	3
HUMS206	Intervention Theories/Practice II	3
HUMS208	Field Experience	3
PSCH103	Developmental Psychology	3
PSCH104	Abnormal Psychology	3

Option Courses . . . Select 3 Courses From Option 1 And 1 Course From Option 2
ANTH120	Introduction To Anthropology	Opt1	3
PHIL112	Ethical Problems	Opt1	3
PLSC112	State & Local Government	Opt1	3
HUMS	Any Human Services	Opt1	
SOCY	Any Sociology	Opt1	
PSCH	Any Psychology	Opt1	
SOCY101	Introduction To Sociology	Opt2	3
SOCY102	Social Issues	Opt2	3

Elective Courses
	Electives	1

Journalism-Preparation 060200-1

Students planning to major in journalism at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Law-Preparation 140100-1

Students planning to major in law at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Legal Assistant 140100

Legal Assistants perform a variety of legal tasks under the supervision of an attorney. They work for attorneys in private practice, state agencies, and public service organizations. Legal assistants work with the attorney in virtually every area of legal practice. They do not give advice or represent clients since that would be the actual practice of law.

Our objective is to educate a legal assistant capable of performing a variety of legal tasks. He/She should be able to provide the broad spectrum of services needed by attorneys in the public sector. This objective is met by providing intensive and practical instruction by attorneys with experience and expertise in their fields of instruction. This program is approved by the American Bar Association.

Students in the program complete general education core requirements and legal specialty courses. Course offerings include torts and litigation, family law, business law, probate, and income tax. All students complete an internship, under the supervision of an attorney, during which they use the skills and apply the knowledge gained in the classroom. Interested applicants who hold a prior college degree may seek the Legal Assistant Certificate.

A program chairperson, a legal assistant, and a program counselor are available to assist students with educational and career planning.

Graduates of the Legal Assistant program are employed in private law firms, the courts, public agencies, and legal departments of large companies. Additionally, some students work on law related jobs such as investigation, collections, and bank trust departments.
Location: Urban

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

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 Reqirements	24
LEGA240	Introduction To Law	3
LEGA260	Legal Research & Writing I	3
LEGA261	Legal Research & Writing II	3
LEGA242	Torts & Litigation I	3
LEGA246	Business & Corporate Law I	3

LEGA250	Legal Internship & Ethics		4

Option Courses ... Select 15 Credits From Option 1
LEGA243	Torts & Litigation II	Opt1	3
LEGA247	Business & Corporate Law II	Opt1	3
LEGA244	Domestic Relations	Opt1	3
LEGA249	Probate Procedure	Opt1	3
LEGA252	Administrative Practice	Opt1	3
LEGA256	Debtor/Creditor Law	Opt1	3
LEGA259	Advanced Legal Research & Writing	Opt1	3
LEGA270	Legal Interviewing/Clinical Exper	Opt1	3
LEGA254	Evidence: Theory & Practice	Opt1	3
LEGA251	Wills, Estate Planning & Taxation	Opt1	3
LEGA248	Real Estate Law	Opt1	3
LEGA245	Income Tax Law	Opt1	3
LEGA258	Computerized Legal Research	Opt1	3
CRIM105	Constitutional Law	Opt1	3
COMS181	Intro To Computer Literacy	Opt1	3
MGMT153	Office Management	Opt1	3

Elective Courses
	Electives	6

Legal Office Technology 500500-5

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

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

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements
To earn a Legal Office Technology AAS degree a student must complete all course work as prescribed and maintain a 2.0 grade point average.

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

Term 2
COOP220	Career-Seeking Skills	2
MGMT203	Human Relations In Business	3
OFFC204	Office Procedures	3
OFFC302	Typing Skill Development II	2
OFFC338	Word Processing II	3
OFFC344	Machine Transcription	3
OFFC404	Professionalism II	1

Term 3
ACCT301	Accounting Fundamentals	3
OFFC206	Correspondence Techniques	3
OFFC234	Citations & Legal Procedure	1
OFFC304	Legal Typing	3
OFFC331	Legal Terminology	3
OFFC341	Advanced Office Computer Application	3

Term 4 ... Select 1 Courses From Option 1
BUSL101	Business Law I		3
MGMT153	Office Management		3
OFFC345	Adv Word Processing Application		3
OFFC409	Internship/Seminar		4
SPCH110	Fundamentals Of Speech	Opt1	3
SPCH117	Interpersonal & Small Grp Comm	Opt1	3

Leisure Studies-Holistic Wellness 550600-W

The Leisure Studies program with the emphasis on the holistic wellness track prepares the student with the skills, training, and experience necessary to successfully develop and coordinate wellness programs for employees in the work place.

After completion of the program, a student has the choice of transferring

to a four-year institution or seek employment. If the student chooses employment, opportunities exist in corporations, factories, private businesses, government agencies, health spas and other work settings.
Location: Boone

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements
To earn a Leisure Studies-Holistic Wellness AS degree, a student must complete the standard core requirements for the degree, plus the Leisure Studies-Holistic Wellness required courses and electives and maintain a 2.0 grade point average.

Required Courses
	Complete AS Degree Core Requirements	24
HUMS216	Survey Of Addictive Disease	3
LRST142	Supervised Field Experience I	1
LRST144	Prog Planning/Organization	3
LRST149	Supervised Field Experience II	11
LRST151	Introduction To Recreation	2
PHYE149	Wellness Prog/Planning/Organiz	3
PHYE150	Fitness Testing/Programming	3
PSCH110	Stress & Stress Management	3

Elective Courses
	Electives	11

Leisure Studies-Recreational Leadership 550600-R

The Leisure Studies program with an emphasis in recreational leadership, prepares the student with the skills, training, and experience necessary to successfully organize and lead activities in a variety of recreational settings. After completion of the program, employment opportunities are available in YMCA's - YWCA's Boys' or Girls' Clubs, retirement communities, resorts, swimming pools, medical facilities, schools, industries, armed forces, and public and private institutions.
Location: Boone

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students may start any term.

Graduation Requirements
To earn a Leisure Studies-Recreational Leadership AS degree, a student must complete the standard core requirements for the degree plus the Leisure Studies-Recreational Leadership required courses and electives and maintain a 2.0 grade point average.

Required Courses
	Complete AS Degree Core Requirements	24
LRST141	Recreation Leadership	3
LRST142	Supervised Field Experience I	1
LRST144	Prog Planning/Organization	3
LRST146	Intro/Therapeutic Recreation	3
LRST149	Supervised Field Experience II	11
LRST151	Introduction To Recreation	2
PHYE149	Wellness Prog/Planning/Organiz	3

Elective Courses
	Electives	14

Machine Drafting 530300-1

The Machine Drafting program prepares people for employment in a company that produces home or commercial applicances, electrical/ electronic equipment, agricultural equipment, and/or many other items.

The support courses include mathematics, (trigonometry and descriptive geometry) and computer-assisted drafting (CAD).
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start fall or spring term.

Graduation Requirements
To earn a Machine Drafting diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average.

Term 1
CADD401	Intro to Computer Aided Drafting-CAD	3
ENGL410	Communication Skills	3
MACD451	Drafting Basics	3
MACD452	Basic Shape/Design Description	3
MACD453	Adv Shape & Size Description	3
MATH410	Mathematics for Technicians I	3

Term 2 . . . Select 1 Course From Option 1
CADD402	Intermediate CADD-Mechanical		3
MACD461	Mfg Dimensions & Tolerances		3
MACD462	Mechanical Components		3
MACD466	Descriptive Geometry		2
MATH411	Mathematics for Technicians II		3
MGMT203	Human Relations In Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3

Term 3
CADD404	Computer Aided Design & Analysis	3
MACD456	Materials & Processes	2
MACD471	Layouts & Working Drawings	4
MACD472	Presentation Drawings	2

Management and Supervision 500400-1

Management offers you a number of career options. It is a people-oriented field. Career opportunities consist of working with professional management in obtaining organizational goals and objectives through people. The program includes: up-to-date curriculum which emphasizes the latest management principles; "student-centered" instruction which offers seminars, labs, field trips, field study projects, and classes; opportunity to earn as you learn through on-the-job training; leadership training at the local, state, and national levels through participation in the Professional Management Club; instructors with extensive backgrounds in business and industry.

Basic subject areas for the five terms are management, supervision, marketing, human relations, communications, accounting, and information processing.

Employment and advancement opportunities exist in positions as assistant personnel managers, general managers, sales representatives, owners of your own business, manufacturing and distribution managers, production supervision, customers's service, parts and inventory management, and purchasing. Advanced management positions are available to those who demonstrate strong individual skills and knowledge.
Location: Ankeny

Program Entry Requirements
Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements
To earn the Management and Supervision AAS degree, a student must complete all course work as prescribed, and maintain a 2.0 (GPA)

Required Courses
BSAD150	Intro To Business	3
BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2
MGMT101	Personnel Supervision	3
MGMT102	Introduction To Management	3
MGMT103	Sales Management	3
MGMT104	Organizational Behavior	3
MGMT203	Human Relations In Business	3
MGMT344	Field Experience I Seminar	2
MGMT345	Field Experience I	6
MGMT356	Field Experience II Seminar	1
MGMT363	Field Experience II	4
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
MKTG102	Principles Of Marketing	3
MKTG103	Principles Of Selling	3
MKTG104	Advertising & Sales Promotion	3
MKTG211	Industrial Marketing	3
SPCH110	Fundamentals Of Speech	3

Option Courses ... Select 1 Course From Each Option

COMS181	Intro To Computer Literacy	Opt1	3
DKTP401	Introduction to Desktop Publishing	Opt1	3
OFFC340	Intro To Office Computer Application	Opt1	3
ENGL117	Composition I	Opt2	3
ENGL410	Communication Skills	Opt2	3
ACCT101	Principles Of Accounting I	Opt3	4
ACCT301	Accounting Fundamentals	Opt3	3
ACCT102	Principles Of Accounting II	Opt4	4
MGMT153	Office Management	Opt4	3
MGMT241	Production Management	Opt4	3
MKTG212	Purchasing	Opt4	3
MKTG321	Retail Management I	Opt4	3
BIOL	Any Biology	Opt5	
CHEM	Any Chemistry	Opt5	
PHYL	Any Physics	Opt5	
MATH	Any MATH 100 or above	Opt5	

Elective Courses

	Electives	6

Medical Assistant 521400

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

The student gains a basic knowledge of anatomy and physiology, laboratory procedures, office management, and patient care techniques. These subjects are presented in the classroom, through laboratory experience, and in supervised clinical experience in the field.

Students are eligible to take the certification examination given by the certifying board of the American Association of Medical Assistants upon completion of the three-term course of study.

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. 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). Typing skill of 35 WPM with no more than 5 errors is required. Submit proof of high school graduation or GED prior to enrollment. Students start fall term.

Graduation Requirements

To earn a Medical Assistant diploma, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all MEDA courses.

Term 1

MEDA461	Human Body-Health & 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 In Health & Disease II	4
MEDA472	Diagnostic Radiography I	2
MEDA473	Medical Office Management II	4
MEDA474	Medical Laboratory Procedures II	3
MEDA475	Medical Office Procedures II	3
MGMT203	Human Relations In Business	3

Term 3

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

Medical Laboratory Technology 520500-1

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

The program is accredited by the Committee on Allied Health Education (CAHEA) a committee of the American Medical Association (AMA). 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 and attend any required orientation/information sessions. Submit evidence of grade "C" or better in one year of 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 Technician AAS degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all MLTS courses.

Term 1

BIOL154	General Anatomy & 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	

Term 5

MLTS455	Clinical Practicum II	12
MLTS460	Clinical Seminar	1
MLTS461	Med Lab Review	1
MLTS463	Professional Development	1

Medical Office Technology 500500-D

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

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

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

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

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of typing skill of 40 wpm with no errors or enroll in Typing Skill Development I (OFFC 301) first term. Students start fall term.

Graduation Requirements

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

Term 1

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

Term 2

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

Term 3

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

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

ACCT301	Accounting Fundamentals		3
OFFC206	Correspondence Techniques		3
OFFC328	Internship For Medical Secretaries		4
OFFC341	Advanced Office Computer Application		3
SPCH110	Fundamentals Of Speech	Opt1	3
SPCH117	Interpersonal & Small Grp Comm	Opt1	3
ACCT	Any Accounting	Opt2	
BSAD	Any Business Admininstration	Opt2	
BULS	Any Business Law	Opt2	
COMS	Any Computer Science	Opt2	
DATA	Any Data Processing	Opt2	
MGMT	Any Management	Opt2	
MKTG	Any Marketing	Opt2	
OFFC	Any Office	Opt2	

Medicine-Preparation   120600

Students planning to major in pre-medicine at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. 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 Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Mortuary Science-Preparation   1206 MS

Students planning to major in mortuary science may complete their general education requirements at Des Moines Area Community College.

The Counseling, Advising, Placement office can provide a transfer plan. Contact a counselor or advisor for course planning assistance.

Nursing Preparation   120300

Students planning to major in nursing at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising, and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Nursing Program

PRACTICAL NURSING
ASSOCIATE DEGREE NURSING

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

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

Upon sucessful completion of Terms 1 and 2 of the nursing curriculum, the student will be eligible to write 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 access, plan, provide, evaluate, and supervise bedside nursing care for patients primarily in hospitals and nursing homes.

Upon successful completion of Terms 1-5 of the nursing curriculum, the student will be eligible to write National Council Licensure Exam for Registered Nurse Licensure (NCLEX-RN). Program Locations: Ankeny, Boone, (Carroll Terms 1, 2 and 3 only).

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

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. 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). Practical Nursing starts fall term.

Students desiring to continue in the Associate Degree Nursing program must have a cumulative GPA of 2.0 in the Nursing Program and submit evidence of a grade "C" or better in one year of high school chemistry or equivalent (Academic Achievement Center Chemistry I & II or CHEM 131) prior to the completion of Term 2. Associate Degree Nursing starts summer term.

NOTE ...

Effective Fall 1993 - The Program Entry Requirements for the nursing program will be as follows: Complete an application and attend any required orientation/information sessions including a nursing program information session. Complete required testing obtaining satisfactory scores and submit evidence of grade "C" or better in one year of high school biology and chemistry or equivalent (Academic Achievement Center Biology I & II or BIOL 127 and Academic Achievement Center Chemistry I & II or CHEM 131). Submit proof of high school graduation or GED prior to program enrollment.

Graduation Requirements

To earn a Practical Nursing diploma, a student must complete all course work as prescribed in Terms 1 & 2 and maintain a 2.0 grade point average. A grade of "C" or better is required in all NURS courses. Submit proof of high school graduation or completion of a GED prior to graduation.

To earn an Associate Degree Nursing AAA degree, a student must complete all course work as prescribed in Terms 1-5 and maintain a 2.0 grade point average. A grade of "C" or better is required in all NURS and ASDN courses. Submit proof of high school graduation or completion of a GED prior to graduation.

PRACTICAL NURSING   520900

Term 1

BIOL133	Health Science Anatomy	3
NURS261	Nursing I	5
NURS262	Nursing II	5
PSCH101	General Psychology	3

Term 2

ENGL117	Composition I	3
NURS263	Nursing III	10
PSCH103	Developmental Psychology	3

ASSOCIATE DEGREE NURSING 520800-A

Elective Courses

Electives	3

Term 3 . . . Must complete terms 1 & 2 Prior to enrolling in

BIOL132	Health Science Microbiology	4
BIOL134	Health Science Physiology	3

Term 4

ASDN264	Nursing IV	11
SOCY101	Introduction To Sociology	3

Term 5 . . . Select 1 Course From Option 1

ASDN265	Nursing V		11
SPCH110	Fundamentals Of Speech	Opt1	3
SPCH117	Interpersonal & Small Grp Comm	Opt1	3

Nursing-Advanced Standing 520800-4

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

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of grade "C" or better in one year of high school chemistry or equivalent (Academic Achievement Center Chemistry I & II or CHEM 131). General Psychology, Composition I, and Developmental Psychology (or equivalent Human Growth and Development course) must be successfully completed prior to entry. Licensed Practical Nurses must submit a copy of their current Iowa LPN license and proof of completion of an approved Practical Nursing Program with a cumulative GPA of 2.0. Students start summer term.

Graduation Requirements

To earn an Associate Degree Nursing (AAA) degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A grade of "C" or better is required in all ASDN courses. Submit proof of high school graduation or completion of a GED prior to graduation.

Elective Courses

Electives	3

Term 3

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

Term 4

ASDN264	Nursing IV	11
SOCY101	Introduction To Sociology	3

Term 5 . . . Select 1 Course From Option 1

ASDN265	Nursing V		11
SPCH110	Fundamentals Of Speech	Opt1	3
SPCH117	Interpersonal & Small Grp Comm	Opt1	3

Nursing Advanced Standing - PT

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

Students enter the third term of the Associate Degree curriculum and

upon completion of six terms and attainment of the program objectives, are eligible to write the NCLEX for Registered Nurse Licensure.

The program is approved by the Iowa Board of Nursing and accredited by the National League of Nursing.
Location: Ankeny (even years), Boone and Carroll (odd years)

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Submit evidence of grade "C" or better in one year of high school chemistry or equivalent (Academic Achievement Center Chemistry I & II or CHEM 131). General Psychology, Composition I, and Developmental Psychology (or equivalent Human Growth and Development course) must be successfully completed prior to entry. Licensed Practical Nurses must submit a copy of their current Iowa LPN license and proof of completion of an approved Practical Nursing Program with a cumulative GPA of 2.0. Students start summer term.

NOTE . . .

ASDN 264 is an 11 credit hour course. The student will register and pay fees fall term for 11 credit hours. This course is extended over two semesters. The student must successfully complete both terms, a total of 11 credit hours, to earn a grade for the course at the end of spring term.

ASDN 265 is an 11 credit hour course. The student will register and pay fees fall term for 11 credit hours. This course is extended over two semesters. The student must successfully complete both terms. A total of 11 credit hours, to earn a grade for the course at the end of spring term.

Graduation Requirements

To earn an Associate Degree Nursing AAA degree, a student must complete all course work as prescribed and maintain a 2.0 grade point average. A minimum of "C" is required in all ASDN courses. Submit proof of high school graduation or completion of a GED prior to graduation.

Elective Courses

Electives	3

Term 3

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

Term 4

ASDN264	Nursing IV	11

Term 5

ASDN264	Nursing IV (cont)*	11

Term 6 . . . Select 1 Course From Option 1

SOCY101	Introduction To Sociology		3
SPCH110	Fundamentals Of Speech	Opt1	3
SPCH117	Interpersonal & Small Grp Comm	Opt1	3

Term 7

ASDN265	Nursing V	11

Term 8

ASDN265	Nursing V (continued)	11

Office Management 900500-M

The Office Management program prepares students for careers as office managers/general bookkeepers. The program is built on a solid base of bookkeeping and office management theory and includes specialized courses in computer operations and purchasing along with electives in governmental accounting, small business administration and marketing.
Locations: Boone, Urban

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Student start any term.

Graduation Requirements

To earn an Office Management 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
ACCT102	Principles Of Accounting II		4
ACCT352	Managerial Acct/Microcomputers		3
ACCT403	Accounting Internship		3
ACCT404	Accounting Career Seminar		1
ACCT407	Accounting Professional Development		1
BKKA411	Payroll Accounting		2
BSAD150	Intro To Business		3
BSAD223	Business/Financial Math		3
BUSL101	Business Law I		3
COOP220	Career-Seeking Skills		2
MATH115	Finite Mathematics		4
MGMT101	Personnel Supervision		3
MGMT102	Introduction To Management		3
OFFC324	Office Calculators		
SPCH110	Fundamentals Of Speech		3

Option Courses . . . Select 1 Course From Each Option

ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
OFFC301	Typing Skill Development I	Opt2	2
OFFC329	Keyboarding I	Opt2	1
COMS181	Intro To Computer Literacy	Opt3	3
OFFC340	Intro To Office Computer Application	Opt3	3
OFFC341	Advanced Office Computer Application	Opt3	3
ENGL115	Technical & Business Writing	Opt4	3
ENGL118	Composition II	Opt4	3
ENGL410	Communication Skills	Opt4	3
MGMT203	Human Relations In Business	Opt5	3
PSCH101	General Psychology	Opt5	3

Elective Courses

	Electives	15

Office Technology 50050EA (500500-3)

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

Upon successful completion of Terms 1 and 2 of the Office Technology curriculum students may receive a diploma. By completing the diploma program and Terms 3 and 4, a student may receive an AAS degree.
Locations: Ankeny, Boone, Carroll, Urban

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements

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

Term 1

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

Term 2

COOP220	Career-Seeking Skills	2
MGMT203	Human Relations In Business	3
OFFC204	Office Procedures	3
OFFC302	Typing Skill Development II	2
OFFC338	Word Processing II	3
OFFC344	Machine Transcription	3
OFFC404	Professionalism II	1

Term 3 . . . Select 1 Course Form Option 1

ACCT301	Accounting Fundamentals		3
MGMT153	Office Management		3
OFFC206	Correspondence Techniques		3
OFFC341	Advanced Office Computer Application		3
SPCH110	Fundamentals Of Speech	Opt1	3

SPCH117	Interpersonal & Small Grp Comm	Opt1	3

Term 4 . . . Select 9 Credits From Option 2

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

Pharmacy Preparation 121100

Students planning to major in pharmacy at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC course should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Physicians Assistant-Preparation 1206 PA

Students planning to major in a pre-physicians assistant program at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with specific course requirements at the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Printing Technology 500900D (500900)

The Printing Technology program is designed to provide its graduates with the knowledge needed to enter any number of career options in the printing industry. The program will provide the student with the necessary technical background information about tools, equipment, and a variety of processes that are used in the production of printed materials.

The curriculum and instruction are geared to provide both lecture and laboratory settings that will introduce and develop the knowledge and skill of the student in a very fast paced, high tech field. Instruction will be provided in layout and design, desktop publishing, process cameras, film assembly, offset printing and finishing operations.

Graduates of the program will find employment in an industry that is lacking in qualified individuals. Opportunities range from press operators, strippers, camera operators, typesetter, technical representatives and a host of support positions.

Upon successful completion of Terms 1, 2, and 3 of the printing 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 and attend any required orientation/information sessions, and obtain a satisfactory score on an English aptitude test, or equivalent. Students start fall term.

Graduation Requirements

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

Term 1 . . . Select 1 Course From Option 1

OFFC329	Keyboarding I		1
PRTG400	Introduction to Printing Technology		4

PRTG401	Science for Printers		3
PRTG406	Principles of Copy Preparation		4
DKTP401	Introduction to Desktop Publishing		3
ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3

Term 2

PHOT105	Principles Of Photography		3
PRTG410	Press I Duplicators		4
PRTG411	Process Camera Fundamentals		4
PRTG413	Film Assembly/Carrier Preparation		4
PRTG415	Electronic Publishing		3

Term 3 . . . Select Option 2, 3, Or 4

MATH410	Mathematics for Technicians I		3
PRTG420	Press II Offset	Opt2	4
PRTG422	Auxiliary Methods	Opt2	4
PRTG421	Advanced Camera Techniques	Opt3	4
PRTG423	Advanced Stripping Contacting	Opt3	4
PRTG425	Electronic Image/Color Control	Opt4	4
PRTG426	Copy Preparation II	Opt4	4

Term 4

MGMT101	Personnel Supervision	3
PRTG431	Process Color Procedures	4
PRTG454	Printing Production Methods	4
PRTG456	Estimating and Inventory Control	3
PSCH106	Psychology Of Human Relations & Adj	3

Respiratory Therapy 521500

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

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

Graduates of the program receive an Associate of Applied Science (AAS) degree. The program is accredited by the American Medical Association (AMA) and graduates are eligible for all credentialing examinations currently offered by the National Board of Respiratory Care (NBRC) and the Iowa Department of Public Health.

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

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. An individual information session must be scheduled with the program chairperson. Submit proof of grade "C" or better in one year of high school algebra and biology or the equivalent (Academic Achievement Center Algebra I & II or MATH 092 and Academic Achievement Center Biology I & II or BIOL 127). One year of high school chemistry is recommended. Submit proof of high school graduation or GED prior to enrollment. Students start fall term.

Graduation Requirements

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

Term 1

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

Term 2 . . . Select 1 Course From Option 1

BIOL134	Health Science Physiology	3
RESP310	Cardiopulmonary Renal Pathophys	5

RESP315	Respiratory Therapy Pharmacology		3
RESP352	Respiratory Therapy Practicum I		3
ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3

Term 3

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

Term 4

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

Term 5 . . . Select 1 Course From Option 2

BIOL132	Health Science Microbiology		4
RESP330	Cardiopulmonary Diagnostics		3
RESP382	Respiratory Therapy Practicum IV		7
PSCH101	General Psychology	Opt2	3
PSCH106	Psychology Of Human Relations & Adj	Opt2	3
SOCY101	Introduction To Sociology	Opt2	3
MGMT203	Human Relations In Business	Opt2	3

Term 6

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

Restaurant Management-Preparation 130700

Students planning to major in restaurant management at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. 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 Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Retail Marketing & Management 500400-7

Rapid expansion in the field of retail management during the last few years has created numerous career opportunities for people who like working with people, and for those who want the challenge of a management position.

Graduates from the Retail Marketing and Management program are found in positions such as: owners of their own business; managers of clothing stores, stereo shops, building materials stores, furniture and grocery stores and department managers and salespeople in almost all kinds of marketing businesses.

Outstanding features of the program include: an in-depth study into management principles and practices; opportunity to earn as you learn through business internship; opportunity to specialize in product lines of your choice such as apparel and accessories, food marketing, automotive, home furnishing, sporting goods and building materials. Up-to-date instruction is based on advice from an advisory committee of retail managers. Rapid advancement opportunities generally result from a promotion-from-within policy.
Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements

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

Required Courses

BSAD150	Intro To Business	3
BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2
MGMT101	Personnel Supervision	3

MGMT203	Human Relations In Business	3
MGMT229	Small Business Management	3
MGMT341	Business Internship I	6
MGMT342	Internship Seminar I	2
MGMT353	Business Internship II	4
MGMT358	Internship Seminar II	1
MGMT362	Business Internship III	4
MGMT367	Internship Seminar III	1
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
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	Display & Visual Merchandising	2
MKTG324	Buying & Merchandise Control	3
SPCH110	Fundamentals Of Speech	3

Option Courses ... Select 1 Course From Each Option

COMS181	Intro To Computer Literacy	Opt1	3
DKTP401	Introduction to Desktop Publishing	Opt1	3
OFFC340	Intro To Office Computer Application	Opt1	3
MGMT102	Introduction To Management	Opt2	3
MGMT103	Sales Management	Opt2	3
ACCT101	Principles Of Accounting I	Opt3	4
ACCT301	Accounting Fundamentals	Opt3	3
ENGL117	Composition I	Opt4	3
ENGL410	Communication Skills	Opt4	3

Retail Merchandising 500400-8

Retail Merchandising offers rapidly growing employment opportunities. A recent government study reported that one-fourth of all job openings will be in the merchandising and distribution industry.

Graduates of the Retail Merchandising program work in positions related to sales and sales management, display and advertising, supervision and in- store merchandising. Several graduates are now operating their own businesses. The list of employment opportunities in retail merchandising is almost endless.

Highlights of the program: a one-year concentrated program three terms in length; opportunity to earn as you learn through business internship; student-centered instruction which offers seminars, labs, field trips, classes, and on-the-job training. Up-to-date curriculum as based on advice from the retail merchandising advisory committee. An opportunity to specialize in a product line of your choice such as furniture, automotive, decorator products, clothing and sporting goods is available. Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements

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

Required Courses

BSAD150	Intro To Business	3
BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2
MGMT203	Human Relations In Business	3
MGMT342	Internship Seminar I	2
MGMT361	Retail Merchandise Internship I	6
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
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	Display & Visual Merchandising	2

Option Courses ... Select 1 Course From Option 1

ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3

Sales and Management 500400-5

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

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

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

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. 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

BSAD223	Business/Financial Math	3
COOP220	Career-Seeking Skills	2
MGMT101	Personnel Supervision	3
MGMT203	Human Relations In Business	3
MGMT344	Field Experience I Seminar	2
MGMT345	Field Experience I	6
MGMT406	Human Potential	2
MGMT407	Professional Development Seminar	1
MKTG103	Principles Of Selling	3
MKTG104	Advertising & Sales Promotion	3

Option Courses ... Select 1 Course From Each Option

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

Small Business Management 050100

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

Program Entry Requirements

Complete an application and attend any orientation/information session. Students start any term.

Graduation Requirements

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

Required Courses

MGMT229	Small Business Management	3
COOP212	Coop Career Seminar	1
COOP225	Coop Career Experience	5
MGMT301	Small Business Finance and Law	3
MGMT302	Small Business Mgmt Development	3

MGMT303	Small Business Marketing		3
MGMT101	Personnel Supervision		3
MKTG103	Principles Of Selling		3

Option Courses ... Select 1 Course From Each Option

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

Social Work-Preparation 210400

Students planning to major in social work at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. Since requirements vary at senior institutions, students should become familiar with the specific course requirements of the four-year institutions to which they plan to transfer.

The Counseling, Advising and Placement Office can provide transfer plans from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Telecommunications Technology 531000-X

The Telecommunications Technology program is designed to prepare students to begin a career in either the telecommunications or telephone industries. The program covers basic skills and knowledge associated with transmitting analog and digital communications. Hands-on training covers system installation, system configuration commands, system operation and diagnostic maintenance procedures. Students who successfully complete this program may seek employment in several areas of the telephone and telecommunications industries.

Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information session. 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

TELE410	Telephony I		3
TELE411	Telephony Experience I		6
ELEM450	Related Math		3
ELEM451	DC & AC Fundamentals		3
ELEM452	DC & AC Fundamentals Lab		3

Term 2

TELE420	Telephony II		4
TELE421	Telephone Experience II		7
ELEM462	Digital Electronics		3
ELEM463	Digital Electronics Lab		3

Term 3

TELE430	Telephony III		3
TELE431	Telephony Experience III		6
TELE432	Data Communications		3

Term 4 ... Select 1 Course From Option 1

BSAD150	Intro To Business		3
DATA106	Microcomputers In Business		3
ENGL410	Communication Skills		3
TELE440	Telephony IV		3
TELE441	Telephony Experience IV		3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3
MGMT203	Human Relations In Business	Opt1	3

Tool & Die Making 530300-2

The Tool and Die Making 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 Die Making. Job Shop Machinist graduates should have the skills required to work in a general machine shop. Die Making 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 & Die Making AAS degree.

Location: Ankeny

Program Entry Requirements
JOB SHOP MACHINIST

Complete an application and attend any required orientation/information sessions. Students start fall term.

DIE MAKING

Complete an application and attend any required orientation/information sessions. Submit proof of a Job Shop Machinist Diploma or equivalent. Students start fall term.

Graduation Requirements

To earn a Job Shop Machinist or Die Making diploma; or Tool and Die Making AAS degree, the student must complete all course work as prescribed and maintain a 2.0 grade point average.

JOB SHOP MACHINIST 530300

Required Courses

ENGL410	Communication Skills	3
MATH410	Mathematics for Technicians I	3
TOOL480	Blueprint Reading I	2
TOOL481	Blueprint Reading II	3
TOOL482	Machine Shop Measurements I	2
MATH411	Mathematics for Technicians II	3
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

DIE MAKING 53030DM

Required Courses

ENGL410	Communication Skills	3
MATH410	Mathematics for Technicians I	3
CADD401	Intro to Computer Aided Drafting-CAD	3
CADD402	Intermediate CADD-Mechanical	3
CIM-413	Introduction to FMS Cell	3
DIEM400	Basic Diemaking	4
DIEM401	Basic Diemaking Lab	6
DIEM402	Advanced Blueprint Reading	2
DIEM403	Progressive Die Design	3
DIEM404	Advanced Diemaking	4
DIEM405	Advanced Diemaking Lab	6
DIEM407	Plastic Moldmaking	3
DIEM413	Electrical Discharge Machining	3

TOOL AND DIE

Select 1 Course from Option 1

MGMT203	Human Relations In Business	Opt1	3
PSCH101	General Psychology	Opt1	3
PSCH106	Psychology Of Human Relations & Adj	Opt1	3
SOCY101	Introduction To Sociology	Opt1	3

Upholstery 531300-1

The Upholstery program is designed to provide the student with the necessary knowledge to enter employment in the automotive or furniture upholstery field. The program provides a blend of shop and theory activities utilizing laboratory projects and experiences.

Instruction includes the use of machines and hand tools, pattern layout, furniture construction, color concepts and coordination, and cost estimating. The listed sequence of courses may be altered.

Graduates of this program will find employment in automotive or

furniture upholstery business.
Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. Students start any term.

Graduation Requirements

To earn an Upholstery diploma, complete all courses as prescribed and maintain a 2.0 grade point average.

Required Courses

UPHL460	Basic Upholstery	2
UPHL461	Pattern Layout	2
UPHL462	Cushion Construction	2
UPHL463	Padding Procedures	2
UPHL464	Frame Preparation	1
UPHL465	Technical Problems	2
UPHL466	Business Problems	2
ENGL410	Communication Skills	3
MATH410	Mathematics for Technicians I	3

Option Courses . . . Select Option 1 Or Option 2 And 1 Course From Option 3

UPHL470	Skirt & Attached Pillow Construction	Opt1	2
UPHL471	Nosing & Advanced Cushion Const.	Opt1	2
UPHL472	Overstuffed Chair Project	Opt1	1
UPHL473	Tufting Techniques	Opt1	2
UPHL474	Pillow Back Chair Project	Opt1	2
UPHL475	Recliner Chair Project	Opt1	2
UPHL476	Large Sofa Project	Opt1	2
UPHL477	Loveseat/Small Sofa Project	Opt1	1
UPHL480	Installing Vinyl Tops	Opt2	2
UPHL481	Auto Bench/Bucket Seat Project	Opt2	2
UPHL482	Boat Seat Project	Opt2	1
UPHL483	Auto Pillow Back Seat	Opt2	2
UPHL484	Auto Door Panel & Headliner Project	Opt2	2
UPHL485	Auto Carpeting Project	Opt2	2
UPHL486	Vinyl/Convertible Top Project	Opt2	2
UPHL487	Boat/Tonneau Cover Project	Opt2	1
MGMT203	Human Relations In Business	Opt3	3
PSCH101	General Psychology	Opt3	3
PSCH106	Psychology Of Human Relations & Adj	Opt3	3
SOCY101	Introduction To Sociology	Opt3	3

Veterinary Medicine-Preparation 121900

Students planning to major in pre-veterinary medicine at a four-year college may complete their freshman and sophomore requirements at Des Moines Area Community College. Graduates are awarded the Associate in Arts or Associate in Science degree. 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 Counseling, Advising and Placement Office can provide transfer plans sheets from the various colleges identifying which DMACC courses should be taken for transfer. Students planning on transferring to a four-year college should contact a counselor or advisor for course planning assistance.

Welding 530800

Welding is the term used to describe numerous methods of joining metals. Students are provided with entry level welding skills and knowledge essential for employment in the industrial manufacturing, job shop, and pipe welding industries.

Ferrous and non-ferrous metals are joined using the oxy-acetylene, shielded metallic arc and gas shielded arc welding processes. 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.
Location: Ankeny

Program Entry Requirements

Complete an application and attend any required orientation/information sessions. 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 Weld/Cutting	2
WELD474	Shielded Metallic Arc Welding I	2
WELD478	Shielded Metallic Arc Welding II	3
WELD479	Shielded Metallic Arc Welding III	2
WELD481	Blueprint Reading	3
WELD486	Shielded Metallic Arc Welding IV	3
WELD487	Shielded Metallic Arc Welding V	2
WELD488	Shielded Metallic Arc Welding VI	3
WELD483	Gas Metallic Arc Welding	2
WELD493	Gas Tungsten Arc Welding	2

Accounting Basics 500200-S

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

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

Required Courses
ACCT101	Principles Of Accounting I		4
ACCT102	Principles Of Accounting II		4
ACCT351	Financial Accounting/Microcomputers		3
BSAD223	Business/Financial Math		3

Option Courses . . . Select 1 Course From Each Option
ACCT105	Governmental Accounting	Opt1	3
ACCT103	Intermediate Accounting I	Opt1	4
ACCT203	Cost Accounting I	Opt1	4
COMS181	Intro To Computer Literacy	Opt2	3
MGMT229	Small Business Management	Opt2	3

Accounting Advanced 500200-A

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

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

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

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

Option Courses . . . Select 1 Course From Each Option
ENGL117	Composition I	Opt1	3
OFFC205	Business English	Opt1	3
ENGL115	Technical & Business Writing	Opt2	3
ENGL118	Composition II	Opt2	3
ENGL410	Communication Skills	Opt2	3
ACCT104	Intermediate Accounting II	Opt3	4
ACCT105	Governmental Accounting	Opt3	3
ACCT352	Managerial Acct/Microcomputers	Opt4	3
MGMT229	Small Business Management	Opt4	3

Administrative Support 500500-C

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

Required Courses
OFFC205	Business English		3
OFFC206	Correspondence Techniques		3
OFFC302	Typing Skill Development II		2
OFFC335	Introductory Shorthand		3
OFFC337	Word Processing I		3
OFFC338	Word Processing II		3
OFFC340	Intro To Office Computer Application		3

Option Courses . . . Select 1 Course From Option 1
OFFC336	Advanced Shorthand & Transcription	Opt1	3
OFFC341	Advanced Office Computer Application	Opt1	3

Airbrush Art 501200-S

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, photo retouching (both black and white and color); and in design such as textile, plastic products, greeting cards, and posters.

Required Courses
CART449	Airbrush I		4
CART451	Airbrush II		4

Building Maintenance 539900-S

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
BLDM328	Inventory & Purchasing	Opt1	1
BLDM329	Basic Plumbing	Opt1	2
BLDM330	Building Custodian	Opt1	1
BLDM331	Temperature Control Systems	Opt1	2
BLDM332	Residential Wiring systems	Opt1	2
HLCR314	Emergency Care	Opt1	1

Chemical Dependency Counseling 550600-S

This one year certificate is offered cooperatively with Powell III at Iowa Methodist Medical Center.

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 III. Powell III reserves the right to establish admissions procedures and select their practicum/field experience students. Powell III 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 coursework.

For information about and admission procedures for the practicum phase, contact Training Coordinator, Powell III, Iowa Methodist Medical Center, 2023 Grand, Des Moines, Iowa 50312.

Required Courses
ENGL117	Composition I		3
HUMS109	Survey Mental Health Treatment		3
HUMS202	Interviewing/Interper Relation		3
HUMS205	Intervention Theories/Practice I		3
HUMS206	Intervention Theories/Practice II		3
HUMS208	Field Experience		3
HUMS213	Pract:Chemical Depend Counsel I		6
HUMS214	Pract:Chemical Depend Counsel II		6
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

Child Care Specialist I 559900-C

The Child Care Specialist I certificate has been designed for those persons with little or no experience and/or training in the child care field. It provides a comprehensive learning experience for individuals in the care and guidance of young children.

Required Courses

CHLD240	Emergency Care	1
CHLD334	Development In Early Childhood I	2
CHLD337	Creating The Environment	2
CHLD338	Development In Early Childhood II	1
CHLD343	Assessing Child/Program Planning	1
CHLD347	Planning Group Activities	1
CHLD349	Contemporary Issues In Child Care	1
CHLD360	Guiding Young Children	2

Child Care Specialist II 559900-S

The Child Care Specialist II certificate has been designed for those persons with experience and/or training in the child care field. Classroom instruction is provided on the social, emotional development, and intellectual needs of children. Emphasis is placed on program enrichment and problem solving. To earn a Child Development diploma, a student must complete Child Care Specialist I and II and CHLD 460, 461, and 464.

Required Courses

CHLD268	Professional Relationships	1
CHLD362	Activities For Infants & Toddlers	2
CHLD364	Activities For Preschooler/Schoolage	2
CHLD375	Child Nutrition	2
CHLD376	Child Health/Safety	1

Option Courses ... Select 1 Course From Each Option

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

Child Care Specialist III 559900-3

The Child Care Specialist III certificate has been designed for persons functioning in a supervisory capacity such as lead teachers, coordinators, assistant directors and directors. An in-depth view of management techniques and operational skills needed to provide quality supervision of a day care center is provided.

Required Courses

CHLD366	Developing A Child Care Team	1
CHLD266	Admin Of Programs/Children	3
CHLD368	Being The Best You Can Be	1
CHLD369	Remaining Current	1

Option Courses ... Select 1 Course From Option 1

CHLD370	Getting To Know You & Me	Opt1	1
CHLD371	Personal Coping Skills	Opt1	1

CIM - MFG Resource Planning 5 30100

The Management Resource Planning certificate prepares the student with the technical and conceptual skills in the management of a Computer Integrated Manufacturing installation at the operations management planning and execution levels.

Required Courses

CIM-408	Intro to Computer Integrated Mfg.	3
CIM-409	Inventory Management & Planning	3
CIM-410	Material Requirements Planning	3
CIM-411	Production and Capacity Management	3
CIM-412	Just In Time Inventory Control Tech.	3

CIM - Product Engineering 53010 I

The Product Engineering certificate covers all aspects of CAD. Beginning with an introductory course in mechanical AutoCAD, the program progresses to 3D CAD and finally the generation of computer-assisted parts programs. These are then post-processed and down loaded to CNC machines.

Required Courses

CADD401	Intro to Computer Aided Drafting-CAD	3
CADD402	Intermediate CADD-Mechanical	3
CADD404	Computer Aided Design & Analysis	3
CIM-403	Introduction to CAD/CAM	3
CIM-408	Intro to Computer Integrated Mfg.	3

CIM - Shop Floor Control 530102

The Shop Floor Control certificate introduces the student to the program-

ming 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.

Required Courses

CIM-404	Robotics	2
CIM-405	Programmable Controllers	3
CIM-408	Intro to Computer Integrated Mfg.	3
CIM-413	Introduction to FMS Cell	3

Clerical Specialist 500500-F

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

Required Courses

BSAD223	Business/Financial Math	3
MGMT203	Human Relations In Business	3
OFFC205	Business English	3
OFFC302	Typing Skill Development II	2
OFFC324	Office Calculators	1
OFFC340	Intro To Office Computer Application	3

Computer Languages 510300-S

The purpose of the Computer Languages certificate is to provide the student with previous business experience and/or educational background with knowledge of how to design, write, and execute programs to solve specific business problems. It is intended for those wishing to make a career change or for those already employed in the field who wish to upgrade credentials.

Required Courses

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

Option Courses ... Select 6 Credits From Option 1

DATA103	BASIC	Opt1	3
DATA104	BASIC/Advanced	Opt1	3
DATA110	Microcomputer Systems Design	Opt1	3
DATA211	FORTRAN	Opt1	3
DATA221	PL/I	Opt1	3
DATA231	RPG/II	Opt1	3
DATA301	DOS Job Control	Opt1	4
DATA308	COBOL/Advanced	Opt1	3
DATA310	Program Logic Design	Opt1	4
DATA321	Assembler/Intermediate	Opt1	4
DATA327	Assembler/Advanced	Opt1	4
DATA338	OS/JCL	Opt1	2
DATA330	dBase An Introduction	Opt1	1
DATA331	dBase An Advanced Course	Opt1	2
DATA333	Lotus 123-An Advanced Course	Opt1	2
DATA342	Word Star	Opt1	1
DATA343	Word Perfect	Opt1	1

Credit Union Operations 500300-5

The Credit Union Operations certificate is designed to prepare credit union employees and prospective employees for front-line and first supervisory level positions in Iowa credit unions. The program combines courses which focus on the application of business principles in the credit union. Persons completing the Operations certificate program will gain an understanding of credit unions' unique operational and philosophical characteristics as well as practical knowledge of state and federal laws affecting credit unions, credit union structure, credit union financial management models, accounting procedures and auditing requirements. Emphasis also will be placed on member relations skills and on traditional credit union services of savings programs and loan operations. Volunteer credit union directors who have operational responsibilities through their roles on the volunteer board of directors also will benefit from and be eligible for the Operations certificate.

Required Courses

FNSR232	Intro To Credit Unions	3
FNSR233	Credit Union Operations	3
FNSR234	Credit Union Financial Mgmt	3
FNSR274	Credit Union Accounting	3
FNSR275	Credit Union Auditing	3

Data Entry 510200-S

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

Graduates of the Data Entry program locate employment in public and private organizations and agencies of all sizes and missions in positions of data entry operator, computer operator, data control clerk, keyboarder, input clerk, media librarian, and word processing trainee. 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

Dietary Manager 529900-M

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.

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 Exp	1
DMAS363	Nutrition Life Cycle Field Exp	1
DMAS364	Modified Diet/Field Experience	1
DMAS365	Food Production Field Experience	1
DMAS366	Food Service Mgmt Field Experience	1

Emergency Med Tech Ambulance 529900-E

The Emergency Medical Technician-Ambulance 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 untilize EMT-A's.

Required Courses

HLCR307	Emergency Medical Tech Ambulance	6

Fashion 531300-C

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

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

Required Courses

MKTG103	Principles Of Selling	3
MKTG231	Principles/Clothing Selection	3
MKTG321	Retail Management I	3
MKTG323	Display & Visual Merchandising	2
MKTG332	Textiles	3

Fire Specialist 550700-P

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

FIRE231	Intro To Fire Science	2
FIRE232	Fire Behavior	3
FIRE233	Building Construction	3
FIRE234	Fire Protection Systems	3
FIRE235	Hazardous Materials	3
FIRE236	Fluid Flows	3
FIRE237	Planning For Fire Protection	3
FIRE238	Fire Investigation	3

High Tech Electronics-Biomed 531100-E

The Biomedical Electronics certificate prepares graduates of electronics programs, civil or military, for a career as a biomedical electronic technician. By the end of the program you will be able to troubleshoot and repair medical electronic instrumentation such as patient monitoring EEG equipment as well as clinical lab instrumentation such as PH meters, spectrophotometers, and blood cell counters. The technical curriculum is also supported by courses from the health field such as health care delivery and integrated services.

Upon program completion you may seek employment in hospitals or as a technician for a manufacturer of medical electronic equipment. Students must obtain a satisfactory score on an entrance examination. Spring start only.

Required Courses

BIOL127	Human Biology	3
HTBM353	Biomed Instrumentation I	3
HTBM354	Biomed Instrumentation I Lab	5
HTBM358	Internship	3
HTBM355	Electro-Mechanical Systems I	2
HTBM356	Electro-Mechanical Systems I Lab	2
HTBM362	Health Care Delivery	3
HTBM363	Biomed Instrumentation II	2
HTBM364	Biomed Instrumentation II Lab	2

Insurance Sales 500400-I

The purpose of the Insurance Sales certificate is to 1) provide minimal knowledge necessary to become licensed, and 2) learn human relations and marketing elements essential in prospecting and selling insurance coverage. The certificate is also beneficial to currently employed insurance people wishing to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

Required Courses

BSAD225	Principles Of Insurance	3
MGMT203	Human Relations In Business	3
MKTG103	Principles Of Selling	3

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

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

Legal Assistant 140100-8

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
LEGA260	Legal Research & Writing I	3
LEGA261	Legal Research & Writing II	3
LEGA242	Torts & Litigation I	3
LEGA246	Business & Corporate Law I	3
LEGA250	Legal Internship & Ethics	4

Option Courses . . . Select 15 Credits From Option 1

LEGA243	Torts & Litigation II	Opt1	3
LEGA247	Business & Corporate Law II	Opt1	3
LEGA244	Domestic Relations	Opt1	3
LEGA249	Probate Procedure	Opt1	3
LEGA252	Administrative Practice	Opt1	3
LEGA256	Debtor/Creditor Law	Opt1	3
LEGA259	Advanced Legal Research & Writing	Opt1	3
LEGA270	Legal Interviewing/Clinical Exper	Opt1	3
LEGA254	Evidence: Theory & Practice	Opt1	3
LEGA251	Wills, Estate Planning & Taxation	Opt1	3
LEGA248	Real Estate Law	Opt1	3
LEGA245	Income Tax Law	Opt1	3
COMS181	Intro To Computer Literacy	Opt1	3
CRIM105	Constitutional Law	Opt1	3
LEGA258	Computerized Legal Research	Opt1	3

Management 500400-A

The purpose of the Management certificate is to provide the currently employed person in business with broad knowledge of 1) the principles of management and business functions, and 2) human relations and communication skills necessary to recognition and appointment to successive levels of management. The certificate is also beneficial to people currently employed in management who wish to upgrade credentials and improve chances for further promotion.

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

Required Courses

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

Option Courses . . . Select 1 Course From Each Option

ACCT101	Principles Of Accounting I	Opt1	4
ACCT301	Accounting Fundamentals	Opt1	3
MGMT103	Sales Management	Opt2	3
MGMT153	Office Management	Opt2	3
MGMT229	Small Business Management	Opt2	3
MGMT241	Production Management	Opt2	3
MKTG211	Industrial Marketing	Opt2	3
MKTG212	Purchasing	Opt2	3
MKTG321	Retail Management I	Opt2	3
ENGL117	Composition I	Opt3	3
ENGL410	Communication Skills	Opt3	3

Medical Transcriptionist 50050MT

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

Required Courses

OFFC221	Medical Terminology I	3
OFFC222	Medical Terminology II	3
OFFC223	Medical Transcription III	3
OFFC320	Human Body In Health & Disease	3
OFFC430	Medical Transcription I	3
OFFC431	Medical Transcription II	3
DATA343	Word Perfect	1

Microcomputer Application 519900

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

Required Courses

OFFC337	Word Processing I	3
OFFC338	Word Processing II	3
OFFC340	Intro To Office Computer Application	3
OFFC341	Advanced Office Computer Application	3

Microcomputers 510300-T

This certificate is designed with microcomputer applications in mind. The student who pursues this course work will, after completing the courses, have a good working knowledge of business applications for the microcomputer as well as the considerations needed when developing a microcomputer system for the business environment.

The student should currently be employed in a field where microcomputers have greatly impacted their occupation and where an additional knowledge base of microcomputers will heighten the individual's productivity and career potentials.

Required Courses

DATA106	Microcomputers In Business	3
DATA110	Microcomputer Systems Design	3
BSAD150	Intro To Business	3
COMS181	Intro To Computer Literacy	3

Option Courses . . . Select 3 Courses From Option 1

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

Nursing Home Administrator 521800-R

The Nursing Home Administrator certificate is for students with prior degrees who desire eligibility to sit for Nursing Home Administrator Licensure. The student must also meet the Iowa Board of Examiners for Nursing Home Administrator equivalency requirements.

Required Courses

HCAD271	Admin Long-Term Care Facilities	5
HCAD272	Services: Long-Term Care Residents	5
HCAD261	Pract: Long-Term Care Administration	3
HCAD264	Pract: Seminar	2
HCAD262	Pract: Long-Term Care Administration	3
HCAD264	Pract: Seminar	2
HCAD263	Pract: Long Term Care Administration	3
HCAD264	Pract: Seminar	2
HCAD281	Seminar In Health Care	3
SOCY204	Social Gerontology/Applications	4

Phlebotomy 520100-S

A phlebotomist draws blood from patients for routine and diagnostic medical tests. Most phlebotomists are employed in hospitals.

Required Courses

PHLE310	Phebotomy with Practicum	4

Printing 500900-S

The Printing certificate is designed for individuals with prior printing experience who are looking to update their skills or are seeking advancement in other areas of the printing industry. The program will provide the individual with 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 individuals 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

PRTG410	Press I Duplicators	4
PRTG411	Process Camera Fundamentals	4
PRTG413	Film Assembly/Carrier Preparation	4
PRTG420	Press II Offset	4
PRTG421	Advanced Camera Techniques	4
PRTG423	Advanced Stripping Contacting	4
PRTG426	Copy Preparation II	4

Production Art 501200-P

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

Purchasing 500400-D

The purpose of the Purchasing certificate is to provide the currently employed person in business with knowledge of principles and minimal accounting skills and legal aspects necessary to make a change to the field of purchasing. The certificate is also beneficial to persons already employed in purchasing who wish to upgrade their credentials. Courses also apply toward the one and two-year programs in marketing and management.

Required Courses

ACCT101	Principles Of Accounting I	4
BSAD223	Business/Financial Math	3
BUSL101	Business Law I	3
MKTG212	Purchasing	3

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

BSAD150	Intro To Business	Opt1	3
MGMT153	Office Management	Opt1	3
COMS181	Intro To Computer Literacy	Opt1	3
DATA103	BASIC	Opt1	3
MGMT341	Business Internship I	Opt1	6
MKTG102	Principles Of Marketing	Opt1	3
MKTG211	Industrial Marketing	Opt1	3
ENGL117	Composition I	Opt2	3
SPCH110	Fundamentals Of Speech	Opt2	3

Real Estate Sales 500400-C

The purpose of the Real Estate Sales certificate is to 1) provide minimal knowledge necessary to become licensed, and 2) study human relations and marketing elements essential in prospecting and selling real estate property. The certificate is also beneficial to currently employed real estate people wishing to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

Required Courses

BSAD226	Principles Of Real Estate	3
BUSL101	Business Law I	3
MGMT203	Human Relations In Business	3
MKTG103	Principles Of Selling	3

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

BSAD150	Intro To Business	Opt1	3
BSAD223	Business/Financial Math	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT341	Business Internship I	Opt1	6
MKTG104	Advertising & Sales Promotion	Opt1	3
ENGL117	Composition I	Opt2	3
SPCH110	Fundamentals Of Speech	Opt2	3

Residential Care Facility Admininistrator 521800-F

The purpose of the Residential Care Facility Administrator certificate is to provide course work to qualify individuals to be administrators of residential care facilities. Administrators are generally responsible for budgeting and staffing, as well as developing programs for the care and supervision of residents. Select OPTION I (Mentally Retarded/Developmentally Disabled Residents) or II (Geriatric Residents).

Required Courses

ACCT301	Accounting Fundamentals	3
ENGL117	Composition I	3
HCAD271	Admin Long-Term Care Facilities	5
HCAD273	Law & Long-Term Care	4

Option Courses . . . Select One Of The Following Options

HCAD227	Integrating Community Service - MH/MR/DD	Opt1	4
HCAD277	Service Delivery Systems - MH/MR/DD	Opt1	5
PSCH104	Abnormal Psychology	Opt1	3
PSCH107	Principles Of Behavior Modification	Opt1	3
HCAD272	Services: Long-Term Care Residents	Opt2	5
PSCH101	General Psychology	Opt2	3
SOCY101	Introduction To Sociology	Opt2	3
SOCY204	Social Gerontology/Applications	Opt2	4

Retailing 50040RE

The Retailing certificate offers skills for entering the exciting 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 is both challenging and rewarding. All courses are transferable into the one year diploma and two year degree retailing management and marketing programs.

Required Courses

MGMT407	Professional Development Seminar	1
MKTG103	Principles Of Selling	3
MKTG321	Retail Management I	3
MKTG323	Display & Visual Merchandising	2

Sales 50040SC

The purpose of the Sales certificate is to provide currently employed people with knowledge of 1) the basic principles of selling and marketing and 2) the elements of human relations and communication required to enter the field of selling. Courses also apply toward one and two-year programs in marketing and management. This program is offered both during the evening and the day.

Required Courses

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

Option Courses . . . Select 1 Course From Option 1

ENGL117	Composition I	Opt1	3
ENGL410	Communication Skills	Opt1	3

Small Business 050600-2

The Small Business certificate introduces you to creative and tested ways to start and operate your 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's Small Business Management program.

Required Courses

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

Supervision 500400-H

The purpose of the Supervision certificate is to provide the person currently employed in business with knowledge of 1) the principles of supervising others, and 2) the elements of human relations and communication needed for promotion and success in first line supervision. The certificate is also beneficial to people currently working as supervisors who wish to upgrade their credentials. Courses also apply toward one and two-year programs in marketing and management.

Required Courses

MGMT101	Personnel Supervision	3

MGMT102	Introduction To Management		3
MGMT203	Human Relations In Business		3

Option Courses ... Select 6 Credits From Opt. 1 and 1 Course From Opt. 2

BSAD150	Intro To Business	Opt1	3
MGMT103	Sales Management	Opt1	3
MGMT153	Office Management	Opt1	3
MGMT229	Small Business Management	Opt1	3
MGMT341	Business Internship I	Opt1	6
MKTG103	Principles Of Selling	Opt1	3
MKTG211	Industrial Marketing	Opt1	3
MKTG212	Purchasing	Opt1	3
MKTG321	Retail Management I	Opt1	3
ENGL117	Composition I	Opt2	3
ENGL410	Communication Skills	Opt2	3

Technical Management 050600-3

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
MGMT101	Personnel Supervision		3
MGMT102	Introduction To Management		3
MGMT240	Principles Of Managerial Finance		3
MGMT241	Production Management		3
MKTG102	Principles Of Marketing		3

Travel Personnel 550100-S

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

Required Courses

OFFC205	Business English		3
OFFC301	Typing Skill Development I		2
OFFC340	Intro To Office Computer Application		3
OFFC414	Travel Personnel I		3
OFFC415	Travel Personnel II		3
OFFC416	Selling For Travel Personnel		3
OFFC417	Geography For Travel		3

Upholstery I 531300-5

The Upholstery I certificate is designed to provide instruction in the correct operation of sewing machines. The students will also gain knowledge of layout, cutting and fitting fabric for sewing machine operation.

Required Courses

UPHL460	Basic Upholstery		2
UPHL461	Pattern Layout		2
UPHL462	Cushion Construction		2
UPHL463	Padding Procedures		2
UPHL464	Frame Preparation		1

Upholstery II 531300-6

The Upholstery II certificate is designed to provide instruction in either furniture recovering or auto repair and restoration. Students will develop skills in layout, match fabric, and removal and replacement of pillow and channel backs. Students choosing the auto repair and restoration will develop skills in auto restoration and custom auto upholstery. Students must complete all courses in Upholstery I Certificate before advancing to Upholstery Certificate II.

Required Courses

UPHL465	Technical Problems		2
UPHL466	Business Problems		2

Option Courses ... Select Option 1 Or Option 2

UPHL470	Skirt & Attached Pillow Construction	Opt1	2

UPHL471	Nosing & Advanced Cushion Const.	Opt1	2
UPHL472	Overstuffed Chair Project	Opt1	1
UPHL480	Installing Vinyl Tops	Opt2	2
UPHL481	Auto Bench/Bucket Seat Project	Opt2	2
UPHL482	Boat Seat Project	Opt2	1

Upholstery III 531300-7

The Upholstery III certificate is designed to provide the student with the necessary knowledge to enter employment in the furniture or automotive upholstery field.

Courses in the Upholstery I, II, III certificates also apply toward the one-year Upholstery diploma program. Students must complete all courses in Upholstery II Certificate before advancing to Upholstery III Certificate.

Option Courses ... Select Option 1 Or Option 2

UPHL473	Tufting Techniques	Opt1	2
UPHL474	Pillow Back Chair Project	Opt1	2
UPHL475	Recliner Chair Project	Opt1	2
UPHL476	Large Sofa Project	Opt1	2
UPHL477	Loveseat/Small Sofa Project	Opt1	1
UPHL483	Auto Pillow Back Seat	Opt2	2
UPHL484	Auto Door Panel & Headliner Project	Opt2	2
UPHL485	Auto Carpeting Project	Opt2	2
UPHL486	Vinyl/Convertible Top Project	Opt2	2
UPHL487	Boat/Tonneau Cover Project	Opt2	1

Welding

In an effort to meet the needs of interested students and local industry, the Welding program is offering a variety of certificates designed for the inexperienced, as well as the more advanced and experienced welders.

The certificates are designed for open entry and open exit. 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 his/her own personal gain.

OXY-ACETYLENE WELDING CERTIFICATE 530800-A

WELD473	Oxygen-Acetylene Weld/Cutting	2

SHIELDED METAL ARC WELDING CERTIFICATE 53080SM

WELD474	Shielded Metallic Arc Welding I	2
WELD478	Shielded Metallic Arc Welding II	3
WELD479	Shielded Metallic Arc Welding III	2
WELD486	Shielded Metallic Arc Welding IV	3
WELD487	Shielded Metallic Arc Welding V	2
WELD488	Shielded Metallic Arc Welding VI	3

GAS METAL ARC WELDING CERTIFICATE 530800-G

WELD483	Gas Metallic Arc Welding	2

GAS TUNGSTEN ARC WELDING CERTIFICATE 53080GT

WELD493	Gas Tungsten Arc Welding	2

BLUEPRINT READING CERTIFICATE 53080BR

WELD481	Blueprint Reading	3

STRUCTRUAL WELDING CERTIFICATE 53080SW

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

PIPEWELDING CERTIFICATE 530800-P

WELD499	Intro-Shielded Met Arc Pipe Welding	3

Word Processing 510100-S

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

Required Courses

OFFC205	Business English	3
OFFC206	Correspondence Techniques	3
OFFC302	Typing Skill Development II	2
OFFC337	Word Processing I	3
OFFC338	Word Processing II	3
OFFC340	Intro To Office Computer Application	3
OFFC345	Adv Word Processing Application	3

COURSE NUMBER — **ACCT090**

COURSE NAME — **Accounting Adaptor Lab**

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

2 0 4 0 0   Adaptor

- CREDITS
- LECTURE HOURS
- LAB HOURS
- PRACTICUM HOURS
- WORK EXPERIENCE
- *COURSE TYPE
- **SEE BELOW

*General = non-core courses identified as freshman-sophmore 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.

(P/F) = indicates courses taken pass/fail.

**PREREQUISITES - successful completion of a course or other criterion necessary for a student to succeed in a higher level course

COREQUISITES - a course that must be taken concurrently with or prior to the course

RECOMMENDATION - a course or other criterion desirable for successful performance in another course.

ACCT090   2 0 4 0 0
Accounting Adaptor Lab   Adaptor
Applied theory and practice of topics covered in ACCT101 Accounting Principles I. The course is primarily intended for students currently enrolled in ACCT101 who have not had a high school course or other previous exposure to bookkeeping and accounting. COREQUISITE: ACCT101

ACCT101   4 4 0 0 0
Principles Of Accounting I   General
Introduces the student to the principles of accounting with emphasis placed on the users and uses of accounting information. The double-entry bookkeeping system is presented with a focus on the end result of the accounting cycle, the financial statement.

ACCT102   4 4 0 0 0
Principles Of Accounting II   General
A continuation of Principles of Accounting I. Introduces accounting procedures related to corporations, manufacturing, and branch operations. The course also includes an introduction to capital budgeting, analysis of financial statements and decision-making by managers. PREREQUISITE: ACCT101

ACCT103   4 4 0 0 0
Intermediate Accounting I   Open
Emphasis on theory, standards and principles—the "why" of accounting. The framework goes beyond the procedural level to the conceptual level. Topics include: preparation of income statements, balance sheets and related footnotes. Applicable FASB pronouncements are presented. PREREQUISITE: ACCT102

ACCT104   4 4 0 0 0
Intermediate Accounting II   Open
Continuation of Intermediate Accounting I with emphasis in the following areas: corporations-formation, expansion, investments, bonds, pensions, leases, accounting changes, earnings per share and accounting for inflation. PREREQUISITE: ACCT103

ACCT105   3 3 0 0 0
Governmental Accounting   Open
An introduction to the accounting and reporting principles, standards, and procedures applicable to federal, state, and local government. Also includes nonprofit institutions such as hospitals and universities. PREREQUISITE: ACCT102 or dept permission

ACCT203   4 4 0 0 0
Cost Accounting I   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.

ACCT301   3 3 0 0 0
Accounting Fundamentals   Open
An introductory course in accounting fundamentals and procedures. Includes capturing and analyzing business data and in financial statement preparation.

ACCT351   3 3 0 0 0
Financial Accounting/Microcomputers Voc/Tech
Introductory course in micro-computer accounting operation. Includes topics in setting up the general ledger, accounts receivable, accounts payable, payroll and fixed asset depreciation. PREREQUISITES: ACCT101, COMS181

ACCT352   3 3 0 0 0
Managerial Acct/Microcomputers   Voc/Tech
Microcomputer operations with an emphasis on managerial uses. Includes topics in basic spreadsheet modeling, spreadsheet commands, manufacturing systems, budgeting, profit analysis and model building. PREREQUISITES: ACCT102, COMS181

ACCT403   3 0 0 0 14
Accounting Internship   Open
An opportunity to gain practical experience through on-the-job training in an approved business or governmental office. (P/F) PREREQUISITES: Complete 2 sem Acct Sp/Bk- Acct/Offc Mgmt or dept perm

ACCT404   1 1 0 0 0
Accounting Career Seminar   Voc/Tech
Designed to provide in-depth discussion of accounting/bookkeeping/office management work experiences. Includes topics in the areas of work attitudes, confidentiality, job promotion opportunities and employer/employee responsibilities. These discussions will be related to internship and future job related activities. COREQUISITE: ACCT403

ACCT407   1 1 0 0 0
Accounting Professional Development Voc/Tech
How individuals fit into organizations. Development of individual career values. Opportunities in the Accounting Profession. (P/F)

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 3 0 0 0
Soil Fertility   Voc/Tech
The course develops an understanding of the factors which affect plant growth. Plant nutrients are considered as students gain experience in identifying major and micro nutrient deficiency symptoms in plants by means of soil tests, plant tests and observations.

AGRI203   3 3 0 0 0
Feeding & Animal Nutrition II   Voc/Tech
The practical application of feeding principles. An in-depth study of the various nutrients, their requirements and uses. An analysis of research feeding trials, research procedures and manufacturing terminology. PREREQUISITE: AGRI201

AGRI204   3 3 0 0 0
Animal Science I   Voc/Tech
An analysis of the livestock industry with emphasis on reproduction, inheritance, performance testing, selection and marketing.

AGRI205   3 3 0 0 0
Commodities I   Voc/Tech
Focus on the futures market and how it can be used as a marketing tool. Emphasis is on terminology and hedging.

AGRI206   3 3 0 0 0
Crop Management   Voc/Tech
An introductory course in the general principles of crop production and management. Major areas of study are food production, crop classification, plant growth factors, seed production and variety selection.

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.

AGRI215   3 3 0 0 0
Commodities II   Voc/Tech
An in-depth study of the futures market. Major areas of study include hedging, speculation, price forecasting, spreading, tec\nical analysis and fundamental analysis. PREREQUISITE: AGRI205

AGRI219   5 5 0 0 0
Soils & Fertilizers   Voc/Tech
An introductory 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.

AGRI304   3 3 0 0 0
Swine Production and Management   Voc/Tech
The practical application of technical information to life-cycle swine production including production systems, breeding and genetics, herd health, housing, marketing, management and nutrition. PREREQUISITES: AGRI201, 204

Commercial Vehicle Operator

To meet the increasing needs of transportation companies, the Transportation Institute offers participants the opportunity to enter the industry as a commercial vehicle operator. The 8-week, 320-hour, non-credit program utilizes the U.S. Department of Transportation Model Curriculum. The course is one of only 35 in the U.S. that has been certified by the Professional Truck Drivers Institute of America.

The Transportation Institute also offers Commercial Driver License training and Defensive Driving courses.

Features

1. Placement with cooperating companies prior to beginning of training.

2. Extensive behind-the-wheel experience (1000-1500 miles per student) with two students per truck ratio.

3. Tuition assistance programs for qualifying enrollees.

4. Guaranteed student loans available.

5. Approved for VA benefits.

6. Commercial drivers licensing while enrolled.

7. First year earning potential - $25,000 - $30,000

Graduation Requirements

Students must successfully complete the required coursework and safe operation procedures of the program.

Required Courses	Contact Hours
Basic Operations	112.00
Safe Operation Practices	112.75
Advanced Operating Procedures	22.00
Vehicle Maintenance	26.00
Non-Vehicle Activities	47.25

AGRI305   3 3 0 0 0
Beef Production and Management   Voc/Tech
The practical application of technical information to life-cycle beef production with emphasis on cow-calf production and feedlot management. PREREQUI-SITES: 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. PREREQUISITES: AGRI202, 206, 219

AGRI322   3 3 0 0 0
Agribusiness Management   Voc/Tech
A study of the role and organization of agribusiness, the financial management and control of the agribusiness, marketing in agribusiness, operation in agribusiness 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 terminology. Major areas of study will be fuels and lubricants with emphasis on applications and selection, equipment operations, storage and handling procedures, and federal regulations.

AGRI411   3 3 0 0 0
Agricultural Economics   Voc/Tech
A study of economic principles and the application of these principles to the distribution of agricultural supplies.

AGRI421   3 3 0 0 0
Chemical Technology   Voc/Tech
Common features of pests, methods of control, how pesticides work, pesticide labels, application equipment, calibration, laws and regulation governing pesticide use.

AGRI430   4 0 0 0 18
Employment Experience I   Voc/Tech
Employment experience in an agri-business related to career objectives. PREREQUISITES: AGRI201, 219, or permission of instructor.

AGRI436   2 2 0 0 0
Grain Management   Voc/Tech
Designed to acquaint the student with the complete cycle of grain from the farm to the country elevator. Major areas of study are the management of facilities, equipment, personnel and finances, warehouse requirements, grain grading, grain conditioning and grain inventory management.

AGRI454   1 1 0 0 0
Agriculture Seminar   Voc/Tech
An overview of the individual's goals as they relate to employment experiences and the instructional program. PREREQUISITE: AGRI455

AGRI455   4 0 0 0 18
Employment Experience II   Voc/Tech
Work experience in an agri-business area. 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. Course also examines the varieties of cultures and institutions of contemporary Mexico.

ARCH410   2 2 0 0 0
Architectural Drafting I   Voc/Tech
An introduction to drafting and related equipment, along with a preliminary look at site, energy, the building code, and sketching.

ARCH420   2 2 0 0 0
Architectural Drafting II   Voc/Tech
Complete sets of residential working drawings involving plans, elevations, sections, details, and schedules will be developed. PREREQUISITE: ARCH410

ARCH460   3 0 6 0 0
Architectural Drafting Lab I   Voc/Tech
Practical application of the basic skills of drafting involving the mechanics and the necessary thought process.

ARCH461   3 0 6 0 0
Architectural Drafting Lab II   Voc/Tech
Practical application of techniques necessary to develop a set of residential drawings. PREREQUISITE: ARCH460

ARCH462   2 2 0 0 0
Architectural Drafting III   Voc/Tech
Small commercial building drawings will be developed including the mechanical systems and costs. PREREQUISITE: ARCH420

ARCH463   3 0 6 0 0
Architectural Drafting Lab III   Voc/Tech
Involvement in the practical drawing of commercial buildings including the normal system but with emphasis on energy conservation. PREREQUISITE: ARCH461

ARCH464   2 2 0 0 0
Construction Techniques I   Voc/Tech
An introduction to building materials through the construction specification institutes' accounting and management systems.

ARCH465   2 2 0 0 0
Building Equipment Techniques II   Voc/Tech
Heating and cooling systems with support conditioning elements will be analyzed. PREREQUISITE: ARCH473

ARCH470   2 2 0 0 0
Construction Techniques II   Voc/Tech
An ongoing look into the construction specification institutes' system of categorizing building materials. PREREQUISITE: ARCH464

ARCH471   3 3 0 0 0
Construction Techniques III   Voc/Tech
Complete the construction specification institutes' uniform system and investigate the preliminary aspects of structural design. PREREQUISITE: ARCH470

ARCH472   2 2 0 0 0
Construction Estimating   Voc/Tech
An orderly process of accounting for the items involved in the construction project.

ARCH473   2 2 0 0 0
Building Equipment Techniques I   Voc/Tech
The mechanical systems of the building will be analyzed from the ground beginning with plumbing and electrical.

ARCH475   2 2 0 0 0
Technical Report & Specs   Voc/Tech
A look into the forms and contracts used in architecture as well as the technical section called specifications.

ARTS101   3 3 0 0 0
Art Appreciation   Core
A general survey course which explores in chronological sequence many artists, their lives, cultures and media. Field trip required.

ARTS102   3 0 6 0 0
Fundamentals Of Drawing   General
Emphasis on new perceptions of reality using nature, still life, and landscapes. Students will explore a variety of media techniques to develop skills.

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 or oil painting with emphasis on still life, landscape, and individual composition.

ARTS105   3 2 2 0 0
Art In The Elementary School   General
Designed for students in Education and Recreation to assist them with design, construction, and planning of multi-art forms and materials for instructional situations.

ARTS109   3 3 0 0 0
Design: Exploring Art Media   General
An introduction to basic techniques in media such as paper-making, clay, fibers and soft sculptures. Students will explore variety of traditional approaches to express a contemporary vision.

ASDN264   11 5 2 15 0
Nursing IV   Open
Focus is scientific nursing knowledge and nursing process with practicum application to restore clients self-concept/sexuality, elimination, nutrition needs to optimum position on the health continuum. Inter-relationships, pathophysiology and signs and symptoms of changing needs are analyzed. Discussion of RN role and scope of practice. PREREQUISITES: BIOL132, 134, ENGL117, NURS263, PSCH101, 103

ASDN265   11 5 2 15 0
Nursing V   Open
Focus is scientific knowledge and nursing process with practicum application to restore clients activity/sensory, sleep/comfort and oxygenation/circulation needs to optimum position on health continuum. Continue analysis of pathophysiology, multiple needs and evaluation of care plan. Management, role transition & bioethical issues are explored. PREREQUISITES: ASDN264, SOCY101

ASEP312   3 2 2 0 0
GM Specialized Electronics Training Voc/Tech
A study of the electrical and electronics systems used in general motors vehicles. The instruction includes fundamentals of electricity, series and parallel circuits, schematics, wire repair, diodes, transistors and microprocessors. PREREQUISITES: Admission to Automotive Service Educational Program

ASEP317   3 2 2 0 0
GM Shop Fundamentals & Minor Svc Voc/Tech
A study of dealership organizational structure as it relates to the technician. Use of service manuals, electronic troubleshooting manuals and service bulletins are practiced. Also provides entry level automotive task competencies. PREREQUISITES: Admission to Automotive Service Educational Program

ASEP318   4 3 2 0 0
GM Steering/Suspension/Brake Systems Voc/Tech
Instruction in the theory of operation and service procedures used in the maintenance and repair of general motors steering, suspension and brake systems. PREREQUISITES: Admission to Automotive Service Educational Program

ASEP320   3 0 0 0 18
Technical Internship I   Voc/Tech
The technician will work in a sponsoring dealership. The work will be full-time approximately 40 hours per week. The tasks will be consistent with the technician's ability and previous course work. A task list will be issued to each dealer. PREREQUISITES: Admission to Automotive Service Educational Program, MATH410, ASEP312, 317, 318

ASEP326   3 2 2 0 0
GM Auto Air Conditioning Systems   Voc/Tech
Theory of operation of General Motors air conditioning systems leading to the diagnosis, service and repair of current models of GM vehicles. PREREQUISITES: Admission to Automotive Service Educational Program ASEP312, 317

ASEP327   3 2 2 0 0
Minor Service/Repair-GM Engines   Voc/Tech
Principles of operation of General Motors engines. Minor service procedures and engine component repair or replacement will be emphasized. Will also include diagnostic procedures. PREREQUISITES: Admission to Automotive Service Educational Service 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 componets and accessories used on current GM vehicles. PREREQUISITES: Admission to Automotive Service Educational Program, MATH410, ASEP312, 317

ASEP330   3 0 0 0 18
Technical Internship II   Voc/Tech
Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program ASEP320, 326, 327, 328

ASEP333   3 2 2 0 0
Major Service Procedures/GM Engines Voc/Tech
Evaluating, reconditioning and replacing of major components of GM engines will include instruction in machining operations performed in GM dealerships. PREREQUISITES: Admission to Automotive Service Educational Program ASEP320, 327

ASEP336   3 2 2 0 0
GM Carb & Fuel Induction Systems   Voc/Tech
Theory of carburetion principles and current model fuel delivery systems to include diesel fuel systems, electro-mechanical carburetors and gasoline fuel injection. PREREQUISITES: Admission to Automotive Service Educational Program ASEP320, 327, 328

ASEP337   4 3 2 0 0
GM Tune-Up Proc & Emission Control Voc/Tech
Diagnosis and service of microprocessor controlled fuel and ignition systems. Oscilloscopes, engine analyzers, digital meters and other high technology instruments will be used. PREREQUISITES: Admission to Automotive Service Educational Program ASEP320, 327, 328

ASEP340   3 0 0 0 18
Technical Internship III   Voc/Tech
Work experience at a sponsoring dealership. Tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program ASEP330, 333, 336, 337, PHYL401

ASEP343   8 7 2 0 0
GM Transmissions & Transaxles   Voc/Tech
Standard and automatic transmissions and transaxles including all components in front and rear drive powertrains and 4-wheel drive vehicles. PREREQUISITES: Admission to Automotive Service Educational Program ASEP330

ASEP350   3 0 0 0 18
Technical Internship IV   Voc/Tech
Work experience at a sponsoring dealership. Tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Service Educational Program ASEP340, 343, ENGL410, PSCH106

ASEP354   5 3 4 0 0
Advanced GM Motors Systems   Voc/Tech
Instruction in techniques and procedures required to diagnose and service current vehicles. New systems developed by GM will be included. PREREQUISITES: Admission to Automotive Service Educational Program ASEP350

ASST312   3 2 2 0 0
Ford Automotive Electronics   Voc/Tech
A study of the electrical and electronics systems used in Ford Motor Company vehicles. The instruction will include fundamentals of electricity, series and parallel circuits, schematics, wire repair, diodes, transistors, microprocessors, and digital displays. PREREQUISITES: Admission to Automotive Student Service Ed Training

ASST317   3 2 2 0 0
Ford Shop Fund & Minor Service   Voc/Tech
A study of dealership organizational structure as it relates to the technician. Use of service manuals, electronic trouble shooting manuals and service bulletins are practiced. Also provides entry level automotive task competencies. PREREQUISITES: Admission to Automotive Student Service Ed Training

ASST318   4 3 2 0 0
Ford Steering/Suspension/Brakes   Voc/Tech
Instruction in the theory of operation and service procedures used in the maintenance and repair of Ford Motor Company steering, suspension, and brake systems. PREREQUISITES: Admission to Automotive Student Service Ed Training

ASST320   3 0 0 0 18
Technical Internship I   Voc/Tech
Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training, MATH410, ASST312, 317, 318

ASST326   3 2 2 0 0
Ford Auto Air Conditioning Systems   Voc/Tech
Theory and operation of Ford Motor Company air conditioning systems leading to the diagnosis, service, and repair of current models of vehicles. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST312, 317

ASST327   3 2 2 0 0
Minor Service & Repair-Ford Engines   Voc/Tech
Principles of operation of Ford Motor Company four stroke engines. Minor service procedures and engine component repair or replacement will be emphasized. Will also include diagnostic procedures. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST317, AUTO464

ASST328   3 2 2 0 0
Diagnosis/Repair Ford Elec System   Voc/Tech
Instruction in the diagnosis, repair and service of electrical and electronic components and accessories used on current Ford Motor Company vehicles. PREREQUISITES: Admission to Automotive Student Service Ed Training, MATH410, ASST312, 317

ASST330   3 0 0 0 18
Technical Internship II   Voc/Tech
Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 326, 327, 328

ASST333   3 2 2 0 0
Major Serv Procedures/Ford Engines   Voc/Tech
Evaluating, reconditioning, and replacing of major components of Ford Motor Company engines. Will include instruction in machining operations performed in Ford Motor Company dealerships. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 327

ASST336   3 2 2 0 0
Ford Carb & Fuel Induction System   Voc/Tech
Theory of carburetion principles and current model fuel delivery systems to include diesel fuel systems, feedback carburetors, gasoline fuel injection, electronic engine controls and Ford EEC specialist certification. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 327, 328

ASST337   4 3 2 0 0
Ford Tune Up Proc & Emission Control Voc/Tech
Diagnosis and service of microprocessor controlled fuel and ignition systems. Oscilloscopes, engine analyzers, digital meters, and other high technology instruments will be used. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST320, 327, 328

ASST340   3 0 0 0 18
Technical Internship III   Voc/Tech
Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST330, 333, 336, 337, PHYL401

ASST343   8 7 2 0 0
Ford Transmissions & Transaxles   Voc/Tech
Standard and automatic transmissions and transaxles including all components in front and rear drive powertrains and 4-wheel drive vehicles. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST340

ASST350   3 0 0 0 18
Technical Internship IV   Voc/Tech
Work experience at a sponsoring dealership. The tasks will be consistent with the technician's ability and previous course work. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST340, 343, ENGL410, PSCH106

ASST354   5 3 4 0 0
Ford Advanced Engine Controls, Elect Voc/Tech
Instruction in techniques and procedures required to diagnose and service current vehicles. New systems developed by Ford Motor Company will be included. PREREQUISITES: Admission to Automotive Student Service Ed Training ASST350

AUTC403   2 1 2 0 0
Basic Shop Safety   Voc/Tech
A course designed to acquaint the student with the hazards in an Auto Collision facility. Emphasis on EPA regulations, OSHA guidelines and personal health and safety in the shop area.

AUTC405   5 2 6 0 0
Basic Shop Operations/Metal   Voc/Tech
Automobile design, the materials used in construction, collision, and corrective forces, and procedures for repair and services are analyzed through class and lab study. PREREQUISITES: AUTC403, HLCR314, WELD468

AUTC408   5 3 4 0 0
Basic Shop Operations/Paint   Voc/Tech
This course will give the student an overall understanding of the complexities of todays auto refinishing. Developing industry standard preparation habits and spray painting skills with various chemicals will be studied. PREREQUISITE: AUTC403

AUTC410   2 1 2 0 0
Basic Estimating   Voc/Tech
Vehicle damage estimating skills are needed to provide a written report. This report can then be used as a repair guide, a legal document, an analysis report and for business evaluation. Ability to use estimating guides and write estimates accurately will be emphasized. PREREQUISITES: AUTC403, HLCR314

AUTC412   6 3 6 0 0
Get Ready For Paint   Voc/Tech
This course covers the application techniques and equipment used in today's auto collision repair shops and also deals with potential problems with chemicals. Shop and personal safety will be emphasized. PREREQUISITE: AUTC403, 408

AUTC413   4 2 4 0 0
Plastic Repair and Refinishing   Voc/Tech
The wide variety of solid plastics, flexible panels, plastic compounds and reinforced plastic panels now used in automobile manufacturing require separate repair procedures. Repair, replacement and refinishing of the substrates will be studied in classroom and lab. PREREQUISITE: AUTC403, 408, 412

AUTC414   2 1 2 0 0
Collision Analysis and Measuring   Voc/Tech
Unibody design and construction has created a need for methods of damage analysis, gauging, measuring, and sequencing total collision repair. This course emphasizes these new technologies.

AUTC420   6 3 6 0 0
Advanced Refinishing   Voc/Tech
Industry application of colors and clear coats require the latest information on repair and refinishing of today's vehicles. This course covers the latest manufacturer's preferred methods for repair using current colors and chemicals. Color matching will be emphasized. PREREQUISITE: AUTC403, 408, 412, 413

AUTC421   3 2 2 0 0
Adv Estimating/Ownership/Management Voc/Tech
Estimating, customer relations and service selling are all important skills of ownership and managership. Hand and computer estimates will be written. Labor, parts, and material cost and profits will be studied. Customer and employee relations will be studied. PREREQUISITE: AUTC403, 410, HLCR314

AUTC430   6 3 6 0 0
Suspension and Brakes   Voc/Tech
In this course students will study the theory of operation and service procedures of the suspension and brake systems in today's unibody vehicle. The importance of those systems as they relate to the damaged unibody vehicle will be emphasized. PREREQUISITES: AUTC403, 414

AUTC432   4 2 4 0 0
Auto Collision/Electrical Systems   Voc/Tech
A course designed to help auto collision students to understand the trouble shooting, diagnostic problems, and repair of today's complex electrical systems.

AUTC440   5 1 8 0 0
Frame and Unibody Structural Repair   Voc/Tech
This course builds upon the knowledge and skill in previous auto collision courses to prepare the student to diagnose and repair conventional frame and unibody structural components. The theory and operating principles of unibody structural components will be emphasized. Lab instruction on late model vehicles will be included. PREREQUISITES: AUTC405, HLCR314, WELD468

AUTO464   3 2 2 0 0
Automotive Measurement & Tools   Voc/Tech
This course provides instruction in the correct selection and use of mechanics tools and precision measuring devices. Shop safety will be emphasized.

AUTO466   3 2 2 0 0
Fuel Systems   Voc/Tech
A course designed to acquaint the student with basic fuel system principles. Instruction will be offered in the theory, cleaning, repair and adjustment of automotive fuel systems.

AUTO468   6 2 8 0 0
Automotive Electricity   Voc/Tech
A course to provide instruction in basic electricity and circuitry used in the automobile. Components, diagnosing, and servicing will be emphasized.

AUTO472   4 2 4 0 0
Auto Air Conditioning & 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 4 stroke automotive engine. Diagnosis procedures, repair, and adjustment will be emphasized. PREREQUISITE: AUTO464

AUTO476   5 3 4 0 0
Electronic Engine Control   Voc/Tech
This course builds upon the knowledge and skills in previous automotive courses to prepare the student to service electronically controlled vehicles. The theory and operating principles of automotive computers, sensors, and control devices will be emphasized. Lab instruction on late model cars will be included. PREREQUISITES: AUTO466, 468

AUTO478   4 2 4 0 0
Advanced Tune Up   Voc/Tech
Provides instruction in testing, diagnosis, and repair of the automobile's ignition, electrical, and fuel systems. Modern test equipment, procedures, and technology are utilized. PREREQUISITE: AUTO476

AUTO479   2 1 2 0 0
Service Management   Voc/Tech
Provides instruction in customer relations, service sales, shop management and business practices in the automotive shop. PREREQUISITE: AUTO474

AUTO482   3 1 4 0 0
Advanced Engines   Voc/Tech
Provides instruction in proper diagnosis of engine malfunctions and repair or replacement of defective components and assemblies. Emphasis will be placed on cylinder head service and repair. PREREQUISITE: AUTO474

AUTO484   6 3 6 0 0
Basic Power Train   Voc/Tech
Principles of operation and construction of automotive power trains. Includes instruction in the theory of hydraulic and planetary systems used in automatic transmissions.

AUTO486   3 2 2 0 0
Basic Brakes   Voc/Tech
Instruction in the theory of operation and service procedures of automotive brakes.

AUTO488   4 2 4 0 0
Basic Suspension & Alignment   Voc/Tech
Instruction in the theory of operation and service procedures of automotive alignment and suspension systems.

AUTO490   6 2 8 0 0
Advanced Power Train   Voc/Tech
The application of engine power is the final drive of the automobile and must be trouble free. Proper diagnosis, service and repair procedures are studied and practiced to accomplish this need. 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. Issues include 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
This lab supplements the discussion course BIOL 118. Lab includes measurement of soil nutrients and water pollutants. Selected field trips deal with soil conservation, wildlife management, wastewater treatment and other aspects of environmental conservation. PREREQUISITE: BIOL118 COREQUISITE: BIOL118

BIOL126   3 2 2 0 0
Field Biology   Core
Field and laboratory studies of native plants and animals of Iowa. Emphasis is placed on ecological relationships. Selected field trips are conducted to forest, prairie, marsh, and riparian habitats in the local area.

BIOL127   3 2 2 0 0
Human Biology   Core
A study of biology which emphasizes the human body. Topics such as the cell, basic chemistry, basic genetics and human ecology are included. Designed for the non-science and inadequately prepared health science major.

BIOL132   4 3 2 0 0
Health Science Microbiology   Open
Basic concepts and applications of medical microbiology. Topics include morphology and physiology of micro-organisms, pathology, epidemiology and immunology. Designed for the health science major. PREREQUISITES: H.S. biology and H.S. chemistry recommended

BIOL133   3 2 2 0 0
Health Science Anatomy   Open
Offers the student basic concepts in human anatomical structure with relation to body functions. The course covers all major body systems with emphasis on structure. The accompanying lab will reinforce lecture with cat dissection. PREREQUISITE: H.S. biology or equivalent

BIOL134   3 2 2 0 0
Health Science Physiology   Open
Detailed human physiology of the nervous, circulatory, respiratory, digestive, urinary and endocrine systems. Designed for the health science major. PREREQUISITES: BIOL133 OR 154

BIOL145   4 3 2 0 0
Biology I   Core
The first of a two-term sequence in introductory biology designed for the science major. Emphasis is placed on basic principles of biology at the cellular, organism and population levels. PREREQUISITES: H.S. biology and H.S. chemistry

BIOL146   5 3 4 0 0
Biology II   Core
The second of a two-semester sequence in introductory biology. This general zoology course involves a progressive survey of the animal kingdom. Studies include anatomy, physiology, development, classification, evolution, and ecology. PREREQUISITES: BIOL145 or permission of instructor

BIOL147   3 2 2 0 0
Introduction To Botany   Core
Morphology and taxonomy of representative species of algae, fungi, byrophytes, and the vascular plants, with emphasis on the local flora. PREREQUISITES: BIOL145 or permission of instructor

BIOL149   4 2 4 0 0
General Microbiology   Core
A general microbiology course with laboratory designed for the science major. Emphasis is placed on morphology, physiology, microbial genetics, virology and basic immunology, and applications. PREREQUISITES: BIOL145 OR 154

BIOL150   1 0 2 0 0
Ecology Field Trip   General
This course involves an extended field trip to study unique natural ecosystems. Topics may include field studies of forest, prairie, wetland and wildlife ecology. May be taken twice for credit with permission of instructor.

BIOL154   5 3 4 0 0
General Anatomy & Physiology   Core
A classic integration of human anatomy and physiology at the cellular level and organ/ system level. Includes cat dissection. PREREQUISITES: H.S. biology and H.S. chemistry

BIOL155   3 3 0 0 0
Ecology of Iowa   General
Surveys the major landforms of Iowa including the Mississippi River Valley, northern prairie lakes region, loess hills, and southern hills area. Landforms are emphasized from the standpoint of climate, soils, geology, water resources, forestry, wildlife and environmental concerns. One Saturday field trip.

BKKA403   4 3 2 0 0
Accounting Procedures and Management Voc/Tech
A project approach to record keeping systems and office management. Includes topics in receivables, payables, banking records, planning and organizing; leadership and human relations, and communications. PREREQUISITES: ACCT101, BSAD223, OFFC324

BKKA411   2 2 0 0 0
Payroll Accounting   Voc/Tech
Develops an appreciation and an understanding of the personnel and payroll records that provide the information required under the numerous laws affecting the operations of a payroll system. PREREQUISITES: departmental permission or ACCT101, BSAD223

BLDG451   5 5 0 0 0
Materials & Construction Theory   Voc/Tech
An introduction to the materials used in the construction industry and the methods involved in the application of these building materials.

BLDG452   7 0 15 0 0
Construction Techniques   Voc/Tech
A practical "hands-on" introductory experience that covers the construction process including rough and finish carpentry.

BLDG453   1 0 2 0 0
Care/Use Of Hand & Power Tools   Voc/Tech
Proper care, use and selection of hand and power tools with an emphasis on maintenance and safety.

BLDG455   3 3 0 0 0
Construction Blueprint Reading   Voc/Tech
A study of the fundamentals of blueprint reading and estimating designed to allow the student to translate plans into practical job experiences and materials cost estimates.

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 Procedures & Applications I   Voc/Tech
This course includes footings, drainage, foundation, basement insulation and decking. (5 week session) PREREQUISITES: BLDG451, 452, 453, 455, 461, 464

BLDG481   5 0 10 0 0
Const Procedures & Applications II   Voc/Tech
This 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 Procedures & Application III   Voc/Tech
This course includes concrete flatwork, insulation, drywall application, cabinet work and interior trim. (5 week session) PREREQUISITE: BLDG481

BLDM325   1 1 0 0 0
Boiler Room Maintenance   Voc/Tech
Basic course to cover boiler accessories, fittings, controls, water treatment and fundamentals.

BLDM326   2 2 0 0 0
Steam Plant Operations   Voc/Tech
A basic course in the operation of high-pressure steam boilers.

BLDM328   1 1 0 0 0
Inventory & Purchasing   Voc/Tech
Knowledge and skills necessary to understand new inventory systems, maintain records and orders, and maintain supplies correctly.

BLDM329   2 2 0 0 0
Basic Plumbing   Voc/Tech
A basic course in plumbing, plumbing components, and reading blueprints.

BLDM330   1 1 0 0 0
Building Custodian   Voc/Tech
Work procedures, floor covering, detergents, and safety.

BLDM331   2 1 2 0 0
Temperature Control Systems   Voc/Tech
Class covers basic electrical controls, pneumatic controls, air conditioning controls, and preventative maintenance.

BLDM332   2 1 2 0 0
Residential Wiring systems   Voc/Tech
Residential wiring systems will be explored in a classroom/laboratory environment. Topics will include: terminology, safety, grounding, polarity, code, wiring, maintenance, trouble-shooting and repair.

BSAD122   3 3 0 0 0
Personal Insurance   Open
Covers personal loss exposures; homeowners coverage, pricing and endorsements; other forms of residential insurance; other personal property and personal liability; personal auto policy; life insurance; health insurance and government insurance. PREREQUISITE: BSAD225

BSAD123   3 3 0 0 0
Commercial Insurance   Open
Covers commercial property insurance; loss of business income; commercial inland marine; commercial crime; commercial general liability; workers compensation; commercial auto; other commercial coverages and commercial insurance packages. PREREQUISITE: BSAD225

BSAD150   3 3 0 0 0
Intro To Business   General
An overview of the ever-changing world of business. Provides information in the areas of ownership, management, marketing and finance as well as the role of government.

BSAD151   3 3 0 0 0
Personal Finance   Open
Management of personal income with emphasis on family financial planning including budgeting, income taxes, types of insurance and investing.

BSAD152   4 4 0 0 0
Business Statistics   Core
Tabular and graphical presentation, measures of central tendency and variability, standard elementary procedures involving the binomial, normal, student's t's, chi-squares and f distributions, correlation, regression, analysis of variance, and several nonparametric procedures. PREREQUISITES: 2 years of H.S. algebra or MATH 094 or dept permission

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 markdowns, 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.

BSAD233   3 3 0 0 0
Claims Personnel Public Relations   Open
The study of human behavior; recognition of the imperfect human; communicating with the public; development of listening skills; motivation principles in handling claims; public relations of handling claims; dealing with excess liability; bad faith punitive damages; unfair claims settlement act; avoiding extra-contractual claims. PREREQUISITE: BSAD225

BSAD234   3 3 0 0 0
Principles of Claims Adjusting   Open
Covers property losses adjustment procedure; investigating property losses; reports to insurers; estimating building losses; function of the claim department & adjuster; coverages & legal liability; the process & types of investigation of claims; evaluation & settlement of injury claims; reserving on claims. PREREQUISITE: BSAD225

BSAD235   3 3 0 0 0
Property Insurance Adjusting   Open
Covers loss apportionment; insurable interests of mortgages & bailees; estimating building losses; adjusting building, personal property & merchandise losses; salvaging rental value of leasehold; additional living expense losses; business interruption & extra expense losses; condominium losses; procedure of claims settlement; flood insurance. PREREQUISITE: BSAD234

BSAD236   3 3 0 0 0
Liability Insurance Adjusting   Open
Covers the practice of casualty claims; contract & tort law fundamental; torts in agency & bailments. Auto liability; products liability; professional liability; investigation & evidence; medical aspects of damages; liability insurance contract language; claims settlement; negotiations; employer's liability; worker's compensation. PREREQUISITE: BSAD234

BSAD243   4 4 0 0 0
Quantitative Methods   General
An introduction to management research methods which are used in business. Topics include probability, break-even analysis, inventory control, statistics and transportation models. PREREQUISITES: MATH094 or department permission

BSAD250   3 3 0 0 0
Real Estate Appraisal   Open
Residential appraisal principles of real estate valuations cost, market data, summation and sales analysis, methods of appraisal, estimating current trends and techniques in appraising residential dwellings.

BSAD261   3 3 0 0 0
Principles of Underwriting   Open
Covers objectives & organization of underwriting; the decision-making process; coverage analysis; risk management in underwriting; re-insurance; pricing; financial analysis of underwriting information; decision-making & monitoring of risks; communications; underwriting trends & issues. PREREQUISITE: BSAD225

BSAD262   2 2 0 0 0
Personal Lines Underwriting   Open
Covers classification, rating & changes in auto policy; evaluation of hazards, decision making, classification, rating & endorsements in auto & residence packages; farm, ranch, & dwelling fire insurance; monitoring of residence insurance; personal inland marine; pleasure boating & personal liability insurance; relations with agents. PREREQUISITE: BSAD261

BSAD263   2 2 0 0 0
Commercial Liability Underwriting   Open
Covers the legal foundation of liability underwriting; the commercial enterprise; commercial autos' general liability; products liability; workers compensation principles & underwriting; medical profession & speciality liability; surety bonds; special accounting & large risks; managing a book of business. PREREQUISITE: BSAD261

BSAD264   2 2 0 0 0
Commercial Property Underwriting   Open
Covers commercial property underwriting analyzing loss potential from fire & other major perils; construction; occupancy; protection; external exposures & coverages; indirect property damage losses; pricing; commercial inland marine; commercial ocean marine; commercial crime; other property lines & package policies. PREREQUISITE: BSAD261

BUSL101   3 3 0 0 0
Business Law I   General
Provides introductory overview of legal rights and social forces, the impact of government regulation of business, consultant relationships, and sales law.

BUSL102   3 3 0 0 0
Business Law II   General
Provides for overview of commercial paper, creditors rights and secured transactions, the law of agency and business associations. PREREQUISITE: BUSL101.

CADD401   3 2 2 0 0
Intro to Computer Aided Drafting-CAD Voc/Tech
This course will introduce the student to computer-aided drafting and design. Computer basics, operating systems, equipment, and software will be covered. Basic two-dimensional drawing and editing will be taught. Drawings will be created and plotted.

CADD402   3 2 2 0 0
Intermediate CADD-Mechanical   Voc/Tech
This course will introduce the student to an advanced application of computer-aided drafting and design. Complex three-dimensional shapes and editing will be taught. File manipulation, management, and integration with other CAD applications will be covered. PREREQUISITE: CADD401 or equivalent

CADD403   3 2 2 0 0
Intermediate CADD-Architectural   Voc/Tech
This course wil apply architectural drafting practices to the CAD environment. Two and three-dimensional layouts and drawings will be taught. Site plans, third-party libraries, presentation and scheduling are some of the topics that will be discussed. PREREQUISITE: CADD401 or equivalent

CADD404   3 2 2 0 0
Computer Aided Design & Analysis   Voc/Tech
This course will introduce the student to analysis of simple structures. Basic statics and kinematics will be taught. Analysis will be taught and then verified using analysis software in conjuction with CAD. PREREQUISITE: CADD402 or equivalent

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 application of principles of design, and basic advertising design formats.

CART404   3 2 2 0 0
Typography II   Voc/Tech
Typography course including the principles and basic skills in typographic design on computer. PREREQUISITE: CART405

CART405   2 1 2 0 0
Typography I   Voc/Tech
A study of the history of typography as it relates to advertising design. Includes emphasis on copyfitting and use of typography in design.

CART407   3 2 2 0 0
Production Art I   Voc/Tech
A beginning course which will enable the student to seek an entry level position in production art. Problems and solutions in the preparation of camera-ready art for printing are studied.

CART410   4 2 4 0 0
Illustration I   Voc/Tech
Lab and lecture study of tools and skills necessary to basic visual communication in a graphic arts studio environment. Emphasis on introductory marker rendering, line art, perspective drawing concepts, and basic drawing tools skills.

CART411   3 2 2 0 0
Communication Design II   Voc/Tech
Lab and lecture study will develop a solid base in appropriate technical and creative skills necessary in the field of graphic design. Emphasis on introduction to continuous page layout using frid layout, packaging design and poster design. PREREQUISITE: CART403

CART414   4 2 4 0 0
Illustration II   Voc/Tech
Lab and lecture study of tools and skills necessary to creating color marker comps and visuals. Study includes a variety of surfaces and products as well as the human figure. All work is conceived in the framework of existing publications. PREREQUISITE: CART410

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 2-color & advanced camera-ready art for printing. PREREQUISITE: CART407

CART419   2 0 4 0 0
Lettering & Sign Art   Voc/Tech
Use of various types of lettering skills for the production of posters, signs, certificates and other hand-lettered materials.

CART421   2 2 0 0 0
Internship Preparation   Voc/Tech
Students seeking an internship will be required to develop job interviewing techniques and 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 information, review and evaluation. COREQUISITE: CART424

CART426   3 2 2 0 0
Communication Design III   Voc/Tech
An advanced course using skills and understanding developed in Communicatio Design I & II. Application of design in advanced communication problems, with emphasis on image generation, integration of type and image, direct mail and broadcast advertising. PREREQUISITE: CART411

CART428   3 2 2 0 0
Illustration III   Voc/Tech
Lab and lecture study of color theory, painting media, illustration styles and techniques. Emphasis on creative solutions to specific projects. Introduction to electronic illustration on computer. PREREQUISITE: CART414

CART430   3 2 2 0 0
Production Art III   Voc/Tech
Computer technology is used in the preparation of material to be printed. Included are lectures and experiences in the production of printed portfolio samples. PREREQUISITES: CART415, DKTP401

CART436   3 3 0 0 0
Portfolio Preparation I   Voc/Tech
A student seeking employment must have a well prepared portfolio. Such a portfolio will be developed and reviewed by the Commercial Art Advisory Committee in this course. PREREQUISITE: CART424

CART437   3 2 2 0 0
Communication Design IV   Voc/Tech
Lab and lecture study of advanced design problems with emphasis on corporate identity, newspaper advertising, outdoor advertising and publication design. PREREQUISITE: CART426

CART440   3 2 2 0 0
Production Art IV   Voc/Tech
To complete the study of production art. Emphasis will be on the development of portfolio projects. PREREQUISITE: CART430

CART442   3 2 2 0 0
Illustration IV   Voc/Tech
Advanced study of electronic illustration and advanced experimental media rendering techniques. Class includes lab and lecture study. PREREQUISITE: CART428

CART444   3 3 0 0 0
Portfolio Preparation II   Voc/Tech
"Portfolio night" is the highlight of completing this course. The student will be required to present a completed portfolio to commercial art professionals and prospective employers at the annual event. PREREQUISITE: CART436

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 they apply to photographs. Emphasis is placed on the art of retouching equipment, buildings and portraits, both in black and white and in color. PREREQUISITE: CART449

CART459   3 2 2 0 0
Computer Graphics I   Voc/Tech
This course focuses on 2D illustration skills required in commercial art. Beginning with basic line and shapes developing into completed drawings using the personal computer. PREREQUISITE: CART456

CART462   3 1 4 0 0
Computer Graphics II   Voc/Tech
This course focuses on 2D and 3D illustration skills required in commercial art. Advanced 2D illustrations developing into 3D applications using the personal computer. PREREQUISITE: CART459

CDEV100   1 1 0 0 0
Orientation To College   Open
This course is designed to introduce students to college resources, services, & 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 assess interests, abilities and values, explore options, and make decisions that will lead to career satisfaction and success.

CHEM120   3 2 2 0 0
Survey Of Chemistry   Core
An introduction to chemical topics with little mathematics. Topics include energy, food chemistry, air and water pollution, agricultural chemicals, detergents, and drugs. For students who need one semester of laboratory science.

CHEM131   4 3 2 0 0
General Chemistry I   Core
A study of the concepts of general chemistry including atomic structure, bonding, reactions, stoichiometry, gas laws, solutions, acids and bases, equilibrium, nuclear chemistry and an introduction to organic chemistry. Problem solving is emphasized. For non-science majors and students in health related programs. PREREQUISITES: 1 year H.S. algebra or MATH092

CHEM132   4 3 2 0 0
General Chemistry II   Core
A continuation of the study of organic chemistry and a study of biochemistry. Organic topics include the structure of organic molecules, the nature and reactions of functional groups, and stereochemistry. Biochemistry topics include carbohydrates, proteins, lipids, nucleic acids, enzymes and metabolism. PREREQUISITE: CHEM131 or equivalent

CHEM151   4 3 2 0 0
General And Inorganic Chemistry I   Core
A thorough treatment of general chemistry including atomic structure, stoichiometry, chemical bonding, states of matter, solutions, acids and bases, reaction rates, equilibrium, thermodynamics and electrochemistry. This course is intended for science, engineering, pre-vet, pre-med, pre-dental and pre-optometry majors. PREREQUISITES: 1 yr. H.S. chem or CHEM131 & 2 yrs. H.S. algebra or MATH094

CHEM152   4 3 2 0 0
General And Inorganic Chemistry II   Core
A continuation of General and Inorganic Chemistry I. PREREQUISITE: CHEM151 or equivalent

CHEM161   5 3 4 0 0
Organic Chemistry I   Core
A study of the principles of organic chemistry including the nomenclature and chemistry of the various organic functional groups. Structure, bonding, synthesis, reaction mechanisms and spectroscopy are emphasized. The sequence is designed to satisfy the one year of organic chemistry required by most medical schools. PREREQUISITES: CHEM132 or 152 or 1 year college level general chem.

CHEM162   5 3 4 0 0
Organic Chemistry II   Core
A continuation of Organic Chemistry I. PREREQUISITE: CHEM161 or equivalent

CHLD170   3 3 0 0 0
Child Development   Open
Course includes an overview of child development theory and principles as related to language-cognitive, physical-motor and social-emotional development of the child from conception through adolescence.

CHLD240   1 1 0 0 0
Emergency Care   Open
Cardio-pulmonary resusitation according to Iowa Heart Guidelines. Childhood diseases, immunization laws, and environmental safety for children are discussed. Designed for day care personnel.

CHLD260   3 3 0 0 0
Observation and Guidance of Children   Open
A study of observation and guidance techniques appropriate for use with young children. Various guidance philosophies are studied and applied through work with children. Students acquire the skills of objective observation as well as completing appropriate written observations of children.

CHLD262   4 4 0 0 0
Curriculum & Activities I   Open
Course includes structuring of curriculum for infant through school aged groups of children. Planning of both the physical environment and the educational program will be covered. Areas of curriculum include large motor skills, dramatic play, music, cooking and creative arts. PREREQUISITES: CHLD170, 260 COREQUISITES: CHLD170, 260

CHLD264   3 3 0 0 0
Child Nutrition & Health   Open
A basic study of nutrition and the nourishment of young children and the provision of a healthy and safe environment for children.

CHLD265   4 4 0 0 0
Curriculum & Activities II   Open
A continuation of Curriculum and Activities I, with emphasis on equipping a day care center and program evaluation. Areas of curriculum include literature, language development, small motor skills, science and math awareness. PREREQUISITES: CHLD170, 260, 262

CHLD266   3 3 0 0 0
Admin Of Programs/Children   Open
Course covers basic principles involved in setting up and administering a child care center. Emphasis is placed on funding, bookkeeping, business procedures, insurance, enrollment and record keeping.

CHLD268   1 1 0 0 0
Professional Relationships   Open
A course designed to give Child Development students an overview of professional behaviors and responsibilities. Students will focus on communication skills, job performance, job-seeking skills, and professional associations and conferences.

CHLD334   2 2 0 0 0
Development In Early Childhood I   Open
Interrelationship of physical, emotional, intellectual and social growth from birth through 5 years. Includes problems common to early childhood.

CHLD337   2 2 0 0 0
Creating The Environment   Open
Skill development in communication and interpersonal relationships. Emphasis on guidance and behavior control techniques with children. Inquiry into physical environments and their effect on children, staff, and parents. Ways of modifying environments.

CHLD338   1 1 0 0 0
Development In Early Childhood II   Open
Interrelationship of physical, emotional, intellectual and social growth from school age to adolescence. Includes problems common to middle childhood and adolescence. PREREQUISITE: CHLD334

CHLD343   1 1 0 0 0
Assessing Child/Program Planning   Open
Methods and techniques for working with children from varying lifestyles, including the exceptional child. Emphasis on communication with parents.

CHLD347   1 1 0 0 0
Planning Group Activities   Open
Focus on various methods child care providers can utilize to foster creative experiences in small group settings. Emphasis on developmentally appropriate activities.

CHLD349   1 1 0 0 0
Contemporary Issues In Child Care   Open
Latest information and policy developments in the field of child care. Emphasis on the role and impact of adults in child care.

CHLD360   2 2 0 0 0
Guiding Young Children   Open
A study of guidance techniques appropriate for use with young children. Various guidance philosophies are studied.

CHLD362   2 2 0 0 0
Activities For Infants & Toddlers   Open
Practical ideas for guidance and development of the child from birth to 48 months. Health, safety and special techniques will be covered.

CHLD364   2 2 0 0 0
Activities For Preschooler/Schoolage   Open
Focus on ideas for working with the child ages 48 months through 12 years. A variety of activities that are designed to keep the child busy after school.

CHLD366   1 1 0 0 0
Developing A Child Care Team   Voc/Tech
Elements of team building including roles in a team and group dynamics, feedback and specific methods for implementation in child care centers.

CHLD368   1 1 0 0 0
Being The Best You Can Be   Voc/Tech
Develop skills in public relations, parent involvement, and curriculum development. Special consideration of methods for staff retention.

CHLD369   1 1 0 0 0
Remaining Current   Voc/Tech
A look at current issues that impact child care centers, directors and the profession. Topics may include use and abuse of computers in center programs, teacher competency testing, legal issues and marketing.

CHLD370   1 1 0 0 0
Getting To Know You & Me   Voc/Tech
Identify and develop interpersonal skills including verbal and non-verbal communication. Emphasis on effective feedback and conflict resolution.

CHLD371   1 1 0 0 0
Personal Coping Skills   Voc/Tech
Explores a variety of techniques including effective time management, identifying and coping with stress and burnout, and adaptation of self and environment.

CHLD375   2 2 0 0 0
Child Nutrition   Open
Designed to explore basic concepts in food and nutrients. Nutrition and the young adult. Planning nutrition education concepts and activities for children.

CHLD376   1 1 0 0 0
Child Health/Safety   Open
Designed to explore health routines, hygiene, and safety guidelines for children.

CHLD460   3 0 0 0 12
Student Participation I   Open
Participation with children in the Day Care Center on campus under the supervision of a lead teacher. Students have limited responsibilities for curriculum planning. Daily student-teacher guidance conferences are held PREREQUISITE: CHLD260 COREQUISITES: CHLD260, 262

CHLD461   3 0 0 0 12
Student Participation II   Open
A continuation of Student Participation I in which students assume full responsibility for planning, head teaching and parent communications in the Day Care Center on campus under the supervision of a lead teacher. PREREQUISITES: CHLD170, 260, 266, 460 COREQUISITE: CHLD266

CHLD464   2 0 0 0 8
Practicum   Open
Placement in a community-based program for children. Emphasis is on development of the competencies necessary for employment in a similar setting. PREREQUISITES: A cummulative G.P.A. of 2.0 in all CHLD courses and CHLD170, 260, 262, 460

CHLD465   3 0 0 0 12
Child Development Assoc Practicum   Open
Placement for the associate degree student in a community-based center designed to further build competencies necessary for employment and to develop competence in the area of program administration. PREREQUISITES: A cummulative G.P.A. of 2.0 in all CHLD courses and CHLD464

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. PREREQUISITE: CADD-404

CIM-404   2 1 2 0 0
Robotics   Voc/Tech
The objective of this course is to enable the student to understand and program robots with up to six degrees of freedom. The student will also interface robots and other industrial devices into a workcell.

CIM-405   3 3 0 0 0
Programmable Controllers   Voc/Tech
The objective of this course is to enable a student to understand and program Programmable Logic Controllers. This includes relay logic, register transfer, sequencers with standard and non-standard I/O.

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 covers the techniques used in controlling inventory including raw materials, work in process, and finished goods. Also covers inventory levels and their impact on profits and manufacturing operations.

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 and Capacity Management Voc/Tech
The course involves the study of the set of activities which convert orders, prepared within the planning system, into finished products. Problems of planning and controlling the capacity of the conversion system are also studied.

CIM-412   3 3 0 0 0
Just In Time Inventory Control Tech.   Voc/Tech
This course is a study of the technologies for reducing inventories to a minimum while maximizing customer service and operating efficiency.

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. PREREQUISITES: HTPC 354 & 356 or instructor permission

COMH410   3 2 2 0 0
Greenhouse Production I   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.

COMH411   2 2 0 0 0
Horticulture Chemical Tech   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.

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.

COMH440   2 1 2 0 0
Landscape Design I   Voc/Tech
Fundamentals of landscape design for homes are presented. Serves as an introduction to principles of landscaping as they apply to residential landscaping. The student is given the opportunity to draw basic residential landscape plans. PREREQUISITE: COMH488

COMH450   2 1 2 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   2 1 2 0 0
Arboriculture & Plant Prop. II   Voc/Tech
A study of tree culture with emphasis on propagation, pruning, environmental concerns, transplanting, and pest control. Summer methods of plant propagation including meristem, softwood cuttings, budding, and layering will be accomplished. PREREQUISITE: COMH479

COMH453   2 1 2 0 0
Landscape Design/Plant Materials II   Voc/Tech
Course will include design of residential, commercial, public areas and flower beds. Using landscape construction materials in design and material and labor estimates will be developed. Plant materials will be expanded to include annuals. PREREQUISITES: COMH440, 488

COMH454   3 0 0 0 15
Supervised Employment Experience 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, 479, 488

COMH455   2 1 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   2 1 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.

COMH459   1 0 2 0 0
Interior Plantscaping   Voc/Tech
The commercial production of foliage plants. Culture, propagation, and nomenclature will be discussed. Interior use, design and display of foliage plants will be studied.

COMH469   3 2 2 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   2 1 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.

COMH479   3 2 2 0 0
Nursery Production I   Voc/Tech
Will introduce 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.

COMH484   4 0 0 0 20
Supervised Employment Exp III   Voc/Tech
Work experiences in an area in which the individual has chosen to specialize. Taken over an eight week period. (P/F) PREREQUISITE: COMH499

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
Horticulure Equipment Maintenance   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   3 2 2 0 0
Plant Materials & Landscape Drafting   Voc/Tech
The study of plant material using the plant materials in their growing environment. It will cover use of identification keys and plant families. Introduction to landscape drafting will be developed.

COMH490   3 2 2 0 0
Greenhouse Production II   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

COMH494   1 0 2 0 0
Horticulture Prod Alternatives   Voc/Tech
A discussion and comparison of the possibilities and profitability of job opportunities in the various fields of horticulture production in Iowa, i.e., fruit, vegetable, nursery, christmas tree, sod and greenhouse crops.

COMH496   1 0 2 0 0
Landscape Construction   Voc/Tech
To provide study and experience in choosing materials, planning and construction of landscape facilities.

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
Supervised Employment Experience IV   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: COMH484

COMH499   1 0 0 0 5
Supervised Employment Experience II   Voc/Tech
Student will continue on his/her first employment experience. Taken over a three week period. (P/F) PREREQUISITE: COMH454

COMS111   3 3 0 0 0
Computers & Programming I   Open
A block structured language will be used to introduce fundamental structured programming techniques. Structured programs will be developed through an algorithmic approach, then written, tested and debugged. PREREQUISITES: 2 years H.S. algebra or MATH115 or MATH124

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 through writing, testing and debugging COBOL programs. Emphasis is given to business applications. PREREQUISITES: COMS111 OR 176

COMS126   4 4 0 0 0
Business Programming COBOL II   Open
Introduces advanced COBOL programming techniques through the writing, testing and debugging of COBOL programs. Emphasis is given to the SORT verb and ISAM file access techniques. PREREQUISITE: COMS125

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. PREREQUISITES: MATH129, COMS111

COMS174   3 3 0 0 0
Applied Programming I Pascal   Open
Introduction to structured programming using a blocked structured language. Emphasis will be on an algorithmic approach to program development. Programs will be developed, written, tested and debugged. PREREQUISITES: MATH115, 123

COMS176   4 4 0 0 0
Applied Programming II   Open
Data structures as related to computer programming will be emphasized. Programs using these data structures will be developed, written, tested and debugged. The programs written will also be business application oriented. PREREQUISITE: COMS174

COMS181   3 2 2 0 0
Intro To Computer Literacy   Open
Presents the basic concepts of computers and the effect that computers are having, and will continue to have, in the future. Incorporates theory as well as hands-on practice by looking at examples of computers at work in the real world, and exploring the principles behind the application. Includes an introduction to basic programming.

CONA451   3 2 2 0 0
Fundamentals Of Refrigeration   Voc/Tech
This course consists of the principles of refrigeration, domestic sytems and equipment. Installation, operation and trouble shooting with lab work on actual equipment.

CONA452   3 2 2 0 0
Electricity I   Voc/Tech
A study of basic electricity principles, OHMS law, series and parallel circuits as applied to refrigeration. Hands-on practice with training boards in the lab.

CONA454   3 2 2 0 0
Fundamentals Of Heating   Voc/Tech
A study of the combustion process, heating values of different fuels, including piping, venting, controlling and trouble shooting with lab work on actual equipment.

CONA461   5 3 5 0 0
Advanced Refrigeration/Heating   Voc/Tech
Lectures on the compression cycle, different refrigeration and electrical circuits and lubrication problems found in supermarket equipment. Lab work on actual equipment. PREREQUISITES: CONA451, 454

CONA462   8 3 10 0 0
Year Round Air Conditioning I   Voc/Tech
The science of heating and cooling consisting of psychrometrics, humidity control, computation of equipment selection and system cost with a study of installation and service procedures through lab practices. PREREQUISITES: CONA451, 454

CONA463   2 2 0 0 0
Blueprint Reading   Voc/Tech
A comprehensive study of blueprints consisting of drafting symbols and terminology which prepares the student to make an installation according to a set of blueprints and specifications.

CONA471   5 3 5 0 0
Air Distribution   Voc/Tech
Involves the study of fans, blowers and dampers. The design of duct systems for proper air delivery and allows for final system balancing. Includes lab practice.

CONA472   7 2 10 0 0
Year Round Air Conditioning II   Voc/Tech
The theory and function of commercial heating and cooling equipment consisting of heat pumps, cooling towers, evaporators, condensers, related electric and pneumatic controls with lab practice. PREREQUISITE: CONA462

COOP212   1 1 0 0 0
Coop Career Seminar   Voc/Tech
Designed to provide in-depth exploration of careers. Includes discussion topics such as positive work attitudes, conditions for salary increases, and job promotions. Employer/employee responsibilities and other phases of the work. These discussions will be related to student employment.

COOP220   2 2 0 0 0
Career-Seeking Skills   Voc/Tech
Covers all aspects of professional job placement procedures including career goal setting, developing prospective employer lists, resume writing, job application forms, employment tests, personal appearance, interviewing, and follow-up.

COOP221   1 0 0 0 4
Coop Career Experience   Voc/Tech
Supervised work experience with employers that enables students to apply their skills and knowledge. Work experiences will relate to the students' academic programs of study. (P/F)

COOP222   2 0 0 0 8
Coop Career Experience   Voc/Tech
See COOP 221. (P/F)

COOP223   3 0 0 0 12
Coop Career Experience   Voc/Tech
See COOP 221. (P/F)

COOP224   4 0 0 0 16
Coop Career Experience   Voc/Tech
See COOP 221. (P/F)

COOP225   5 0 0 0 20
Coop Career Experience   Voc/Tech
See COOP 221. (P/F)

COOP226   6 0 0 0 24
Coop Career Experience   Voc/Tech
See COOP 221. (P/F)

CRIM101   3 3 0 0 0
Intro To Criminal Justice   General
An in-depth examination of the three components of the criminal justice system and the roles they play in society.

CRIM103   3 3 0 0 0
Community Relations   Open
Examination of the role of criminal justice personnel in a democratic society; emphasis on ethical uses of discretion, analysis of officer stress, and the popular perceptions of the criminal justice system.

CRIM104   3 3 0 0 0
Criminal Law   General
An examination of the elements of offenses and the procedural safeguards in the criminal process.

CRIM105   3 3 0 0 0
Constitutional Law   General
A study of the application of constitutional principles to social and political questions including the powers of the national government vs. state government through focus on the incorporation issue examination of the evolution of civil liberties guarantees.

CRIM106   3 3 0 0 0
Juvenile Law   General
The social and legal aspects plus theories 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, nonverbal communication, deception, and theories of communication.

CRIM110   3 3 0 0 0
Penology   Open
The 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/Crim Justice Agencies   Open
Study of the criminal justice system through an examination of actual agencies, focusing on theoretical vs. real roles and functions of the agencies. Includes on-site visits. PREREQUISITES: 24 hours of CRIM courses or instructor permission

CRIM236   3 0 0 0 12
Internship   Open
Involves one-hundred fifty hours of active internship for students in an agency other than one in which they may be employed. Synthesis paper required. (P/F) PREREQUISITES: 24 hrs of CRIM courses with minimum grade of C in each, CRIM235

CRIM255   3 3 0 0 0
Scientific Investigation I   Open
An introduction to investigation techniques, which stresses the identification and examination of physical evidence from the time of its discovery until a final disposition by the the courts.

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
A continuation of the topics covered in Scientific Investigation I with emphasis on different forms of evidence.

CULA332   2 0 4 0 0
Ala Carte Cooking   Voc/Tech
Application of food preparation with particular emphasis in grill work, deep fat frying, breakfast cookery and convenience items. Upon completion of the course, students have developed skills and increased their efficiency in grill cookery. PREREQUISITES: HRMT316, 320

CULA340   2 0 4 0 0
Baking   Voc/Tech
This course offers instruction in the 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, 320

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: HRMT316, 320

CULA365   3 0 6 0 0
Advanced Baking & Buffet Decorating Voc/Tech
Advanced principles and procedures of producing baked goods, decorative work, and display pieces. PREREQUISITES: HRMT316, 320

CULA386   2 0 4 0 0
Buffet Decorating   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.

CULA446   3 0 6 0 0
International Cuisine Lab I   Voc/Tech
Application of gourmet cooking through actual quantity preparation of eight course international dinners. Four evening gourmet dinners will be prepared and served during the semester. PREREQUISITES: HRMT316, 320, 326, 328 COREQUISITE: CULA456

CULA451   8 0 16 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. COREQUISITE: CULA452

CULA452   2 2 0 0 0
Advanced Culinary Cuisine   Voc/Tech
Discussion of the more intricate and difficult cooking principles and techniques of classical cuisine and planning for advanced culinary cuisine lab. PREREQUISITE: HRMT357 COREQUISITE: CULA451

CULA456   2 2 0 0 0
International Cuisine   Voc/Tech
Students research and plan international dinners. Emphasis is on menu and production planning for eight course gourmet dinners. The lecture will also focus on the pronunciation and definition of French terms. PREREQUISITES: HRMT326, 328 COREQUISITE: CULA446

DATA102   3 3 0 0 0
New Literacy/Intro To Computers   Voc/Tech
A television course giving a comprehensive introduction to computer principles and presenting a broad overview of data processing concepts.

DATA103   3 3 0 0 0
BASIC   Voc/Tech
An elementary course in the use of the BASIC programming language. The various commands will be presented; and students design, code, and test several programs including file processing. PREREQUISITES: COMS181 or instructor permission

DATA104   3 3 0 0 0
BASIC/Advanced   General
An "applications" approach developed around data file programming. Manipulation of string variables, data entry, formats, error checking routines, sequential and random access files. PREREQUISITE: DATA103

DATA106   3 2 2 0 0
Microcomputers In Business   General
This course provides the person already familiar with microcomputer usage, additional skill development in the areas of the operating system, (DOS), word processing, spreadsheets, and database management software. Course features extensive hands-on usage combined with lecture and discussion. PREREQUISITES: instructor permission or COMS181

DATA110   3 3 0 0 0
Microcomputer Systems Design   Voc/Tech
Designed to give added depth in the area of micro computer system applications and design. Telecommunications, networks, bulletin boards and RS232 formats will be discussed. PREREQUISITES: COMS181 or instructor permission

DATA211   3 3 0 0 0
FORTRAN   General
An introductory course in the use of the FORTRAN programming language. Students design, code and test several business programs using the various features of the language. PREREQUISITE: COMS181

DATA221   3 3 0 0 0
PL/I   General
An introductory course in the facilities and techniques in the use of the PL/I language. Students design, code and test several business programs using the features of the PL/I. PREREQUISITE: COMS181

DATA231   3 3 0 0 0
RPG/II   General
A study of the basic steps of programming. Students design, code & debug various problems written in report program generator language. PREREQUISITE: COMS181

DATA301   4 3 2 0 0
DOS Job Control   Voc/Tech
Provides an individual with a working knowledge of disk operating systems/virtual storage extended (DOS/VSE) job control language. PREREQUISITE: DATA304 COREQUISITE: DATA319

DATA304   4 3 2 0 0
COBOL/Beginning   Voc/Tech
Introduces the student to structured COBOL design and coding including control break processing. COREQUISITES: COMS181, DATA310

DATA306   4 3 2 0 0
COBOL/Intermediate   Voc/Tech
ANS COBOL programming involving sequential disk, table processing and VSAM file processing. PREREQUISITE: DATA304 COREQUISITE: DATA301

DATA308   3 2 2 0 0
COBOL/Advanced   Voc/Tech
ANS COBOL involving advanced editing programs,table processing, VSAM file process, programs linkage, and report writer. PREREQUISITE: DATA306 COREQUISITE: DATA321

DATA310   4 3 2 0 0
Program Logic Design   Voc/Tech
The study of the logical design of programs using the structured method. Various design tools and applications will be covered. COREQUISITE: COMS181

DATA318   3 2 2 0 0
INTRO "C" PROGRAM   Voc/Tech
An introduction to standard "C" programming on IBM-PC, using Borlands's Turbo-C compiler. Students will examine the structure of typical "C" programs and design eight small to medium sized "C" programs. PREREQUISITE: DATA310 or equivalent

DATA319   4 3 2 0 0
Assembler/Beginning   Voc/Tech
An introductory course in the syntax rules of assembler language programming. Business problems are analyzed and programmed. PREREQUISITES: COMS181 and DATA304 or instructor permission COREQUISITE: DATA301

DATA321   4 3 2 0 0
Assembler/Intermediate   Voc/Tech
An intermediate course in the concepts and techniques of using assembler language, including machine language and table processing. PREREQUISITES: DATA319, 301

DATA327   4 4 0 0 0
Assembler/Advanced   Voc/Tech
An advanced course in the more complex concepts of assembler type instructions, including VSAM and macro processing with inter-program linkage. PREREQUISITE: DATA321

DATA328   1 0 2 0 0
MS DOS An Introduction   Voc/Tech
An introduction to PC disk operating system. Topics include: directory, direct commands, format, chkdsk, copy diskcopy, rename and other DOS commands.

DATA329   2 1 2 0 0
MS DOS An Advanced Course   Voc/Tech
An advanced disk operating system course. Topics include: advanced utilities (EDLIN, shell commands, system fiels, network considerations and DOS environment menu systems). PREREQUISITES: DATA328 or instructor permission

DATA330   1 0 2 0 0
dBase An Introduction   Voc/Tech
An introduction to Data Base Management using dBase III+. Topics include: create, edit, update, report, delete, modify. Students will generate reports from Data Base file they have created. PREREQUISITES: instructor permission or 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 123 - An Introduction   Voc/Tech
Orientation to Lotus 123. Topics include spreadsheet layout, totals, report generation. Designed for users of Lotus 123.

DATA333   2 1 2 0 0
Lotus 123-An Advanced Course   Voc/Tech
Advanced topics on Lotus 123. Topics include macro, graphic and menu design. PREREQUISITES: COMS181 and DATA332 or DATA106

DATA334   6 4 4 0 0
Applications Programming   Voc/Tech
Individual projects are assigned which require the student to apply the programming knowledge gained in prerequisite courses to the design and implementation of assigned business applications. PREREQUISITES: DATA301, 306, 321, 352

DATA338   2 2 0 0 0
OS/JCL   Voc/Tech
This course presents the concepts and coding rules of OS Job Control language in an easily understood manner. The course is primarily intended for both operators and programmers with DOS experience who plan to use OS in the near future. PREREQUISITE: COMS181

DATA341   3 3 0 0 0
Database Programming   Voc/Tech
An introductory course in the concepts, facilities and techniques used in data base language. Students design, organize and create data independent business applications. PREREQUISITES: DATA306, 321

DATA342   1 0 2 0 0
Word Star   Voc/Tech
Hands-on instruction using the Wordstar word processing software, special features include spelling check, merge and columns. PREREQUISITE: OFFC301

DATA343   1 0 2 0 0
Word Perfect   Voc/Tech
Hands-on instruction using the word perfect word processing software, special features include spelling/thesaurus, macros, merge, and math. PREREQUISITE: OFFC301

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: DATA306, 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

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. PREREQUISITES: DENA304, 320 COREQUISITES: DENA304, 320

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

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. PREREQUISITES: 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, emergency procedures. PREREQUISITES: CPR credentials DENA302, 304, 320

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. PREREQUISITES: Second semester standing in Dental Assisting program. COREQUISITE: DENA310

DENA318   4 0 0 0 16
Dental Assisting Clinical II   Voc/Tech
Continuation of DENA 310. 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. PREREQUISITES: DENA302, 304 COREQUISITES: DENA302, 304

DENA322   5 3 4 0 0
Clinical Dental Assisting   Voc/Tech
A continuation of the Preclinical Dental Assisting with emphasis on operative dentistry, dental specialities 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. PREREQUISITE: 35 wpm typing speed

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. COREQUISITE: DENH201

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. COREQUISITE: DENA325 or DENH203

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 Pract   Open
See DENH 208. 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
Continuation of instrumentation techniques, polishing techniques, topical application of fluoride and supplementary procedures. Application of principles of patient education in chairside instruction. PREREQUISITES: DENH208, 209

DENH229   4 0 8 0 0
Dental Hygiene I Practicum   Open
See DENH228. PREREQUISITES: CPR certification DENH208, 209 COREQUISITE: DENH228

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 & Preventive 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 preventive dentistry necessary to maintain optimum oral health. PREREQUISITES: BIOL154, CHEM132

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. PREREQUISITES: DENA304 or DENH230 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

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. Additional topics include research in dentistry and intraoral photography. PREREQUISITES: DENH228, 229

DENH279   2 0 0 6 0
Dental Hygiene II Practicum   Open
See DENH 278. PREREQUISITES: DENH228, 229, 278 COREQUISITE: DENH278

DENH280   2 2 0 0 0
Periodontology   Open
The clinical characteristics, histopathology, etiology, and treatment of periodontal disease are presented. Special emphasis is placed on the role of the dental hygienist in patient education for the prevention and management of periodontal disease. PREREQUISITES: DENH208, 209, 210, 228, 229

DENH281   5 0 0 15 0
Dental Hygiene III Practicum   Open
See DEHN 288. PREREQUISITES: DENH278, 279, 288 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, 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 Dental Hygiene II. Utilization of the dental hygiene treatment plan for initial periodontal therapy. Additional topics include the special needs patient, polishing restorations, ethics, management and marketing. PREREQUISITES: DENH278, 279

DENH290   3 2 2 0 0
Community Dentistry   Open
The course relates the 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 DENH 298. PREREQUISITES: DENH281, 288, 298 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, 257

DENH298   2 2 0 0 0
Dental Hygiene IV   Open
A continuation of Dental Hygiene III. Students present and discuss dental hygiene treatment plans. Legal and management aspects of the dental care system are considered. PREREQUISITES: DENH288, 281 COREQUISITE: DENH291

DEVS072   3 3 0 0 0
Thinking Skills   Adaptor
To increase awareness of thinking as a skill which can be improved. Students will develop the ability to identify and improve the use of basic patterns of cognition. Activities will include personal, academic, and career applications.

DEVS080   3 3 0 0 0
Study Skills   Adaptor
Emphasis on improving time management, developing listening skills, and taking class notes and tests. Guidance in developing study habits and using the library and textbooks.

DIEM400   4 4 0 0 0
Basic Diemaking   Voc/Tech
Introduction to diemaking principles covering die sets, die components, cutting and forming applications, and material utilization. PREREQUISITE: TOOL491 or equivalent COREQUISITE: DIEM401

DIEM401   6 0 12 0 0
Basic Diemaking Lab   Voc/Tech
Introducing the student to basic diemaking procedures as they construct a blank die, piercing die, and a forming die. PREREQUISITE: TOOL490 or equivalent COREQUISITE: DIEM400

DIEM402   2 0 4 0 0
Advanced Blueprint Reading   Voc/Tech
An interpretation of progressive die blueprints, jig & fixture blueprints including assembly drawings, plan & section views, and detailing. PREREQUISITE: TOOL481 or equivalent COREQUISITE: CIM-401

DIEM403   3 1 4 0 0
Progressive Die Design   Voc/Tech
Hands-on drafting experience in the design, drawing, and detailing of a progressive die using Computer Aided Design (CAD). PREREQUISITE: DIEM402 COREQUISITE: DIEM404

DIEM404   4 4 0 0 0
Advanced Diemaking   Voc/Tech
Complex die making procedures, including cam actuated dies and exposure to cost estimating and quoting. PREREQUISITE: DIEM400 COREQUISITE: DIEM405

DIEM405   6 0 12 0 0
Advanced Diemaking Lab   Voc/Tech
Constructing a more complex stamping die, including a progressive die that has been partially designed and detailed by the student. PREREQUISITE: DIEM401 COREQUISITE: DIEM404

DIEM407   3 2 2 0 0
Plastic Moldmaking   Voc/Tech
The student is presented with the basic fundamental of plastic mold construction and molding processes. COREQUISITE: CIM-413

DIEM413   3 2 2 0 0
Electrical Discharge Machining   Voc/Tech
Operation of both conventional and wire EDM machines. Construction of EDM electrodes. COREQUISITE: DIEM405

DISL401   6 1 10 0 0
Diesel Engines I   Voc/Tech
Instruction provided in the technical and non-technical aspects of diesel engines. This information will give the students the basic understanding needed to continue in the Diesel Mechanic program.

DISL402   6 1 10 0 0
Diesel Engines II   Voc/Tech
Instruction in diagnosing problems and the nature of repairs needed. Information on preventative measures to eliminate failures. PREREQUISITE: DISL401

DISL404   6 2 8 0 0
Power Trains   Voc/Tech
Class and lab activities in the design and operation of drive train components including clutches, torque converters, automatic and manual transmissions, drive lines, rear axles, and wheel bearings.

DISL406   3 1 4 0 0
Hydraulics   Voc/Tech
The study of mobile hydraulic systems. Introduces hydraulic principles, components, fluids systems and circuits.

DISL407   6 1 10 0 0
Diesel Fuel Systems I   Voc/Tech
The student will be introduced to basic fuel system principles and provided with operational theory of some commonly used systems as well as general repair and calibration procedures. PREREQUISITE: DISL402

DISL408   5 1 8 0 0
Basic Electricity   Voc/Tech
An introduction to basic electricity and electronic principles that apply to diesel powered equipment. Systems and components covered include starting, charging, lighting and accessories.

DISL409   5 2 6 0 0
Diesel Electronics   Voc/Tech
A study of electronic fundamentals, lab work with electronic components, and testing equipment. Diesel engines which are computer controlled are used in lab to demonstrate applications of electronics on diesel power which meet demands of the future. PREREQUISITE: DISL408

DISL414   6 1 10 0 0
Diesel Fuel Systems II   Voc/Tech
This course covers the theory, general repair, and calibration of advanced diesel fuel systems including an introduction to future systems. PREREQUISITE: DISL407

DISL417   5 1 8 0 0
Heavy Equipment Repair   Voc/Tech
Instruction in the repair and service of equipment relating to the heavy equipment industry. This includes all phases normally done in a general repair shop. Instruction is given under structured lab and field conditions. PREREQUISITES: DISL402, 404, 406, 408

DISL418   5 1 8 0 0
Truck Repair   Voc/Tech
Instruction in the repair and service of equipment relating to the trucking industry. This includes all phases normally done in a general repair shop. Instruction is given under structured lab and field conditions. PREREQUISITES: DISL402, 404, 406, 408

DISL420   3 1 4 0 0
Air Conditioning   Voc/Tech
A course on basic air conditioning theory and design. Emphasis will be placed on various system controls and on service operations.

DISL428   6 1 10 0 0
Operation & Maintenance   Voc/Tech
Instruction in the proper methods of maintaining all equipment. Safety will be emphasized.

DISL460   2 2 0 0 0
Shop Management   Voc/Tech
An opportunity to acquire knowledge about the management of a shop. All phases of management will be presented from organizational structure to manpower efficiency analysis.

DISL470   4 1 6 0 0
Advanced Electricity   Voc/Tech
The electrical circuitry on diesel powered equipment is covered. Included are troubleshooting, diagnosing, and repair procedures. PREREQUISITE: DISL408

DKTP401   3 1 4 0 0
Introduction to Desktop Publishing   Voc/Tech
Introduction to methods of electronic text/image creation, & terminology. This course will present desktop & word processing programs as well as techniques used for proofing copy to typographic measurement such as points & picas. Students will be introduced to word processing and desktop programs using PC/DOS & Macintosh systems. PREREQUISITES: OFFC301, OFFC329 or equivalent

DMAS350   1 1 0 0 0
Health Field   Voc/Tech
Roles of dietary personnel in health facilities, state and federal guidelines. Explore managerial aspects within facilities.

DMAS351   1 0 2 0 0
Food Preparation   Voc/Tech
Basic principles and development of techniques as they apply to preparation of each food group, criterion for evaluating product quality. Laboratory experience.

DMAS352   2 2 0 0 0
Sanitation/Meal Service   Voc/Tech
Methods of efficiently serving safe, pleasing food. An awareness of sanitation will be created for all areas of food service.

DMAS353   1 1 0 0 0
Nutrition Life Cycle   Voc/Tech
An in-depth study (social, physiological and psychological need) of residents from infancy to geriatric. Explore the theraputic role of food.

DMAS354   1 1 0 0 0
Modified Diets   Voc/Tech
An assessment of special diets, using the approved diet manual, a review of food exchanges and hints for making these diets appetizing through the use of seasoning.

DMAS355   1 1 0 0 0
Food Production Management   Voc/Tech
Total production needs, equipment layout, work methods, food storage, food preparation, service, sanitation, and use of computers in food service.

DMAS356   2 2 0 0 0
Food Service Management   Voc/Tech
The management functions required to organize and maintain an efficient quality dietary department are developed.

DMAS361   1 0 0 0 4
Food Prep Field Experience   Voc/Tech
Application and evaluation of food preparation in health care facility. Practical experience in selected health care facility supervised by a registered dietitian. (P/F)

DMAS362   1 0 0 0 4
Sanitation/Meal Service Field Exp   Voc/Tech
Application and 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 Exp   Voc/Tech
Application and 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 and 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 and 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 and 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 For School/Recreation   General
Elements of improvisational acting. Students will learn approaches for participating in as well as leading creative drama activities.

DRAM114   2 0 4 0 0
Theatre Production   General
Practical experience in acting, directing, and stage design. Students will be involved in all stages of production, from auditions to final performance. May be repeated for up to eight semester hours of credit.

DRAM115   3 0 6 0 0
Theatre Production   General
See DRAM114

DRAM116   4 0 8 0 0
Theatre Production   General
See DRAM114

ECON101   3 3 0 0 0
Principles Of Macro-Economics   Core
An introduction to basic macro-economics' concepts and principles. Deals with problems of resource allocation, supply and demand, national income, employment, price levels, fiscal and monetary policy, money and banking systems, and elements of international finance.

ECON102   3 3 0 0 0
Principles Of Micro-Economics   Core
Course covers survey of demand and supply onditions, cost structure, market structure, anti-trust aws, crucial court decisions, competition, and how these elements affect the individual firm.

EDCR101   3 3 0 0 0
Intro To Education   Open
Presents a broad overview of the field of education including foundations of American education, roles of teachers and students, history and philosophy, and curriculum. students will complete a 40 hour practicum at the elementary, middle, or high school level.

EDCR165   3 3 0 0 0
Education of Exceptional Learners   Open
A survey of exceptional learners in the classroom will be explored. History, philosophy, current issues, trends, and mainstreaming will be discussed.

EDCR207   2 0 0 0 8
Internship Teaching Experiences   Open
Provides opportunity to assist in the school as a teacher aide or to assess one's potential and interest in teaching as a career. PREREQUISITE: EDCR101

ELEM321   3 3 0 0 0
Motor Control I   Voc/Tech
Troubleshoot motor controls, use meters for testing, and gain an understanding of schematics. Students should have basic knowledge of electricity to take this course.

ELEM322   3 3 0 0 0
Motor Control II   Voc/Tech
Work with control circuits and equipment including troubleshooting. Major emphasis is placed on solid state programmable controllers. PREREQUISITE: ELEM321 or equivalent

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. PREREQUISITE: ELEM451 COREQUISITE: ELEM451

ELEM453   3 3 0 0 0
Basic Electrical Practices   Voc/Tech
An introduction to, and overview of, consumer products through block diagram analysis. Also included are the principles of soldering, mounting components and printed circuit board fabrication. COREQUISITE: ELEM454

ELEM454   3 0 6 0 0
Basic Electrical Practices Lab   Voc/Tech
This laboratory develops the manipulative skills of the student. Soldering, mounting components and printed circuit board fabrication are included. COREQUISITE: ELEM453

ELEM460   3 3 0 0 0
Applied Electronics   Voc/Tech
An introduction to the principles of transistors and other basic solid state devices. This course includes amplifiers, oscillators, etc. PREREQUISITES: ELEM450, 452

ELEM461   3 0 6 0 0
Applied Electronics Lab   Voc/Tech
This laboratory consists of experiments with transistors and other solid state devices. The use of related equipment is included. PREREQUISITE: ELEM460 COREQUISITE: ELEM460

ELEM462   3 3 0 0 0
Digital Electronics   Voc/Tech
An introduction to the principles of basic TTL and CMOS digital circuits. Included are basic gates, counters, registers, and multiplexer configurations. PREREQUISITES: ELEM450, 452

ELEM463   3 0 6 0 0
Digital Electronics Lab   Voc/Tech
This laboratory consists of experiments on basic TTL and CMOS circuits. Included are gates, counters, registers and multiplexer configurations. PREREQUISITE: ELEM462 COREQUISITE: ELEM462

ELEM464   3 3 0 0 0
Industrial Electronics   Voc/Tech
An introduction to the principles of basic industrial electronic devices. Included are op amps, silicon controlled rectifiers, unijunction transistors and various types of trigger devices. PREREQUISITES: ELEM450, 452

ELEM465   3 0 6 0 0
Industrial Electronics Lab   Voc/Tech
This laboratory consists of experiments with basic industrial devices. Included are op amps, SCRs, UJTs, and various types of trigger devices. PREREQUISITE: ELEM464 COREQUISITE: ELEM464

ELEM470   3 3 0 0 0
Communications   Voc/Tech
Familiarization with broadcast and stereo receivers. Included are circuit analysis and service techniques used in servicing consumer type radio receivers. PREREQUISITES: ELEM454, 461, 463, 465 COREQUISITE: ELEM471

ELEM471   2 0 4 0 0
Communications Lab   Voc/Tech
This laboratory consists of experiments in the stage-by-stage construction of a communications receiver. PREREQUISITE: ELEM465 COREQUISITE: ELEM470

ELEM472   3 3 0 0 0
Color Systems I   Voc/Tech
Instruction in the theory and operation of television receivers. Included are basic color theory, circuit analysis, and servicing techniques. PREREQUISITES: ELEM454, 461, 463, 465 COREQUISITE: ELEM474

ELEM474   1 0 2 0 0
Color Systems I Lab   Voc/Tech
This laboratory consists of experiments with TV receivers. Included are the use of scopes, analyzers and generators to develop proper service techniques. COREQUISITE: ELEM472

ELEM480   6 6 0 0 0
Consumer Products   Voc/Tech
Instruction in the theory of consumer products such as VCRs, disc players, microwave ovens, and other consumer products. PREREQUISITE: ELEM471, 474 COREQUISITE: ELEM481

ELEM481   3 0 6 0 0
Consumer Products Lab   Voc/Tech
A practical laboratory course in troubleshooting and servicing all types of consumer electronic products. COREQUISITE: ELEM480

ELEM482   6 6 0 0 0
Color Systems II   Voc/Tech
A continuation of Color Systems I. An in-depth study of the various circuits in color televisions. PREREQUISITES: ELEM471, 474 COREQUISITE: ELEM483

ELEM483   3 0 6 0 0
Color Systems II Lab   Voc/Tech
A continuation of Color Systems I Lab. Included is practical troubleshooting/ servicing of consumer electronic products. COREQUISITE: ELEM482

ELHT311   3 3 0 0 0
Circuit Analysis I   Voc/Tech
An introduction to direct current fundamentals to include basic series and concepts essential in all phases of electricity and electronics. Subject material includes electricity and magnetism, ohms law, batteries, induced EMF, magnetic circuits, DC measuring instruments, motors, and generators. COREQUISITES: ELHT312, 313

ELHT312   2 0 4 0 0
Circuit Analysis I Lab   Voc/Tech
Basic experiments in circuit analysis. Includes series circuits, parallel circuits, and basic instrumentation familiarization. It also includes experiments in Theyenin's theory, Norton's theory, and Zirchoff's law. COREQUISITES: ELHT311, 313

ELHT313   3 3 0 0 0
Technical Math I   Voc/Tech
A review of algebra to include factoring, clearing of fractions, simultaneous linear equations, and quadratic equations. Students are also introduced to the use of an electronic calculator.

ELHT315   3 1 4 0 0
Fabrication Techniques   Voc/Tech
The proper use of the basic mechanical tools and techniques required in the fabrication of chassis and other selected projects. Practice in the development of techniques and skills in the manipulation of layout tools is provided in the shop.

ELHT321   3 3 0 0 0
Circuit Analysis II   Voc/Tech
An introduction to AC circuitry. Subject material includes generation, vector representation, complex algebraic manipulation of the sine wave, inductance, capacitance, resonance, transformers, and omhs law for alternating current series. PREREQUISITES: ELHT311, 312, 313 COREQUISITE: ELHT322

ELHT322   2 0 4 0 0
Circuit Analysis II Lab   Voc/Tech
Continuation of Circuit Analysis I. Includes experiments in alternating current. PREREQUISITES: ELHT311, 312, 313 COREQUISITE: ELHT321

ELHT323   3 3 0 0 0
Technical Math II   Voc/Tech
A continuation of Technical Mathematics I. To include exponents and radicals logarithms, graphs of trigonometric functions, as well as continued use of a calculator. PREREQUISITE: ELHT313

ELHT324   3 3 0 0 0
Computer Programming   Voc/Tech
Designed to introduce the student to basic programming techniques such as writing algorithms, drawing of flow charts, and developing programs that include loops and subroutines. In addition, it will include machine level languages and their application and software packages such as word processors and assembly interface. PREREQUISITE: ELHT313

ELHT330   2 2 0 0 0
Digital Circuits I   Voc/Tech
An analysis of those circuits which form basic building blocks for a digital system. To include logical gates, such as OR, NOR, AND, and NAND, storage registers, and counters. PREREQUISITE: ELHT323 COREQUISITE: ELHT362

ELHT331   3 3 0 0 0
Circuit Analysis III   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: ELHT321, 322, 323 COREQUISITE: ELHT363

ELHT340   3 3 0 0 0
Digital Circuits II   Voc/Tech
This course covers two major areas of microprocessors. The first is an investigation of the specific architecture of the microprocessor. The second area is software and is concerned with the specific machine and assembly level instruction as well as using these instructions for common routines. PREREQUISITES: ELHT330, 362 COREQUISITE: ELHT341

ELHT341   5 0 10 0 0
Digital Circuits II Lab   Voc/Tech
Continuation of Digital I. Also included are experiments in microprocessor architecture and timing. Methods of generating device select pulses, latching data, and interrupt techniques are examined. PREREQUISITES: ELHT330, 362 COREQUISITE: ELHT340

ELHT345   2 2 0 0 0
Operating Systems   Voc/Tech
An introduction to the disk operating system (DOS) and the network operating systems, Novell Netware. Includes personal computer and LAN basics. Emphasis is given to DOS version 3.3 the DOS shell and Netware version 2.15.

ELHT346   2 0 4 0 0
Operating Systems Lab   Voc/Tech
This laboratory consists of exercises for learning about the functions of disk and network operating systems. Emphasis is given to DOS version 3.3 and higher and Novell Netware. Lab exercises will be performed on an IBM personal system/2 computer. COREQUISITE: ELHT345

ELHT362   2 0 4 0 0
Digital Circuits Lab   Voc/Tech
Laboratory evaluation of small-scale integrated circuits and medium-scale integrated circuits. In addition to basic and/or gates, it includes comparators, decoders, multiplexors, and arithmetic units. PREREQUISITES: ELHT321, 322, 323 COREQUISITES: ELHT330, 331

ELHT363   3 0 6 0 0
Circuit Analysis III Lab   Voc/Tech
An analysis of solid state circuitry. It includes both transistor & integrated circuit experiments. Linear amplifiers as well as active filters are evaluated. PREREQUISITES: ELHT321, 322, 323 COREQUISITE: ELHT331

ENGL070   3 3 0 0 0
Basic Writing   Adaptor
Teaches basic grammar and writing skills; punctuation, spelling, sentence and paragraph structures; writing, revising and proofreading strategies. Students will compose 3-4 short personal essays, learning to develop main ideas with specific support material. Individualized approach to basic skills. Preparation for ENGL071 and ENGL117.

ENGL071   3 3 0 0 0
Writing Skills Review   Adaptor
An introductory course, prepares students for college-level writing. Confidence & skills are built as students write & revise 4-6 essays, learning to develop & organize material to support main ideas. Students review sentence & punctuation patterns & how to proofread. For students who have taken ENGL 070 or meet that course's objectives.

ENGL084   3 2 2 0 0
Communicative Grammar for ESL   Adaptor
This course provides nonactive students of English with intensive practice in advanced English grammar while promoting the development of communicative skills. Areas of instruction include tenses, passive voice, reported speech, conditions, etc. PREREQUISITES: Minimum scores on the TOEFL or Michigan Test.

ENGL085   3 2 2 0 0
Reading English As A Second Language   Adaptor
This course is designed for nonactive speakers of English. Reading comprehension skills are developed through the use of vocabulary work, guided reading activities and discussion. Reading material is intellectually stimulating but not beyond the student's level of comprehension. PREREQUISITES: Minimum scores on the TOEFL or Michigan Test.

ENGL086   1 1 0 0 0
Writing Tutorial   Adaptor
An individualized writing course tailored to meet individual student's needs. Students can concentrate on improving or exploring specific areas of their own writing.

ENGL115   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

ENGL117   3 3 0 0 0
Composition I   Core
Designed to help students read and write effectively. Exploration of relationship of audience to writer and material. Emphasis on developing concrete detail to support main ideas. PREREQUISITE: Satisfactory writing skills

ENGL118   3 3 0 0 0
Composition II   Core
Expository and persuasive writing developed through critical reading. The course explores structure, style, research, and documentation. PREREQUISITE: ENGL117

ENGL120   1 1 0 0 0
Library Instruction   General
Study of classification systems, use of the card catalog, periodical indexes, dictionaries, encyclopedias, subject reference books, & the compilation of bibliographies.

ENGL121   3 3 0 0 0
Creative Writing   General
Techniques of writing poetry and fiction. Students will read the work of professional writers and apply the principles of imaginative writing to their own work. Approaches include workshop evaluations and individual conferences.

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 area emphasized.

ENGR155   2 2 0 0 0
Engineering Computations   Open
This course includes the organization, solution & presentation of engineering problems. Topics covered includes S.I. units, selected engineering topics & the study of BASIC. PREREQUISITE: MATH123 or equivalent

ENGR160   2 2 0 0 0
Engineering FORTRAN   Open
The FORTRAN language in batch and interactive modes with an emphasis on solutions to engineering problems. PREREQUISITE: MATH123 or equivalent

ENGR165   4 2 4 0 0
Engr Graphics/Conceptual Design   Open
An integration of conceptual design & engineering graphics. This course includes orthographic projection applied to three dimensional geometry & engineering drawing. Instrument & freehand application to an open ended project that includes a formal engineering report.

ENGR175   3 3 0 0 0
Engineering Statics   Open
This course includes the vector and scalar analysis of coplanar and non-coplanar force systems, equilibrium concepts, friction, centroilds, moments and products of inertia. Mohr's circle, radius of gyration, internal forces, shear and bending moment diagram. PREREQUISITE: PHYL121 COREQUISITE: MATH130

FIRE231   2 2 0 0 0
Intro To Fire Science   Open
First in the fire science series, this course provides a historical & philosophical background of the fire service, reviews the functions of fire protection organizations, examines the nation's fire problem, identifies fire protection careers & describes the associate degree requirements.

FIRE232   3 3 0 0 0
Fire Behavior   Open
A qualitative study of chemical and physical aspects of fuels, the combustion process and products of combustion as they relate to causes, spread and extinguishment of fire. The course emphasizes the natural laws that determine fire behavior in any environment. COREQUISITE: CHEM131

FIRE233   3 3 0 0 0
Building Construction   Open
A study of building materials, components, & design features with regard to their reactions under fire conditions. The course also includes interpretation of the Life Safety Code and its application to proposed & existing structures. PREREQUISITE: FIRE232

FIRE234   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: FIRE232

FIRE235   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, FIRE232

FIRE236   3 3 0 0 0
Fluid Flows   Open
A problem-solving course involving application of the laws of hydraulics, design features, flow characteristics, and tests needed to assure adequate water supplies for fire protection. PREREQUISITES: H.S. algebra or MATH092, PHYL106

FIRE237   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.

FIRE238   3 3 0 0 0
Fire Investigation   Open
This course furnishes a technical background that will enable the student to examine a fire scene and determine the point of origin, cause, and sequence of events of the fire. It also covers fire cause data systems and data use in criminal prosecution, civil liability, and code enforcement. PREREQUISITES: FIRE232, 233

FNSR201   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.

FNSR203   3 3 0 0 0
Real Estate Finance   Open
This course provides a background in the varied real estate mortgage credit operations of commercial banks. It addresses the manner in which funds are channeled into mortgage markets, the financing of residential and special purpose property, and administrative tasks common to most mortgage departments.

FNSR205   3 3 0 0 0
Money & Banking   Open
The course presents basic principles as they relate to banking. It emphasizes the practical aspects of money & banking with an emphasis on basic monetary theory.

FNSR232   3 3 0 0 0
Intro To Credit Unions   Open
An overview of the credit union movement in the United States. Includes the structure of the credit union, legal basis for operation, services & characteristics, management, financial system, & insurance and bonding.

FNSR233   3 3 0 0 0
Credit Union Operations   Open
This course deals with granting of loans, financial counseling and collections. Current regulations under equal opportunity act and truth-in-lending laws will be covered. Relation of other laws to credit union operations will be discussed.

FNSR234   3 3 0 0 0
Credit Union Financial Mgmt   Open
This course is designed to develop an understanding of the financial management skills needed to operate a credit union, with emphasis on basic credit union accounting & bookkeeping, including financial statement analysis, & budgeting. Risk management & insurance are discussed along with investment guidelines.

FNSR237   3 3 0 0 0
Consumer Lending   Open
Designed to provide an overview of the consumer credit operation. This course examines the role of consumer credit in overall banking operations. Not a how-to training program. It offers an improved understanding of the consumer credit function within a bank.

FNSR251   3 3 0 0 0
Principles Of Credit & Collection   Open
Covers the different types of commercial credit, evaluation of potential credit customers, and the different sources of credit information. Discusses the organization of credit departments, collection procedures, and negotiable instruments.

FNSR252   3 3 0 0 0
Advanced Credit & Collection   Open
Provides an understanding of the role of credit in financial management, the four responsibilities of the credit function, and the purpose and value of financial statements. Covers the different financial statements. PREREQUISITE: FNSR251

FNSR274   3 3 0 0 0
Credit Union Accounting   Open
Terms and procedures basic to accounting and unique to credit unions are explained. Topics include credit union accounting, the accounting cycle, journal records, members' ledger cards, interest refunds and dividends, reserves and undivided earnings, statement of financial condition, closing the books, accounting bases, & internal controls.

FNSR275   3 3 0 0 0
Credit Union Auditing   Open
This course is designed to give credit union personnel the needed information to perform their ongoing responsibilities and to understand and work with various financial reports. This course details the steps included in preparing the audit, conducting the audit, and reporting the audit.

FREN101   4 4 0 0 0
Elementary French I   Core
An introduction to the basic skills in understanding, speaking, reading and writing French. Grammar analysis, classroom conversational practice, and some exploration of French culture.

FREN102   4 4 0 0 0
Elementary French II   Core
Continued practice of the four basic skills and grammar analysis begun in French 101. Introduction to short prose selections with conversational emphasis. PREREQUISITE: FREN101

FREN103   4 4 0 0 0
INTERMED FRENCH I   Core
Review of essential grammatical constructions emphasizing major areas of difficulty for English speakers. Use of cultural and literary materials to develop conversational skills. PREREQUISITE: FREN102

FREN104   4 4 0 0 0
INTERMED FRENCH II   Core
Continued review of grammatical constructions using cultural materials. Reading, writing, and conversation will be emphasized in the context of cultural issues and current events. PREREQUISITE: FREN103

GEOG141   3 3 0 0 0
Intro To Geography   Core
This course utilizes the basic concepts of cultural geography (area, landscape, ecology, diffusion, and integration) in a systematic examination of the contemporary world. The course is intended to provide an elementary acquaintance with the 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.

HCAD227   4 4 0 0 0
Integrating Community Serv-MH/MR/DD Open
Emphasis will be placed on physical, psychosocial and cultural dynamics of mental health, mental retardation, and developmental disabilites and the various disciplinary perspectives that may be encountered. Special attention will be given to the integration of community based services.

HCAD237   3 3 0 0 0
Long-Term Care Financial Management   Open
Emphasis on financial practices in the long-term care facility. Cost and labor hour controls, third-party payment, evaluation of profit/loss, and fiscal reports will be addressed. PREREQUISITE: ACCT301

HCAD251   1 0 0 0 4
Pract:Social Services   Open
Focus on social services and rehabilitation programs in the long-term care facility.

HCAD252   1 0 0 0 4
Pract:Dietary   Open
Focus on the dietary department in the long-term care facility. Food ordering, inventory processes, food preparation, serving, and staffing patterns will be explored.

HCAD253   1 0 0 0 4
Pract:Legal Aspects & Govt Organ   Open
Emphasis on the legal aspects and government organizations affecting long-term care facilities.

HCAD254   1 0 0 0 4
Pract:Nursing   Open
Nursing services in the long-term care facility. The relationship of nursing services to administration.

HCAD255   1 0 0 0 4
Housekeeping/Laundry/Maintenance   Open
Emphasis on the administrator's responsibilities in the housekeeping, laundry, and maintenance departments.

HCAD256   1 0 0 0 4
Pract:Activ/Community Resources   Open
Activity & volunteer programs in the long-term care facility. The use of community resources will be explored.

HCAD257   1 0 0 0 4
Pract:Business Administration   Open
Emphasis on business practices in the long-term care facility.

HCAD258   1 0 0 0 4
Pract: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.

HCAD261   3 0 0 0 12
Pract: Long-Term Care Administration   Open
Application of theory and concepts. Focus on administrative organization practices, human resource management and business management.

HCAD262   3 0 0 0 12
Pract: Long-Term Care Administration   Open
Application of theory and concepts. Focus on administrative aspects of activities, community resources, social services, rehabilitation and nursing services.

HCAD263   3 0 0 0 12
Pract: Long Term Care Administration   Open
Application of theory and concepts. Focus on legal aspects, government organization & administrative aspects of dietary, housekeeping, laundry & maintenance services.

HCAD264   2 2 0 0 0
Pract: Seminar   Open
Practicum experience and problems will be discussed. Additional information and topics relating to long-term care will be addressed. Classes will be held in a variety of long-term care facilities. (May be repeated a maximum of 3 times.) COREQUISITES: HCAD261, HCAD262 and/or HCAD263

HCAD271   5 5 0 0 0
Admin Long-Term Care Facilities   Open
Relates fundamental management principles to special challenges and concerns of long-term care. Includes study of long-term care organizations, the management process, organizational behavior and human resource management.

HCAD272   5 5 0 0 0
Services: Long-Term Care Residents   Open
Relates physical, psychological and sociological needs of residents to services provided in the long term care setting. Includes processes of normal aging, residents of long-term care facilities, services in the therapeutic milieu, nursing services, environmental services, and quality assurance.

HCAD273   4 4 0 0 0
Law & Long-Term Care   Open
An introduction to law and how it relates to the long-term care industry. A study of caselaw, court structure and procedures, torts and litigation. Additional topics include labor law, liability, licensure, certification, resident rights, reimbursement and living wills.

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 accountable services. Reviews behavior modification techniques and addresses future trends.

HCAD281   3 3 0 0 0
Seminar In Health Care   Open
Emphasis on principles and practices involved in long-term care administration and resident services with special attention to the review of federal and state regulations. PREREQUISITE: Taken final semester

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
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 presettlement, Colonial, Revolutionary, Antebellum Civil War, and Reconstruction eras.

HIST125   4 4 0 0 0
American Hist 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 Ambulance   Voc/Tech
Prepares rescue personnel for the role and responsibilities of an EMT-A. 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.

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.

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.

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) COREQUISITE: HRMT315

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

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 time management skills 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 COREQUISITE: HRMT326

HRMT330   2 2 0 0 0
Introduction To Hotel Operations   Voc/Tech
This course represents a systematic approach to front office procedures by detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection procedures. Also places front office procedures within the context of the overall operation of a hotel and examines front office management.

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: HRMT316, 320, 326 COREQUISITE: HRMT357

HRMT342   1 1 0 0 0
Work Experience Seminar   Voc/Tech
A course designed for problem solving, personal management, as well as evaluating management functions as they apply to various hospitality businesses.

HRMT347   5 0 0 0 20
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   3 3 0 0 0
Purchasing/Cost Control   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.

HRMT349   3 3 0 0 0
Nutrition & Menu Planning   Voc/Tech
Evaluating and planning menus for restaurants, schools, and health facilities. Introduction to basic nutrition. Projects in menu format and design, computerized nutritional analysis & nutrition reports are required in this course.

HRMT357   5 0 10 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. PREREQUISITES: HRMT-316, 320, 326 COREQUISITE: HRMT335

HRMT360   3 3 0 0 0
Layout Equipment & Design   Voc/Tech
This course is designed to emphasize the importance of equipment layout, equipment selection, and facility planning in relation to the efficient operation of a restaurant or hotel. Course content will also include preventive maintenance and energy conservation.

HRMT364   2 2 0 0 0
Hotel Administration   Voc/Tech
Hotel Administration is a management course which introduces the student to advanced studies of property management, catering, sales, legal aspects, security, and maintenance of all departments of the hotel. PREREQUISITE: HRMT330 COREQUISITE: HRMT366

HRMT366   4 0 0 0 16
Hotel Administration Lab   Voc/Tech
An approved program of work experience in one of the many hotel/motel properties in the area. PREREQUISITE: HRMT330 COREQUISITE: HRMT364

HTBM353   3 3 0 0 0
Biomed Instrumentation I   Voc/Tech
This course trains the biomedical student in the repair, calibration, and preventative maintenance of patient monitoring equipment such as ECG, blood pressure, defibrillators, ICU and CCU central monitoring stations, respiratory instrumentation, and electrical safety testing. PREREQUISITES: instructor permission or ELHT340, 341, 345, 346 COREQUISITE: HTBM354

HTBM354   5 0 10 0 0
Biomed Instrumentation I Lab   Voc/Tech
Experiments in basic instrumentation. It includes experiments in maintenance and repair of patient monitoring equipment. Central monitoring stations, electrical safety testing and preventative maintenance are also covered. COREQUISITE: HTBM353

HTBM355   2 2 0 0 0
Electro-Mechanical Systems I   Voc/Tech
The basic theories and concepts of various types of transducers, active and passive, used in biomedical instrumentation are presented. Additionally, the basic principles of mechanical relationships, and fluid power instrumentation are considered. COREQUISITE: HTBM356

HTBM356   2 0 4 0 0
Electro-Mechanical Systems I Lab   Voc/Tech
Basic transducer principles are evaluated including experiments in pressure, flow, velocity, and mechanical relationships. Gears, levers, and linkages are examined. PREREQUISITES: instructor permission or ELHT340, 341, 345, 346 COREQUISITE: HTBM355

HTBM358   3 0 0 0 12
Internship   Voc/Tech
A supervised hands-on experience in a hospital. Work on a wide range of medical equipment under the supervision of a biomedical engineer or technician. PREREQUISITE: Complete 4th sem.

HTBM362   3 3 0 0 0
Health Care Delivery   Voc/Tech
Students acquire knowledge of the practices and trends within the health care delivery system. The student will have the opportunity in a highly structured environment to communicate with other members of the health team and observe and assist the health worker in the safe delivery of health care of related functions. PREREQUISITES: HTBM353, 354

HTBM363   2 2 0 0 0
Biomed Instrumentation II   Voc/Tech
A continuation of Biomed I. It includes laboratory instrumentation, such as spectrophotometers, blood gas analyzers, & cell counters, in addition to electro-surgery, infusion pumps, x-ray, ultrasound, hemodialysis, & the use of the computer in biomedical instrumentation. PREREQUISITES: HTBM353, 354 COREQUISITE: HTBM364

HTBM364   2 0 4 0 0
Biomed Instrumentation II Lab   Voc/Tech
A continuation of Biomed I lab. It includes experiments in the maintenance and repair of laboratory instrumentation, blood gas, x-ray, ultra-sound, electro-surgery, & infusion pumps. It also includes the use of the microprocessor in biomedical instrumentation. PREREQUISITES: HTBM353, 354 COREQUISITE: HTBM363

HTCT351   3 3 0 0 0
Major Computer Systems I   Voc/Tech
A detailed Module-level study of the PDP-II computer system. Topics include the Internal Bus Structure, Control and Status Registers, Instruction decode, data flow, and Basic Timing Functions. Also system console interfaces, memory concepts, and general interfacing techniques are included. PREREQUISITE: ELHT340, 341, 345, 346 COREQUISITE: HTCT352

HTCT352   4 0 8 0 0
Major Computer Systems I Lab   Voc/Tech
An evaluation of Mainframe hardware. This lab stresses component level troubleshooting using software diagnostics in conjunction with scope & analyzer instrumentation. Board-level troubleshooting and preventitive maintenance techniques are introduced. Also diagnostic software as well as machine and assembly language programming are included. COREQUISITE: HTCT351

HTCT353   3 3 0 0 0
Microprocessors   Voc/Tech
An introduction to microprocessor interface methods. It includes UART and USART interface techniques, programmable peripheral interface using 8255 and interface techniques using A/C and D/A converters. PREREQUISITE: ELHT340, 341, 345, 346 COREQUISITE: HTCT354

HTCT354   4 0 8 0 0
Microprocessors Lab   Voc/Tech
An evaluation of microprocessor interface techniques. The experiments include serial interface using uarts, parallel interface using PIA's, and A/D and C/A conversion techniques. COREQUISITE: HTCT353

HTCT361   3 3 0 0 0
Major Computer Systems II   Voc/Tech
A detailed module level study of the VAX computer system is introduced. Topics include instruction and data flow between the CPU, CacheMem, and MainMemory on the VAX BUS structure, and data flow to peripherals on the integral UNIBUS. The VAX instruction set is introduced. Disk drive, CRT, printer, magtape technologies and VMS are included. PREREQUISITE: HCTC351, 352 COREQUISITE: HTCT362

HTCT362   2 0 4 0 0
Major Computer Systems II Lab   Voc/Tech
Component level analysis of the VAX system is introduced using scope and logic analyzer instrumentation. Disk drive, printer, and magtape component level analysis is included. This course includes VMS software operating techniques. Assembly level programming is introduced with an emphasis on the diagnostic analysis of hardware characteristics. COREQUISITE: HTCT361

HTCT364   3 3 0 0 0
Microcomputer Systems   Voc/Tech
A comprehensive study of small computer systems. It includes troubleshooting techniques such as signature analysis, logic analyzers, and waveform recognition. Use of computer diagnostics is also emphasized. PREREQUISITE: HCTC353, 354 CORE-QUISITE: HTCT365

HTCT365   3 0 6 0 0
Microcomputer Systems Lab   Voc/Tech
An evaluation of microcomputer systems. It includes disk and mainframe diagnostics as well as familiarization experiments in software including the operating system. COREQUISITE: HTCT364

HTPC351   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. PREREQUISITE: ELHT313 CORE-QUISITE: 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 activators are evaluated in the lab. COREQUISITE: HTPC351

HTPC354   3 3 0 0 0
Motor Control & PLC's   Voc/Tech
The objective of this course is to enable the student to understand the control circuitry used in both production machines & control systems. The first phase, motor control, covers different types of motors and their characteristics plus the operational devices such as switches, contactors & controllers used in switching, & controlling power. PREREQUISITE: ELHT340, 341, 345, 346 COREQUISITE: HTPC356

HTPC355   2 2 0 0 0
Process Control Instrumentation   Voc/Tech
A comprehensive study of process control characteristics such as elements, modes, and stability along with detailed knowledge of measurement technique, control mode implementation, and final control element functions. In keeping with modern trends, the digital aspects of process control technology are stressed. PREREQUISITE: ELHT340, 341, 345, 346 COREQUISITE: HTPC357

HTPC356   2 0 4 0 0
Motor Control & PLC Lab   Voc/Tech
This lab includes basic control circuits using devices such as contactors, timers, starters, limits switches, pressure switches, etc. Also included are experiments utilizing programmable logic controllers to implement control circuits. COREQUISITE: HTPC354

HTPC357   2 0 4 0 0
Process Control Instr Lab   Voc/Tech
This lab includes experiments on transducers used in process control as well as experiments on proportional, integral, and derivative control. CORE-QUISITE: HTPC355

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: HTPC354, 356

HTPC363   2 2 0 0 0
Mechanisms   Voc/Tech
This introductory course covers linear and angular displacement, velocities, and accelerations of linkages, gear trains, and belt and friction drives. Included topics are vectors, simple and complex machines, and toggle and intermittent motions mechanisms. PREREQUISITE: ELHT313 COREQUISITE: HTPC364

HTPC364   2 0 4 0 0
Mechanisms Lab   Voc/Tech
The principles of drives & 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

HUMN115   3 2 2 0 0
Introduction To Films   Core
An introduction to the conventions, scope, purposes, and techniques of films. Includes viewing and writing about a variety of films.

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, on the thematic relationships between the arts, and the relevance of the arts in our lives today.

HUMN133   3 2 2 0 0
America In The Movies   Core
An interdisciplinary course that combines the insights of history and literature by examining popular American movies. The course explores the social, cultural, and ethical questions raised in such films.

HUMN137   3 3 0 0 0
Mythology   General
An introduction to world mythology. The course explores classical, Nordic, Eastern, African, & American/British myths.

HUMS101   3 3 0 0 0
Introduction To Human Services   General
History and intro to the social welfare institution. Theoretical perspectives, concepts, values, and intervention strategies are examined. Systems theory is used to explore legislation & services designed to meet client needs.

HUMS104   3 3 0 0 0
Community Organization   Open
A study of various theories, methods, and techniques to bring about needed and desirable changes in political, economic, social, and bureaucratic structures and processes. Emphasis is placed upon application of learned skills. PREREQUISITE: 6 hours of social sciences

HUMS109   3 3 0 0 0
Survey Mental Health Treatment   Open
Introduction to major counseling theories including psychoanalysis, gestalt, transactional analysis, family therapy, reality therapy, behavior therapy, and crisis intervention. Applications in mental health and social services settings are considered.

HUMS202   3 3 0 0 0
Interviewing/Interper Relation   Open
Study of interviewing theories including roles and relationships between the interviewer and the interviewee. Methodology of developing questions, conducting interviews, recording data and analyzing it, and writing assessments and histories are emphasized.

HUMS205   3 3 0 0 0
Intervention Theories/Practice I   Open
Study of several management and planning theories and practices which are used to assess client needs, establish goals, identify resources, and make appropriate referrals. Community resources are explored. PREREQUISITES: HUMS101, 202

HUMS206   3 3 0 0 0
Intervention Theories/Practice II   Open
Theories and values of the social sciences, including human services, are used to interpret and respond to client behaviors. Written analysis is emphasized. Evaluation theory and its applications are also stressed. PREREQUISITES: HUMS202, 205 COREQUISITES: HUMS208 or volunteer services work

HUMS208   3 0 0 0 13
Field Experience   Open
Supervised experience in a human services agency enables students to apply their skills and knowledge by working directly with clients. PREREQUISITES: HUMS202, 205 COREQUISITE: HUMS206

HUMS210   3 3 0 0 0
Counseling Techniques   Open
Several counseling models are considered. The theories, methods, and applications of client-centered and directive counseling are emphasized. PREREQUISITE: HUMS202

HUMS211   3 3 0 0 0
Counseling With Women   Open
This course explores selected concerns that women are likely to bring into a counseling situation. Topics include sex roles, gender and socialization, and their impact on women's lives.

HUMS213   6 0 0 0 27
Pract:Chemical Depend Counsel I   Open
Supervised experience in three of these treatment programs for chemically dependent people: inpatient, outpatient, follow-up care, adolescent, halfway house, and family therapy. PREREQUISITE: Admission-Ia Meth Powell III

HUMS214   6 0 0 0 27
Pract:Chemical Depend Counsel II   Open
See HUMS 213.

HUMS215   3 3 0 0 0
Eating Disorders   Open
Eating disorders including anorexia nervosa and bulimia are considered from historical, psychological, and sociological perspectives. A variety of diagnostic and treatment modalities are considered.

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.

ITSP111   3 3 0 0 0
Intro To International Business   General
An introductory course designed to acquaint students with currency transfer restrictions, custom and tariff regulations, and banking and shipping documentations. Non-economic considerations such as cross cultural communication, political affiliation and socio-religious restrictions are included.

ITSP130   3 3 0 0 0
International Marketing   General
A course of intensive training in global marketing. National sovereignty, geographical location, cultural heritage and economic systems are used to place an international perspective on the role of supply and demand. This course is recommended for those who are now in the existing field or plan to make exporting their career goal.

ITSP150   3 3 0 0 0
International Documentation   General
A course designed to train students for transfer of goods and title to the international buyer. Proper documentation for transactional banking and shipping, with an emphasis on clarity of expression & intent are included.

JNAD120   3 3 0 0 0
Intro To Mass Communication   Open
A non-technical introduction to mass media. Special emphasis on print media, with radio and television included; new trends in the media, freedom of press and media principles.

JNAD121   3 3 0 0 0
Basic Reporting Principles   Open
Designed to provide students with experiences in gathering, organizing, and writing news stories.

JNAD122   3 3 0 0 0
Advanced Reporting   Open
Study of various story types, including consumer, feature, review/editorial and investigative. Further development of news elements, interviewing techniques, and legal and ethical considerations in journalism. PREREQUISITE: JNAD121

JNAD123   3 1 4 0 0
Publications Production   Open
Special work in journalism. Students will produce DMACC newspaper, the Campus Chronicle (Ankeny) or the Bear Facts (Boone), and will gain experience in writing, copy-editing, layout & design. May be repeated for three additional semesters.

JNAD125   3 3 0 0 0
Principles Of Advertising   Open
Course explores advertising as a tool and socio-economic force.

LABS220   3 3 0 0 0
Survey Of Labor Studies   Open
A survey course designed to explain the field of labor studies. Topics covered in the course include: labor history, labor law, contract negotiations and administration, and the future of the labor movement.

LABS221   3 3 0 0 0
Grievance Handling & Arbitration   Open
A practical study of contract terminology and administration, all aspects of arbitration and grievance handling. Responsibilities, tactics and strategies are analyzed through a simulated grievance arbitration case.

LABS222   3 3 0 0 0
History/Dev Of Labor Movement   Open
The development of the American Labor Movement is analyzed in successive time frames, from the colonial era to the present. While tracing the nature and conditions of labor in historical sequence, some attention is also devoted to exploring the meaning of work, the rise of trade unionism, and contemporary labor issues.

LABS223   3 3 0 0 0
Protective Labor Relations Legis   Open
A survey of legislation designed to provide economic security against industrial accidents, disability, illness, old age, unemployment, and the laws governing labor relations, with an introduction of the legal system and constitutional problems of governmental regulations.

LABS224   3 3 0 0 0
Publ Sect Labor Leg/Col Barg   Open
Reviews the development of legal framework, surveys the law governing labor relations in the public sector & an overview of the process of collective bargaining in the public sector. Responsibilities, tactics & strategies are analyzed through public sector mock bargaining sessions.

LABS225   3 3 0 0 0
Union Psychology/Indust Sociology   Open
This course deals with the relations between the individual and the organization. It describes & examines the individual as a formal & informal group leader as it relates to the structure of the labor movement. It also is an examination of the way industry, unions & the economy relate to other social institutions in America's society.

LABS226   3 3 0 0 0
Labor Economics/Collective Bargain   Open
This course first studies the economic sources of union bargaining strength and union preparation for economic bargaining and then looks at the overview of the process of collective bargaining and what it might be in the future. Responsibilities, tactics and strategies are analyzed through mock bargaining sessions.

LABS227   3 3 0 0 0
Union Administration   Open
American unions in theory and practice on local, state and national levels. A study of structure and roles on different levels of the organizations.

LABS228   3 3 0 0 0
Unions/Politics/Comp Labor Movement   Open
An examination of the party structure of American politics, legislative processes, formation of public opinion, and an analysis of the history and development of various labor movements throughout the world.

LABS229   3 3 0 0 0
Labor Studies Problems   Open
An individual study of special problems in labor studies, and an opportunity for a student to apply knowledge and experience to actual specific labor problems. PREREQUISITE: 18 hours of LABS courses

LABS230   3 3 0 0 0
Union Counseling   Open
The purpose of the community services counseling course is to acquaint students with the services available in the community and teach them the fundamentals of referral work and counseling.

LABS231   3 3 0 0 0
Advanced Union Counseling   Open
The purpose of the advanced class is to provide the local union counselor with sufficient information and the basic skills to enjoy being an effective, productive community board or committee member.

LEGA240   3 3 0 0 0
Introduction To Law   Open
A general introduction to the American legal system including case briefing, court structure, and civil, criminal and administrative procedure. An examination of ethical and professional practice standards applicable to the legal profession. Understanding of the roles of the judge, jury, attorney, and legal assistant.

LEGA242   3 3 0 0 0
Torts & Litigation I   Open
A study of the basic law relating to personal & property damage. Topics include intentional torts, negligence, nuisance, strict liability, & automobile law. Principles of trial practice including drafting basic pleadings, gathering & organization of materials for trial. PREREQUISITES: 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
Domestic Relations   Open
The legal aspects of the family relationship. The rights and duties of the parties in marriage, annulment, divorce, child custody, and adoption. The course will emphasize the use of domestic law forms. PREREQUISITES: instructor permission or LEGA240, 260

LEGA245   3 3 0 0 0
Income Tax Law   Open
Study of the basic theory of income tax coupled with instruction in its practical application. Personal & business taxation are covered on both the federal & state levels.

LEGA246   3 3 0 0 0
Business & Corporate Law I   Open
A study of the fundamentals of the law of contracts, the uniform commercial code and the rights of creditors in transactions.

LEGA247   3 3 0 0 0
Business & Corporate Law II   Open
Continuation of Business & 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
A study of the law of real property and a survey of the more common types of real estate transactions. Emphasis is on the preparation of the instruments necessary to complete various real estate transactions. PREREQUISITES: instructor permission or LEGA240, 260

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. PREREQUISITES: instructor permission or LEGA240, 260

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) PREREQUISITES: Min of "C" in all LEGA courses & complete min 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. PREREQUISITES: instructor permission or LEGA240, 260

LEGA254   3 3 0 0 0
Evidence: Theory & Practice   Open
A study of the substantive and procedural laws of evidence. Introduction to the Rules of Evidence. Methods of discovering, preserving, and presenting evidence in civil and criminal trials. PREREQUISITES: instructor permission or LEGA240, 260

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. PREREQUISITES: 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
Advanced 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.

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

LEGA270   3 1 0 0 6
Legal Interviewing/Clinical Exper   Open
Classroom study of techniques of legal interviewing and recording and reporting interviews. Students will work 100 hours in an agency applying interviewing techniques. PREREQUISITES: LEGA240, 260

LITR120 `3 3 0 0 0`
Intro To Literature Core
An introduction to the study and appreciation of fiction, poetry, and drama. Basic critical approaches the work by itself, as an imitation of life, as expression, and as influence are emphasized. 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
In-depth study of works of selected major writers from the post-renaissance through the contemporary period. Common critical approaches for reading, understanding, and evaluating each work are taught.

LITR122 `3 3 0 0 0`
Major American Writers I Core
Examines American literature from its beginnings in New England through the realism of the late 19th century. Emphasizes major literary works and their social and cultural contexts.

LITR123 `3 3 0 0 0`
Major American Writers II Core
Examines American literature from the 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
A survey of children's literature. Students will read and evaluate a wide variety of books and will explore techniques by which parents and teachers can share literature with children.

LITR125 `3 3 0 0 0`
Contemporary Literature Core
A study of the significant contemporary writers and literary movements since 1945. The course considers the way today's fiction mirrors today's society.

LITR130 `3 3 0 0 0`
Science Fiction Core
A brief survey of the fiction dealing with the impact of science on man. The short story is used primarily to see how speculative writers(Poe to Vonnegut) deal with basic issues such as truth, evil and compassion.

LITR131 `3 3 0 0 0`
Detective Fiction Core
Through literary analysis, the course investigates the components underlying the suspense and enjoyment of "Who Done It". A comparison of "potboilers" and "classics" is made.

LITR132 `3 3 0 0 0`
Humor Core
A critical look at humor as a literary genre including an examination of its roots, types, techniques, & purposes.

LITR133 `3 3 0 0 0`
Black American Literature Core
In this course the student will read and analyze Black American writers by defining and applying literary terms to each work. Focus on major black literary and cultural problems and themes.

LITR134 `3 3 0 0 0`
Women's Literature Core
A course focusing on how women and men are portrayed in literature by female writers. Some of the portrayals will be familiar—those limiting women to the roles of mother, wife, sex object; others will challenge the sterotypes.

LRST141 `3 3 0 0 0`
Recreation Leadership Open
The course is designed to provide the student with a knowledge of human dynamics, leadership abilities, and the identification of types of groups. Leadership applications in this course deal with the obtaining of a practical knowledge of group situations and the principles necessary for effective leadership.

LRST142 `1 0 0 0 4`
Supervised Field Experience I Open
This course is designed to acquaint the student with the variety of recreation services available in the recreation field. The student will be required to observe and evaluate ongoing recreation programs in public agencies, private agencies, commercial agencies, voluntary agencies and health facilities.

LRST144 `3 3 0 0 0`
Prog Planning/Organization Open
Underlying principles for effective recreational programming. Overview of the variety of program areas associated with recreation. Attention given to recreation interests & the needs of participants. Emphasis on steps in programming including formation of leagues/ tournaments, research tools, evaluation & marketing.

LRST146 `3 3 0 0 0`
Intro/Therapeutic Recreation Open
Basic concepts of the role of recreation in rehabilitation. Emphasis will be placed on a review of the recipients of therapeutic recreation services, the settings in which it takes place and developing recreation programs for special groups.

LRST149 `1 1 0 0 0 4 4`
Supervised Field Experience II Open
A program designed to provide experience in working with and directing specific programs in a recreation setting. The student is expected to work in a chosen agency under the direct supervision of a recreation professional for 660 clock hours. PREREQUISITES: Complete a minimum of 9 credits of LRST courses

LRST151 `2 2 0 0 0`
Introduction To Recreation Open
Introduce the student to the historical and philosophical foundations of leisure and recreation. The student will be offered an opportunity to develop concepts concerning recreation, the meaning of leisure and recreation, social institutions providing recreation services and the types of areas and facilities used in recreation.

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.

MACD451 `3 1 4 0 0`
Drafting Basics Voc/Tech
This is a generic course applicable to all fields of drafting. Drafting equipment usage will be covered. Line quality, geometric construction & lettering will be taught on a variety of media. Prints of drawings will be prepared.

MACD452 `3 1 4 0 0`
Basic Shape/Design Description Voc/Tech
Sketching techniques, fundamentals of orthographic projection and dimensioning procedures are stressed. PREREQUISITE: MACD451

MACD453 `3 1 4 0 0`
Adv Shape & Size Description Voc/Tech
Basic tolerances, thread systems, and sectional views are presented with emphasis toward the machine drafter. PREREQUISITE: MACD452

MACD456 `2 1 2 0 0`
Materials & Processes Voc/Tech
Survey of materials and methods used in forming the various products produced in the manufacturing field. A number of field trips to local factories are included to observe their processes.

MACD461 `3 1 4 0 0`
Mfg Dimensions & Tolerances Voc/Tech
Dimensioning techniques are presented as they apply to product manufacturing. ANSI 14.5 standards will be used in the selection and application of the dimensions. Geometric dimensioning and tolerancing will be introduced. PREREQUISITES: MACD453, MATH410

MACD462 `3 1 4 0 0`
Mechanical Components Voc/Tech
Preparation of welding drawings will be presented, with emphasis on proper usage of American Welding Society symbols. Sheet metal fabrication will be examined. Basics of power train/mechanical components will be introduced. PREREQUISITE: MACD461

MACD466 `2 1 2 0 0`
Descriptive Geometry Voc/Tech
Basic principles of descriptive geometry as they apply to problem solving in drafting with the emphasis on intersections & sheet metal development. PREREQUISITE: MACD453

MACD471 `4 1 6 0 0`
Layouts & Working Drawings Voc/Tech
Detailing individual parts, types of assembly drawings, and parts lists will be covered on an individual product basis. Students will gain practical experience by creating working drawings to industrial standards. PREREQUISITES: MACD462, MATH411

MACD472 `2 1 2 0 0`
Presentation Drawings Voc/Tech
Basic techniques of technical illustration are covered, with emphasis on the preparation of "exploded" assemblies. PREREQUISITE: MACD471

MATH091 `2 2 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 ew topics including exponents and radicals, functions and graphs, quadratic equations, inequalities and systems of equations. PREREQUISITES: 1 year H.S. algebra, department permission or MATH092

MATH115 `4 4 0 0 0`
Finite Mathematics Core
A general education course in practical mathematics for those students not majoring in mathematics or science. This course will include such topics as set operations and applications, methods of counting, probability, systems of linear equations, matrices, geometric linear programming, and an introduction to Markov chains. PREREQUISITES: 1 year H.S. algebra or MATH092

MATH118 `4 4 0 0 0`
Math For Elementary Educators Core
Provides future elementary teachers with a modern approach to mathematics. Sets, relations, number systems, nature of proof, algorithms, elements of algebra and geometry, basic computational skills and fundamentals of logic. This course is for students in education fields and may not be appropriate for students majoring in other areas. PREREQUISITES: 1 year H.S. algebra, department permission or MATH092

MATH121 `4 4 0 0 0`
Elementary Statistics Core
Tabular and graphical presentation, measures of central tendency and variability, standard elementary procedures involving the binomial, normal, student's t, chi-square and f distributions, correlation, regression, analysis of variance, and several nonparametric procedures. PREREQUISITES: 2 years H.S. algebra, department permission or MATH094

MATH122 `4 4 0 0 0`
Calculus For Business/Social Science Core
Functions, graphs, differential calculus, integral calculus, introduction to max-min theory for functions of two variables. Emphasis on application of calculus to business problems. Not a substitute for MATH129 and MATH130. PREREQUISITES: 2 years H.S. algebra and MATH115, or MATH094 and MATH115

MATH123 `3 3 0 0 0`
Trigonometry Core
Circular functions and their inverses, trigonometric identities, trigonometric equations, solving triangles and graphing. PREREQUISITES: 2 years H.S. algebra, department permission or MATH094

MATH124 `5 5 0 0 0`
Precalculus Core
Real and complex number systems, inequalties, exponential and logarithmic functions, mathematical induction, limits, sequences, elementary theory of equations, linear systems, matrices, vectors and topics of analytic geometry. PREREQUISITES: MATH123 or equivalent, or department permission

MATH129   5 5 0 0 0
Calculus I   Core
Absolute values, inequalities, functions, limits, continuity, differentiation, definite intregal, exponential and logarithmic functions. PREREQUISITES: MATH124 or equivalent or department permission

MATH130   5 5 0 0 0
Calculus II   Core
Continuation of MATH129. Techniques of integration, hyperbolic functions, polar coordinates, indeterminate forms, improper integrals, infinite series, partial derivatives, multiple integrals. PREREQUISITE: MATH129

MATH132   4 4 0 0 0
Differential Equat/Laplace Trans   Core
Ordinary differential equations, systems of ordinary differential equations, Laplace transforms, numerical methods and applications. PREREQUISITE: MATH130 COREQUISITE: MATH130

MATH410   3 3 0 0 0
Mathematics for Technicians I   Voc/Tech
A course in elementary mathematical skills for technicians. Topics covered include fundamental operations with whole numbers, fractions, decimals, & signed numbers; percents; geometric figures & basic constructions; area and volume formulas; English/Metric systems; measurements; & the interpretation of graphs and charts.

MATH411   3 3 0 0 0
Mathematics for Technicians II   Voc/Tech
A course in algebra and trigonometry for technicians. Topics covered include polynomials, equations, systems of linear equations, factoring, quadratic equations, trigonometry, powers, roots and logarithms. PREREQUISITE: MATH410 or equivalent

MEDA461   4 4 0 0 0
Human Body-Health & Disease I   Voc/Tech
Basic biological concepts, structure of the body and its functions are studied. Interrelationship of the systems in the healthy individual is stressed. Symptoms of disease, functional and organic reactions of the body relating to systems, diagnostic aids used by the physician, and possible methods of treatment are presented. PREREQUISITE: H.S. biology or equivalent

MEDA462   1 0 2 0 0
Medical Terminology   Voc/Tech
Designed to help logically understand medical terms. Basic prefixes, suffixes and root words are emphasized as a method of acquiring and retaining knowledge. Exercises stressing the spelling, pronunciation and use of medical terms are included.

MEDA464   4 3 2 0 0
Medical Laboratory Procedures I   Voc/Tech
Introduction to medical laboratory procedures, ethics, and laboratory personnel. Includes use of basic laboratory equipment, and application of basic microbiological principles. Routine urinalysis: physical, chemical and microscopic examination.

MEDA465   3 2 2 0 0
Medical Office Procedures I   Voc/Tech
Designed as a basis for understanding and performing examining room techniques and in providing patient education in concert with the wishes of the physician employer. The responsibility of the medical assistant and those of other health professionals in providing the patient with optimal therapy is emphasized.

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, billing and insurance filing.

MEDA467   3 3 0 0 0
Professional Development I   Voc/Tech
Emphasizes professional opportunities and responsibilities of the Medical Assistant. Medical specialities 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 In Health & Disease II   Voc/Tech
The study of the body systems is completed. PREREQUISITE: MEDA461

MEDA472   2 2 0 0 0
Diagnostic Radiography I   Voc/Tech
This course includes radiological principles, film evaluation, processing and techniques, positioning of patients, and radiation protection of patients and workers. This course partially meets the requirements for a "limited diagnostic radiographer" set by the Radiologic Division of the Iowa Department of Health. PREREQUISITE: MEDA461

MEDA473   4 3 2 0 0
Medical Office Management II   Voc/Tech
Study of health and accident insurance, service plans, worker's compensation, medicare and medicaid, proper use of telephone, appointment scheduling, pegboard record keeping. Through practice sets, the student keeps the patient's medical and financial records and types manuscripts. Includes transcription. PREREQUISITE: MEDA466

MEDA474   3 2 2 0 0
Medical Laboratory Procedures II   Voc/Tech
Blood collection by venipuncture and finger puncture. Complete blood counts, slide agglutination tests. Theory of electrocardiography and production of satisfactory electrocardiograms. Practical experience in cell counts and blood chemistries by automated methods. PREREQUISITE: MEDA464

MEDA475   3 2 2 0 0
Medical Office Procedures II   Voc/Tech
The student learns how to assist with examination, tests and treatments, and how to care for and use medical and surgical instruments and other equipment used in the examining room. Techniques applicable to specialty areas as obsterics, pediatrics, orthopedics, etc., are included. PREREQUISITE: MEDA465

MEDA480   1 0 2 0 0
Professional Development III   Voc/Tech
Provides an opportunity for the student to discuss problems 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. PREREQUISITE: MEDA472

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. Actual case histories, consultations, physical examination, surgical and autopsy reports on prepared tapes are used to provide material that is of immediate practical use. PREREQUISITE: MEDA473

MEDA485   5 0 0 0 21
Practicum   Voc/Tech
A course designed especially for the preparation of stu-dents involving supervised practical application of previously studied theory and in which new material is integrated as the student progresses. The student receives experience in a physician's office working under the direct supervision of the physician and office staff. PREREQUISITES: Satisfactory completion of all courses in first 2 terms.

MGMT101   3 3 0 0 0
Personnel Supervision   Open
A unique view of organizational structure, the managerial function, & the role of the supervisor as it relates to the human relationship between supervisors, peers & subordinates and the practice of sound personnel techniques.

MGMT102   3 3 0 0 0
Introduction To Management   General
An introduction to management terms and basic concepts of planning, organizing, influencing, controlling. Applications of management concepts to various business situations. Identification and evaluation of alternative solutions to common problems.

MGMT103   3 3 0 0 0
Sales Management   Open
Expands on the basic steps in the selling process. Explores the profession of sales management to include recruitment and selection of the salespeople, training and motivation, compensation plans, measurement of sales and performance evaluations.

MGMT104   3 3 0 0 0
Organizational Behavior   Voc/Tech
This course is designed to introduce the student to the basic 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 activites.

MGMT153   3 3 0 0 0
Office Management   Open
Introduces concepts of office management aimed at increasing efficiency and productivity in operation of the office. Areas covered include: planning and organizing, leadership and human relations, and controlling office operations.

MGMT203   3 3 0 0 0
Human Relations In Business   Open
Emphasizes the importance of the development of proper attitudes toward self, others, and organizational settings. Stresses the development of a good self image and the relationship this has to energy levels, emotions, defensiveness, verbal and nonverbal communication.

MGMT229   3 3 0 0 0
Small Business Management   Open
Examines the preparation and methods needed to start a business, the management functions needed to keep it operating on a sound basis, financial analysis system, management, sales promotion, purchasing, pricing, personnel management, credit, insurance, inventory control, regulations and taxes, & a simplified record system.

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.

MGMT301   3 3 0 0 0
Small Business Finance and Law   Voc/Tech
Provides basic information on developing a financial plan, taxes, funding sources, cash flow analysis, financial projections, and credit analysis. Presents basic principles of the legal system as applied to business including topics on contracts, courts, torts, breach, and bankruptcy.

MGMT302   3 3 0 0 0
Small Business Mgmt Development   Voc/Tech
Emphasizes how the potential of the mind can be developed to improve decision making in business. The importance of quality which results from people thinking and working together with common goals and good relationships is stressed.

MGMT303   3 3 0 0 0
Small Business Marketing   Voc/Tech
Marketing as viewed by an entrepreneur is stressed in this course. Emphasis on a marketing philosophy, writing a small business marketing plan, and developing a marketing strategy for a small business are discussed.

MGMT341   6 0 0 0 24
Business Internship I   Voc/Tech
One semester of full-time successful introductory on-the-job training in a cooperating retail training station. Emphasis is placed on stockroom procedures and retail salesmanship techniques. (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 retail marketing. 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 industrial marketing. 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 training in a cooperating industrial training station. Development and supervision of a training plan will be made by a teacher-coordinator. (P/F) PREREQUISITE: COOP220

MGMT353   4 0 0 0 16
Business Internship II   Voc/Tech
Retail training of the level prescribed in the individual training plan. Exposure will be given to fall merchandising techniques. The training will be scheduled in an approv-ed cooperating training station. Supervision of the training plan will be made by a teacher/ coordinator. (P/F)

MGMT356   1 1 0 0 0
Field Experience II Seminar   Voc/Tech
Field experience problems will be discussed, new occupational information will be presented, and topics relating to industrial marketing will be discussed. COREQUISITE: MGMT363

MGMT358   1 1 0 0 0
Internship Seminar II   Voc/Tech
Students are exposed to areas of retail management through guest speakers, visual aids, and discussion of business. (P/F) COREQUISITE: MGMT353

MGMT361   6 0 0 0 24
Retail Merchandise Internship I   Voc/Tech
Retail training of the level prescribed in the individual training plan. Exposure will be given to summer merchandising techniques. The training will be scheduled in an approved cooperating training station. Supervision of the training plan will be made by a teacher/coordinator. (P/F)

MGMT362   4 0 0 0 16
Business Internship III   Voc/Tech
Consists of one term of part-time on-the-job training of the level prescribed in the individual training plan. Exposure will be given to holiday merchandising control and supervision. Supervision of the training plan will be made by a teacher/coordinator. (P/F)

MGMT363   4 0 0 0 16
Field Experience II   Voc/Tech
Consists of field training of the level prescibed in the individual training plan. The training is scheduled in an approved cooperating industrial marketing training station. The training plan will be supervised by a teacher/coordinator. (P/F)

MGMT364   4 0 0 0 16
Field Experience III   Voc/Tech
Consists of field training of the level scheduled in the individual field training plan. the training is scheduled for a half day. The training plan will be supervised by a teacher/coordinator.(P/F)PREREQUISITE:MGMT363

MGMT367   1 1 0 0 0
Internship Seminar III   Voc/Tech
Students are exposed to areas of retail management through guest speakers, visual aids, and discussion of business internship experiences. COREQUISITE: MGMT362

MGMT369   1 1 0 0 0
Field Experience III Seminar   Voc/Tech
Field experience problems will be discussed. New occupational information will be presented and topics relating to industrial marketing will be discussed. COREQUISITE: MGMT364

MGMT406   2 2 0 0 0
Human Potential   Voc/Tech
Covers the development of the I'm OK, You're OK, The Organization Is OK, approach to life. Includes the awareness of communication styles and how to manage successful interpersonal and organizational relationships.

MGMT407   1 1 0 0 0
Professional Development Seminar   Voc/Tech
Presents insights into how individuals with the right insights sense and fit into organizations. A researched set of organizational values used by excellent companies will be presented and used as a model for development of individual career values.

MKTG102   3 3 0 0 0
Principles Of Marketing   General
Examines marketing's role in the economy & in the company, what effect it has on a company's products, prices, types of promotion, and forms of distribution. Also studies the impact consumers have on these activities.

MKTG103   3 3 0 0 0
Principles Of Selling   Open
Emphasizes the "consultative style" of personal selling. Covers the importance of establishing good relationships, finding prospect needs, providing a solution to these needs, and closing a high percentage of sales interviews.

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 message.

MKTG211   3 3 0 0 0
Industrial Marketing   Open
Presents functional methods of industrial marketing. Examines all forms of wholesaler and manufacturer type marketing activities.

MKTG212   3 3 0 0 0
Purchasing   Open
This course examines the fields of traffic, transportation, warehousing, and purchasing. It explores their relationships and the effect they have on materials management. Methods of packaging, physical distribution and purchasing systems are examined.

MKTG231   3 3 0 0 0
Principles/Clothing Selection   Voc/Tech
Emphasis is placed on all phases of the clothing industry from production to consumption; on an introductory level, applying art principles to clothing selection and design, analyzing fashion trends and studying modern designers and their contributions of fashion.

MKTG321   3 3 0 0 0
Retail Management I   Voc/Tech
Study of the developments of retailing, organization of retail institutions, the merchandise handling process, understanding the retail customer, some personal and non-personal selling, and the direction retailing is taking in the future.

MKTG322   3 3 0 0 0
Retail Management II   Voc/Tech
A problem-solving approach to the operative principles and methods in the retail field. Management decision making is emphasized through lecture, the use of case problems, business simulation games, and compiling a handbook. PREREQUISITE: MKTG321

MKTG323   2 1 2 0 0
Display & Visual Merchandising   Voc/Tech
Includes display planning activities, store fixturing and the total merchandise presentation in a store. Emphasis is placed on actual preparation of window and interior displays by students.

MKTG324   3 3 0 0 0
Buying & Merchandise Control   Voc/Tech
The technical procedures of merchandising are studied, including consumer buying habits, a study of current trends, vendor relations, and buying and pricing the goods. Emphasis is also placed on how to maintain a merchandise control system in maximizing profits.

MKTG331   3 3 0 0 0
Fashion Coordination & Promotion   Voc/Tech
Students learn to research, analyze and forecast fashion trends. The information gathered is then presented and discussed through written projects. Students visually present their ideas and knowledge through a fashion show production at the end of the term. PREREQUISITE: MKTG231

MKTG332   3 3 0 0 0
Textiles   Voc/Tech
To develop a skill and knowledge of characteristics of natural and man-made fibers; the qualities, cost, and weaves in manufacturing and finishing processes of textiles, fibers, yarns, and fabrics; and a knowledge of appropriate fabrics for various uses.

MKTG345   1 0 2 0 0
Fashion Study Tour   Voc/Tech
The student will participate in a supervised study tour, location to be announced, in which a concentrated time will be spent touring a market center and researching a variety of fashion businesses from manufacturing and marketing to merchandising, promoting and selling apparel. PREREQUISITES: MKTG231 or instructor permission

MLTS400   6 4 4 0 0
Intro To Medical Laboratory   Open
A course designed to acquaint the student with the field of laboratory medicine, laboratory structure, and staffing. Instrumentation, medical terminology, clinical chemistry assays, kidney function tests, and basic hematology procedures are presented. PREREQUISITES: H.S. biology or chemistry or equivalent

MLTS411   6 4 4 0 0
Hematology   Open
A review of basic procedures, followed by a study of normal and abnormal blood smears as they relate to anemia and leukemia. Hematology instrumentation, quality control and coagulation are studied. PREREQUISITE: MLTS400

MLTS422   8 6 4 0 0
Clinical Chemistry   Open
The study and analysis of electrolytes, protein, lipids, enzymes, hormones, and drugs. The test results are related to the patient's condition. PREREQUISITE: MLTS400

MLTS431   6 4 4 0 0
Clinical Microbiology   Open
A study of clinically important microorganisms. Techniques used to isolate and identify pathogenic bacteria, parasites and fungus. PREREQUISITE: BIOL132

MLTS442   5 3 4 0 0
Immunohematology   Open
Principles of immunohematology with the practices of blood banking are presented. ABO and RH typing and transfusing testing procedures are performed. Blood group antigens and antibodies are studied. PREREQUISITE: MLTS411

MLTS450   2 0 0 0 8
Clinical Practicum I   Open
Students report to a local hospital to join the phlebotomy team to practice patient approach and to draw blood specimens. PREREQUISITE: MLTS400

MLTS455   12 0 0 0 48
Clinical Practicum II   Open
Students rotate through the various departments (hematology, chemistry, microbiology, blood bank, and urinalysis) of the hospital laboratory applying the knowledge and skills learned in the classroom. PREREQUISITES: Completion of first 4 terms of MLTS curriculum

MLTS460   1 1 0 0 0
Clinical Seminar   Open
Students share their experience in the clinical area and present topics of interest. Case studies are presented for knowledge and review. PREREQUISITE: MLTS455

MLTS461   1 1 0 0 0
Med Lab Review   Open
Medical laboratory subjects are reviewed; a mock registry examination is given. COREQUISITE: MLTS463

MLTS463   1 1 0 0 0
Professional Development   Open
The student studies human relations, job seeking skills, continuing education opportunities, legal responsibilities, and professional organizations. PREREQUISITE: MLTS455

MUSI130   3 3 0 0 0
Music Appreciation   Core
A survey of the development of music through study of representative compositions of many periods and styles. Includes definitions of musical terminology.

MUSI131   3 3 0 0 0
Introduction To Music   Core
This course introduces students to the elements of music through performance on recorder and piano. Basic information regarding the teaching of music included.

MUSI132   3 3 0 0 0
Introduction To Guitar   General
This class will teach students to read and play simple melodies and help them build a repertoire of songs with a variety of chords, strums, and picking patterns.

MUSI133   3 3 0 0 0
Modern Popular Music   General
An introduction to popular music of the twentieth century including jazz, rock, broadway musicals, and country western music.

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 4 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 4 credits.

MUSI139   1 0 2 0 0
Instrumental Music   General
Individual instruction in all instruments. Weekly one half hour lessons.

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, and appropriate scales, exercises, and repertoire.

MUSI144   2 1 2 0 0
Concert Choir   General
The concert choir is open to all students. Varied literature is chosen. A performance serves as the final exam. May be repeated for a maximum of 4 credits.

MUSI145   1 0 2 0 0
Chamber Choir   General
This course is open to members of the Concert Choir who are selected by auditioning with the director. The 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 4 credits.

NURS261   5 3 4 0 0
Nursing I   Open
Focus is nursing knowledge to support client's present position on the health continuum. safety, communication & data collection are stressed. Provides basic skills for safe care for clients of all ages with basic human needs of sleep/comfort, activity/sensory, nutrition/elimination.

NURS262   5 3 0 6 0
Nursing II   Open
Focus is nursing knowledge with practicum application to support client's present position on the health continuum. Data collection, pharmacology, health promotion/ issues in health care are stressed. Provides fundamental skills for safe care for clients of all ages with the basic needs of self concept/sexuality oxygenation/circulation. PREREQUISITE: NURS261

NURS263   10 5 2 12 0
Nursing III   Open
Focus is nursing knowledge with practicum application to support and restore client to optimum position on the health continuum. Emphasis is on guided use of nursing process in caring for clients of all ages with predictable needs. Career planning is introduced. PREREQUISITES: BIOL133, PSCH101, NURS262

NURS266   2 1 2 0 0
Nursing Transition   Voc/Tech
Assists students in developing a core of nursing knowledge so that transition to the second year of the program can occur. i.e. curriculum design/framework; role expectations; nursing process skills; pharmacology & diagnostic tests. (P/F) PREREQUISITES: NURS261, 262, 263, or equivalent

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 receptionist and telephone techniques, records management, and the various roles of the office professional. PREREQUISITES: OFFC205, 301

OFFC205   3 3 0 0 0
Business English   Voc/Tech
The fundamentals of proofreading grammar, spelling, punctuation, word usage, capitalization, abbreviations, and number usage.

OFFC206   3 3 0 0 0
Correspondence Techniques   Voc/Tech
The principles and procedures of effective business writing/formatting utilizing a keyboard and oral communication for the office. Dictation skills are developed using dictation equipment. PREREQUISITE: OFFC205

OFFC221   3 3 0 0 0
Medical Terminology I   Voc/Tech
Builds a medical vocabulary through an understanding of anatomic roots for words denoting body structures, prefixes, suffixes, and Greek and Latin verbal adjectival derivatives. COREQUISITE: OFFC430

OFFC222   3 3 0 0 0
Medical Terminology II   Voc/Tech
Continues to build a medical language vocabulary by studying body systems such as musculoskeletal, endocrine and integumentary systems. PREREQUISITE: OFFC221

OFFC223   3 2 2 0 0
Medical Transcription III   Voc/Tech
A continuation of Medical Transcription II. Concentrates on transcription of case histories and physicals, discharge summaries and operative reports from English-speaking foreigners. PREREQUISITE: OFFC431

OFFC234   1 1 0 0 0
Citations & Legal Procedure   Voc/Tech
Study of proper citation forms used in legal writing. Students will develop a working knowledge of universally accepted methods of referring to federal, state, and local law including statutes, cases, and administrative materials. The procedures and sequencing of document filing will be discussed. PREREQUISITES: OFFC331 or instructor permission

OFFC301   2 1 2 0 0
Typing Skill Development I   Voc/Tech
Learn/review alphabetic and numeric keyboard reaches using a computer. Develop a strong keyboarding foundation using the touch method while utilizing correct techniques. May include formatting of business documents.

OFFC302   2 1 2 0 0
Typing Skill Development II   Voc/Tech
Continued development of speed and accuracy is emphasized. May include formatting of business documents. PREREQUISITE: OFFC301 or equivalent

OFFC304   3 2 2 0 0
Legal Typing   Voc/Tech
Preparation of a wide range of legal documents with continuing emphasis on increasing production rates. PREREQUISITE: OFFC302 or equivalent

OFFC312   3 0 6 0 0
Data Entry   Voc/Tech
Competency based course to give students an introduction to current practices, equipment and various job related applications in data entry. The main focus is on speed and accuracy in entering data in a terminal. PREREQUISITES: Must type 40 wpm 3 errors or less for 5 min. or OFFC301

OFFC320   3 3 0 0 0
Human Body In Health & Disease   Voc/Tech
Designed to provide specialized knowledge of the human body relating to disease processes and possible methods of treatment. Includes CPR and emergency treatment training. Drug terminology is added to give students basic knowledge of symbols and abbreviations. PREREQUISITE: OFFC221

OFFC321   1 0 2 0 0
Office Technology Applications   Voc/Tech
An exposure to many brands of equipment and software applications found in business. The student will get hands-on experience using electronic typewriters and personal computers to learn applications of electronic mail, appointment calendar, alpha/numeric applications and how to use the terminal as a calculator.

OFFC324   1 0 2 0 0
Office Calculators   Voc/Tech
Electronic calculator operations. Emphasis on speed and accuracy. Includes topics in addition, subtraction, multiplication and division; also the use of constants, chain computations and prorations.

OFFC325   3 2 2 0 0
Medical Word Processing   Voc/Tech
This course presents basic and practical word processing language and techniques required in various medical facilities. Theory and hands-on experience via examples of materials in operation will be studied. PREREQUISITE: OFFC221

OFFC326   3 3 0 0 0
Medical Insurance   Voc/Tech
This course provides a practical approach in medical insurance billing. Emphasis will be placed on current procedural codes (CPT-4) and international classification of diseases codes (ICD-9-CM) used to facilitate proper coding in submitting claims. Pertinent billing tips will be offered for each type of insurance. PREREQUISITES: instructor permission or OFFC221, 301, 204

OFFC328   4 0 0 0 16
Internship For Medical Secretaries   Voc/Tech
Working in a medical facility to learn the many office procedures and policies as they exist in a work situation. (P/F) PREREQUISITES: OFFC222, 320, 431, 433

OFFC329   1 0 2 0 0
Keyboarding I   Voc/Tech
Basic instruction on a personal computer to learn the touch system for the alphabetic keyboard, number keyboard and ten key numeric pad.

OFFC331   3 3 0 0 0
Legal Terminology   Voc/Tech
Provides training in spelling, defining, and pronouncing terms common in the legal field. PREREQUISITE: OFFC301 or equivalent

OFFC335   3 2 2 0 0
Introductory Shorthand   Voc/Tech
Covers the principles of shorthand theory. Emphasis is on the correct writing of the shorthand outline with instant recall.

OFFC336   3 2 2 0 0
Advanced Shorthand & Transcription   Voc/Tech
Uses the principles of shorthand theory to build speed in taking dictation and producing a typed transcript. Includes the integration of grammar skills with shorthand to produce mailable copy. PREREQUISITE: OFFC335

OFFC337   3 2 2 0 0
Word Processing I   Voc/Tech
Introduces fundamental word processing functions (Wordperfect). Instruction covers word processing concepts, terminology, features and other related skills.

OFFC338   3 2 2 0 0
Word Processing II   Voc/Tech
A continuation of Word Processing I with an emphasis on developing speed, accuracy & proofreading techniques in the preparation of business documents using a computer and word processing software. Students will develop a broader understanding of software capabilities as they continue to study concepts, vocabulary and additional features. PREREQUISITE: OFFC337

OFFC340   3 2 2 0 0
Intro To Office Computer Application   Voc/Tech
General introduction to personal and business computer systems. Includes terminology, fundamental concepts of information systems, hardware, and software. Also includes introduction to the following application software packages: Wordperfect, dBase IV, and Lotus 1-2-3.

OFFC341   3 2 2 0 0
Advanced Office Computer Application Voc/Tech
To develop a high skill of decision-making using computer applications. Emphasizes taking real business simulations or office jobs and using the available software to produce final documents by intergrating files management, graphs and charts, database, DOS, desktop publishing, electronic mail, management support, calendaring, etc. PREREQUISITES: COMS181, OFFC340 or instructor permission

OFFC344   3 2 2 0 0
Machine Transcription   Voc/Tech
Teaches the proper machine transcription techinques using realistic office-style dictation. Emphasizes English skills, formatting decision, and application of reference materials to produce mailable business documents. PREREQUISITES: OFFC205, 301, 337

OFFC345   3 2 2 0 0
Adv Word Processing Application   Voc/Tech
Emphasis is on utilizing Wordperfect software features involving advanced formatting techniques, math, macros, and desktop publishing. Also included is the importing of files from spreadsheet, database, and graphic files into Wordperfect documents. PREREQUISITES: OFFC338 and OFFC340, or permission of instructor

OFFC403   1 1 0 0 0
Professionalism I   Voc/Tech
To promote the development of professional characteristics associated with job success through class activities, industry visits and/or guest speakers. (P/F)

OFFC404   1 1 0 0 0
Professionalism II   Voc/Tech
To promote the development of professional characteristics associated with job success through class activities, industry visits, and/or guest speakers. (P/F)

OFFC409   4 1 0 0 12
Internship/Seminar   Voc/Tech
Practical experience through on-the-job training in an approved business setting. The course will also include a weekly seminar on topics relevant to the internship experience and how to have a successful work experience. (P/F)

OFFC414   3 3 0 0 0
Travel Personnel I   Voc/Tech
An introduction to terminology, use of reference materials, itinerary preparation and reservation procedures. Also a study of the skills and knowledge travel personnel need to perform successfully on the job.

OFFC415   3 3 0 0 0
Travel Personnel II   Voc/Tech
Building upon the knowledge and skills learned in OFFC 414, the student will learn to develop international itineraries and to make arrangements for group and charter travel. The student will also learn computer applications in ticketing and reservations. PREREQUISITE: OFFC414

OFFC416   3 3 0 0 0
Selling For Travel Personnel   Voc/Tech
Focuses on the principles of selling as they apply to the travel industry. Covers the importance of establishing relationships, addressing clients' needs, problem solving and bringing closure to the sale.

OFFC417   3 3 0 0 0
Geography For Travel   Voc/Tech
Provides agents, sales representatives and those employed in travel related fields with a broader perspective on geography. COREQUISITES: May be taken concurrently with OFFC414 or OFFC415

OFFC421   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: OFFC338, COOP220

OFFC430   3 2 2 0 0
Medical Transcription I   Voc/Tech
Designed to prepare the student to take medical dictation from transcription tapes. The course covers the various medical specialities and introduces the student to a variety of typing forms for medical materials. PREREQUISITES: OFFC205, 302 or equivalent COREQUISITE: OFFC221

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, pegboard accounting and telephone procedures. PREREQUISITES: OFFC204, 301

PHIL110   3 3 0 0 0
Introduction To Philosophy   Core
General introduction to philosophy. Exploration of problems in metaphysics, theory of knowledge, and ethics. Emphasis upon western philosophical tradition.

PHIL111   3 3 0 0 0
Introduction To Logic   Core
The study of logical valid ways of thinking. Exposure to fallacies, inductive inference, and deductive methods of reasoning with applications to practical problems. Recommend: 100 level MATH course.

PHIL112   3 3 0 0 0
Ethical Problems   Core
Study of values as they affect the individual and society. Exposure to schools of ethics, cultural ethos, and the functions of norms, morals, and law. Application to contemporary ethical problems.

PHIL113   3 3 0 0 0
Comparative Religions   Core
Study of the origins of religions, institutional forms, and their commonalities and contrasts. Examination of major living religions.

PHLE310   4 2 2 0 6
Phebotomy with Practicum   Voc/Tech
The student learns to perform techniques of blood collection, venipuncture and finger puncture. The practicum takes place at a local hospital with the 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
Photography as a communication medium. Principles of picture-taking, printing, and dry mounting of finished prints.

PHOT106   3 2 2 0 0
Advanced Photography   Open
For students who have mastered the basic photographic principles and processes. Topics will include photographic lighting and filtration, photographic approaches, advanced darkroom techniques, and print finishing and display. PREREQUISITE: PHOT105

PHYE128   3 1 4 0 0
Lifeguard Train/Water Safety Inst   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 & self rescue, swimming rescues, and artificial resuscitation. Upon satisfactory completion, the student will receive Red Cross certification. PREREQUISITE: Students must pass a swim test

PHYE130   1 0 2 0 0
Physical Fitness   Open
Various exercises and activities to improve physical fitness.

PHYE132   1 0 2 0 0
Flag Football And Basketball   Open
Beginning skills only.

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
No instruction. Recreational swimming at Boone County "Y".

PHYE138   1 0 2 0 0
Varsity Men's Basketball   Open
For students on Varsity Men's Basketball team only.

PHYE139   1 0 2 0 0
Varsity Women's Basketball   Open
For students on Varsity Women's Basketball team only.

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 opportunity 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.

PHYE143   1 0 2 0 0
Varsity Women's Softball   Open
For students on Varsity Women's Softball team only.

PHYE144   3 3 0 0 0
Intro To Physical Education   Open
History of physical education. Careers and professional leadership in physical education, with emphasizes on teaching. Examines the four areas of most vital concern to the physical educator: recreation and leisure, sports, curriculum, and research and evaluation.

PHYE145   2 2 0 0 0
First Aid   Open
First aid training with an emphasis in standard first aid and cardiopulmonary resuscitation. Red Cross certification will be awarded to those who qualify.

PHYE146   3 3 0 0 0
Personal & Community Health   Open
Physical, emotional, and social factors as they relate to our state of personal health. To better understand and aid in the alleviation of communicable and chronic diseases, drug use, and environmental problems.

PHYE149   3 3 0 0 0
Wellness Prog/Planning/Organiz   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.

PHYE159   1 0 2 0 0
Jokari   Open
Racketball without walls. An introduction to the game of racketball without the use of walls.

PHYE160   1 0 2 0 0
Volleyball   Open
Beginning skills only.

PHYE161   1 0 2 0 0
Aerobics   Open
Introduces aerobic concept of physical fitness. Includes aerobic activities, aerobic exercising, and aerobic dance. Course designed for men and women.

PHYE162   1 0 2 0 0
Tennis I   Open
Introduction to basic skills (forehand, backhand, service, and volley) and basic knowledge of game play.

PHYE163   1 0 2 0 0
Badminton I   Open
Introduction to basic skills (serve, clear, drop, drive, and smash) and basic knowledge of game play.

PHYL102   3 2 2 0 0
Survey Of Earth Science   Core
The study of selected concepts and procedures in astronomy, geology, meteorology and oceanography.

PHYL106   4 3 2 0 0
Survey Of Physical Science   Core
The student is exposed to the scientific method with an emphasis on elementary problem solving. Along with a review of basic mathematics, the topics of weights and measures, mechanics, heat, gas laws, electricity, magnetism, sound, light and modern physics are covered.

PHYL111   4 3 2 0 0
College Physics I   Core
This course is the first semester of a two semester sequence in non-calculus physics. Topics include forces, linear and rotational motion, energy, momentum, fluids, gases, and heat. PREREQUISITE: MATH123 or trigonometry

PHYL112   4 3 2 0 0
College Physics II   Core
This course is the second semester of a two semester sequence in non-calculus physics. Topics include wave motion, sound, electricity, magnetism, optics and modern physics. PREREQUISITES: PHYL111 or instructor permission

PHYL121   6 5 2 0 0
Classical Physics I   Core
This course is calculus based and intended for engineering and science majors. Topics covered include statics, dynamics, kinematics, fluid behavior, wave motion, vibrating systems, heat and thermodynamics. COREQUISITE: MATH129

PHYL122   6 5 2 0 0
Classical Physics II   Core
This course is a continuation of Classical Physics I. Topics covered include static electricity, electrical circuits magnetism, time-dependent electric and magnetic fields, optics, and modern physics. PREREQUISITES: PHYL121 or instructor permission COREQUISITE: MATH130

PHYL401   3 2 2 0 0
Physics For Technicians   Voc/Tech
A physics course for students of technology. Topics include: forces, work, energy, heat, electricity, and magnetism with a strong emphasis on practical applications. PREREQUISITE: MATH410 or equivalent

PLSC111   3 3 0 0 0
American National Government   Core
A study of the American political system and how and why the citizenry relate to the government as they do. Emphasis is placed upon the organization and functioning of the presidential, legislative, and judicial subsystems.

PLSC112   3 3 0 0 0
State & Local Government   Core
A study of the organization, operations and politics of state and local governments. Emphasis is placed on an analysis of the legislative, executive and judicial roles and processes.

PLSC121   3 3 0 0 0
World Politics   Core
The international system is examined from several perspectives including those of the United States, Russia, and China. Emphasis is placed 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 & political influences on decision making.

PRTG400   4 2 4 0 0
Introduction to Printing Technology   Voc/Tech
An introduction to the beginning student in printing technology & related graphic areas. Course will involve lecture and lab work for the student in relief, screen and offset printing as well as introductions to flexography and gravure printing methods.

PRTG401   3 3 0 0 0
Science for Printers   Voc/Tech
Introduction to the printing student of the various chemicals used in the print industry. Safety and environmental concerns, basic chemistry of PH to how silver reacts to light and how paper is made are observed and studied.

PRTG406   4 2 4 0 0
Principles of Copy Preparation   Voc/Tech
Introduces the beginning student to the basic fundamentals & techniques in preparing camera ready artwork for production. The function & purpose of design will be studied closely as will the basic principles of design as it relates to reproduction in terms of balance, contrast, proportion, etc., and to mechanical limitations of various printing equipment.

PRTG410   4 2 4 0 0
Press I Duplicators   Voc/Tech
Introduction to basic offset principles and practices. Course will involve the student in small press operations covering ink and water, single side, two side, work and turn, work and tumble and spot color. Maintenance of small duplicators will be emphasized as well as binding and finishing concepts. PREREQUISITES: PRTG400, 401 or instructor permission

PRTG411   4 2 4 0 0
Process Camera Fundamentals   Voc/Tech
Introduction to the process camera, films and chemical requirements. Course will involve the student in shooting various copy for line negatives, processing techniques and processing of photomechanical transfers. Basic fundamentals of light and mechanics of the camera will be covered. PREREQUISITES: PRTG400, 401 or instructor permission

PRTG413   4 2 4 0 0
Film Assembly/Carrier Preparation   Voc/Tech
Introduction to film assembly and plating techniques and terminology. Course will involve the student in simple single color and spot color film assembly, work and turn and tumble & the basic layout of flats. Contact printing will be covered and various plates and platemaking techniques will be reviewed in detail. PREREQUISITES: PRTG400, 401 or instructor permission

PRTG415   3 1 4 0 0
Electronic Publishing   Voc/Tech
A continuation of Introduction to Desktop Publishing, this course will involve the student in MacIntosh & IBM-PC computer environments. The course will explose the student to Intermediate Desktop program competencies within the context of available software. Various grid layouts and multi-page concepts will be addressed. PREREQUISITE: DKTP401

PRTG420   4 2 4 0 0
Press II Offset   Voc/Tech
Specialization course in offset lithography, the student will do advance work in multi and process color printing, ink trapping, dot gain, imposition, press mechanics and trouble shooting. Stream-feed, cylinder packing and job planning will be covered in detail. PREREQUISITE: PRTG410

PRTG421   4 2 4 0 0
Advanced Camera Techniques   Voc/Tech
An indepth study of photomechanical techniques and processes. Halftones, duotones, rescreening, problem solving special copy and use of filters will be covered. In this specialization course machine processing of film and densitometry principles will be covered in detail. PREREQUISITE: PRTG411

PRTG422   4 2 4 0 0
Auxiliary Methods   Voc/Tech
Specialization course in conjunction with Press II, in finishing operations and other modes of printing. All bindery operations from folding and cutting to stitching and padding techniques are covered. Some relief operations such as diecutting, embossing and numbering are introduced. Printing techniques may be incorporated. PREREQUISITE: PRTG420

PRTG423   4 2 4 0 0
Advanced Stripping Contacting   Voc/Tech
This specialization course will instruct the student in advanced techniqes used for multi-color stripping, pin register systems and imposition. Contacting will be reviewed in depth allowing the student to work with a Variety of films and concepts, from DOT to DOT to spreads and chokes. PREREQUISITE: PRTG421

PRTG425   4 2 4 0 0
Electronic Image/Color Control   Voc/Tech
A continuation of Electronic Publishing, this specialization course will introduce students to various means of image creation and manipulation. Principles of scanning and the various means of image manipulation through a variey of software will be explored. Color control through means of composites and software are discussed. PREREQUISITE: PRTG415 COREQUISITE: PRTG426

PRTG426   4 2 4 0 0
Copy Preparation II   Voc/Tech
A continuation of the principles of copy preparation. This specialization course will develop advanced skills in layout and design. The student will explore various techniques used for multiple color layouts, uses of overlays and new advances in equipment used for page and product layout. PREREQUISITE: PRTG406 COREQUISITE: PRTG425

PRTG431   4 2 4 0 0
Process Color Procedures   Voc/Tech
The course will focus on the principles of color theory, how we achieve color, how we print color and the effect color has in the world of print. Techniques, processes and systems used in the preparation and production of color separations for offset lithographic purposes will be discussed PREREQUISITES: PRTG420, 421, 422, 423, 425 or 426

PRTG454   4 2 4 0 0
Printing Production Methods   Voc/Tech
A management based course designed to involve the student in all phases of the printing and bindery production process. Students will be required to apply the skills and knowledge gained in prior printing courses. The course will bring together all phases of printing and focus on the production of printed work from both management and production levels. PREREQUISITES: PRTG420, 421, 422, 423, 425 or 426

PRTG456   3 3 0 0 0
Estimating and Inventory Control   Voc/Tech
Course is designed to give detailed information on processes used in estimating production costs, budgets for departments within a company, equipment specifications, inventory control and other management concepts. Several various systems of inventory control will be explored. PREREQUISITES: PRTG420, 421, 422, 423, 425 or 426

PSCH101   3 3 0 0 0
General Psychology   Core
A survey of psychology including theoretical and experimental findings and applications from areas such as physiological, learning, memory, personality, social, abnormal, and therapy.

PSCH102   3 3 0 0 0
Psychology Of Thinking   General
This course is designed to increase the students' understanding of thinking as a process and to strengthen their thinking skills, with emphasis on such topics as elements of thinking and cognitive style; problem solving; creativity; memory; concentration; and visual, verbal, numerical and analytical thinking.

PSCH103   3 3 0 0 0
Developmental Psychology   Core
The study of factors that affect human development from conception to death, with emphasis on topics such as physical, cognitive, and social changes, methods of study and current issues. PREREQUISITE: PSCH101 recommended

PSCH104   3 3 0 0 0
Abnormal Psychology   Core
An introduction to the study of abnormal behavior, with emphasis on abnormal behaviors such as anxiety, depression, and schizophrenia. Includes dynamics of mental disorder and psychological factors involved in the treatment of disorders. PREREQUISITE: PSCH101 recommended

PSCH105   3 3 0 0 0
Social Psychology   Core
This course surveys selected topics in social psychology including social perception, attribution, attraction, altruism, aggression, persuasion, attitude formation, group processes, and applications of research to everyday situations. PREREQUISITE: PSCH101 recommended

PSCH106   3 3 0 0 0
Psychology Of Human Relations & Adj   General
Emphasizes an awareness of the problems inherent in human-to-human relationships, and the known laws and generalizations about the action patterns of individuals and groups. Effort is made to develop an awareness of the techniques of effective interpersonal relations.

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, counseling and teaching. PREREQUISITE: PSCH101 recommended

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 & Stress Management   General
This course provides basic instruction in understanding stress reactions, & their cause & effects in the theory & application of stress management techniques. Includes theories of stress & stress reduction, physiological & psychological reactions to stress, measurement of stress reactions, and application of stress reduction.

RCEL401   1 1 0 0 0
Basic Electricity & Magnetism   Voc/Tech
This course will provide instruction in the basics of electricity and magnetism. It is designed as a foundation course for the student who wishes to become familiar with electrical systems.

READ087   3 3 0 0 0
Developmental Reading I   Adaptor
The first in a series of two courses designed to help students succeed with college-level reading assignments. Emphasis will be placed on vocabulary development and basic comprehension skills, particularly the skill of recognizing the main idea and supporting details.

READ088   3 3 0 0 0
Developmental Reading II   Adaptor
For students who want to improve reading and reasoning skills for college work. Reading material includes newspaper and magazine articles as well as textbook passages. Emphasis is on strengthening comprehension and vocabulary. PREREQUISITES: READ087 or equivalent score on reading skills test.

READ116   3 3 0 0 0
Speed Reading   General
An advanced reading course designed to improve reading speed and comprehension. Emphasis on adapting to varying content and evels of difficulty. PREREQUISITE: READ088 or equivalent

RESP300   3 3 0 0 0
Fundamentals Of Respiratory Therapy   Open
This is the initial course for the student in the Respiratory Therapy program. Major topics are history of the profession, medical specialties, communication, terminology and the evaluation of the patient. Students will become skilled in evaluating vital signs a& clinical data. PREREQUISITES: H.S. biology & chemistry or equivalent

RESP302   4 3 2 0 0
Gas, Humidity and Aerosol Therapy   Open
This course introduces the student to basic therapeutic techniques utilized in respiratory care. Major topics include medical gas therapy, humidity and aerosol, cylinder systems and physical principles of gases and liquids. Students will be required to demonstrate competence in the techniques to receive a passing grade in the course. PREREQUISITES: 1 year H.S. biolgy & algebra with min. grade "C" or equiv

RESP304   3 2 2 0 0
Cardiopulmonary Therapeutics   Open
This course will teach the basic patient care techniques of Positive Pressure Breathing, Incentive Spiromtry, Postural Drainage, Airway Care, Pulmonary Rehabilitation and home care. Students will be required to demonstrate competence in the techniques to pass. COREQUISITE: RESP302

RESP310   5 5 0 0 0
Cardiopulmonary Renal Pathophys   Open
An indepth study of the normal functioning of the cardiovascular, pulmonary and renal systems emphasizing their interactions is presented. Progresses to study of the common adolescent and adult diseases affecting the three systems. Interpretation of the results of arterial blood gas data will be taught. PREREQUISITES: RESP302, BIOL133

RESP315   3 3 0 0 0
Respiratory Therapy Pharmacology   Open
This course provides a study of the 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: RESP302, BIOL133

RESP320   5 4 2 0 0
Advanced Respiratory Therapy   Open
Overview of analysis of arterial blood gas samples and basic electrocardiography will be presented. Use of adjuncts in the treatment of cardiorespiratory arrest will be taught. Principles of mechanical ventilation along with techniques of PEEP, CPAP, SIMV and nitiation and maintenance of ventilation will be taught. PREREQUISITES: RESP304, 310, BIOL134, PHYL106

RESP325   3 3 0 0 0
Neonatal/Pediatric Resp 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: RESP310, BIOL133 COREQUISITE: BIOL134

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: RESP310, BIOL134, PHYL106

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   3 1 0 8 0
Respiratory Therapy Practicum I   Open
This is the initial hospital experience. Consists of supervised care of patients with respiratory disorders. Students will administer IPPB, aerosol, postural drainage and incentive breathing therapies. Other therapeutic modalities which have been learned will be introduced as well. PREREQUISITES: Grade "C" or better in RESP304

RESP362   5 2 0 10 0
Respiratory Therapy Practicum II   Open
This practicum will continue the supervised experience in the provision of basic patient care techniques to the therapies in the previous practicum. PREREQUISITE: RESP352

RESP372   6 1 0 16 0
Respiratory Therapy Practicum III   Open
This practicum will continue the supervised provisions of basic patient care. The echniques of arterial puncture, blood gas, pH analysis and sampling from anterial lines will be taught. ECG and other noninvasive cardiac diagnostic tests will be observed. PREREQUISITE: RESP362

RESP382   7 2 0 16 0
Respiratory Therapy Practicum IV   Open
Hospital respiratory care with the addition of mechnical 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: RESP372, 320

RESP392   7 2 0 16 0
Respiratory Therapy Practicum V   Open
The fourth clinical experience with emphasis on the care of patients in critical care areas of the hospital. All techniques and procedures previously performed will continue to be administered to patients. PREREQUISITES: RESP382, 325

SOCY101   3 3 0 0 0
Introduction To Sociology   Core
A scientific approach to the analysis of culture, socialization, social organization, the development of society, study of social processes, human groups, social institutions, & the effects of group relations on human behavior.

SOCY102   3 3 0 0 0
Social Issues   Core
This course is an analysis of the nature, dimensions, causes, and characteristics of selected social problems of major interest. Consideration is given to theories research and programs for prevention and treatment.

SOCY103   3 3 0 0 0
Courtship, Marriage & Family   Core
This course analyzes the sociological, physical, psychological, legal & economic aspects of the American family. Included are investigations of courtship & marriage relationships, preparation for marriage, family, parenthood, interpersonal relationships, & marital adjustment.

SOCY105   3 3 0 0 0
Race, Ethnic & Gender Relations   Core
Study of the relationship between cultural, sexual and racial categories. Focus on stereotypes, prejudices, discrimination and exploitation. Social-psychological, sociological and economic theories are employed. Major emphasis upon United States. PREREQUISITES: SOCY101 or instructor permission

SOCY106   3 3 0 0 0
Juvenile Delinquency   General
An investigation of juvenile delinquency in American society, sociological theories and research of delinquency, impact of groups, juvenile justice system, and prevention programs. PREREQUISITES: SOCY101 or instructor permission

SOCY107   3 3 0 0 0
Criminology   General
The nature and extent of crime and criminality, society's efforts to repress crime, theories of causation, emphasis on social processes, systems, and philosophy of methods of correction. PREREQUISITES: SOCY101 or instructor permission

SOCY204   4 4 0 0 0
Social Gerontology/Applications   Open
Societal aspects of aging as they relate to the delivery of services to the aging. Students will develop a project which serves a specific community need.

SPAN101   4 4 0 0 0
Elementary Spanish I   Core
Development of the basic skills of understanding, speaking, reading, and writing Spanish. Grammar analysis, classroom conversational practice, and some exploration of the Hispanic culture.

SPAN102   4 4 0 0 0
Elementary Spanish II   Core
Continued practice of the four basic skills and grammar analysis. Introduction of short prose selections with conversational emphasis. PREREQUISITE: SPAN101

SPAN103   4 4 0 0 0
Intermediate Spanish I   Core
Review of essential grammatical constructions emphasizing major areas of difficulty for English speakers. Use of Hispanic cultural and literary materials to develop conversational skills. PREREQUISITE: SPAN102

SPAN104   4 4 0 0 0
Intermediate Spanish II   Core
Continued review of grammatical constructions using Hispanic cultural materials. Reading, writing and conversation will be emphasized n the context of cultural issues and current events. PREREQUISITE: SPAN103

SPCH110   3 3 0 0 0
Fundamentals Of Speech   Core
Explores the fundamentals of speech-communication through the study and practice of interpersonal and small group communication and the composition and delivery of short speeches.

SPCH111   3 3 0 0 0
Public Communication   Core
Analysis, preparation and practice of forms of public address, with emphasis on critical thinking, audience analysis, speech composition and style, and nonverbal communication. PREREQUISITE: SPCH110

SPCH117   3 3 0 0 0
Interpersonal & Small Grp 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, DN junction, diodes, zener diode, transistors, bipolar characteristics, field effect, thyristors, integrated circuits, and opto electronics. Should have knowledge in AC/DC electronics.

TELE410   3 3 0 0 0
Telephony I   Voc/Tech
Provides an overview of telecommunications and covers basic telecommunications circuits, equipment & diagnostic procedures for ines, basic key systems, station carrier, & associated equipment. COREQUISITE: TELE411

TELE411   6 0 12 0 0
Telephony Experience I   Voc/Tech
Provides hands-on experience in installation & fault isolation of lines & basic key systems, access and station data modification for a digital multiplex switch, basic cable counts & splicing procedures. COREQUISITE: TELE410

TELE420   4 4 0 0 0
Telephony II   Voc/Tech
Covers basic telecommunications equipment used by businesses and its connection to a switched public or private network. Covered subjects include advanced key systems, private branch exchange systems (PBX), trunks, and associated equipment. Analog and digital voice and data communications and associated equipment are also covered. PREREQUISITES: TELE410, 411 COREQUISITE: TELE421

TELE421   7 0 14 0 0
Telephone Experience II   Voc/Tech
Provides hands-on training on a computerized branch exchange system, 1A2 and electronic key systems and associated equipment. Experiences include wiring, RAM data base changes and fault isolation. COREQUISITE: TELE420

TELE430   3 3 0 0 0
Telephony III   Voc/Tech
Covers advanced digital switching principles and practices, routing, system configuration, and diagnostic procedures common to computerized digital multiplex switching systems and large private branch exchanges. PREREQUISITE: TELE421 COREQUISITE: TELE431

TELE431   6 0 12 0 0
Telephony Experience III   Voc/Tech
Provides hands-on learning experience in system configuration, operation & diagnostic procedures using a DMS-10M digital multiplex switching system, rolm computerized branch exchange, & associated equipment. Point to point & switched data circuits, & voice circuits are also installed & tested. COREQUISITE: TELE430

TELE432   3 3 0 0 0
Data Communications   Voc/Tech
An introduction to data communications and networks. It includes digital communications, analog communications and interfaces. Networks including both LAN operation and common test techniques. PREREQUISITES: TELE420, 421

TELE440   3 3 0 0 0
Telephony IV   Voc/Tech
Covers digital carrier equipment and fiber optic, microwave and satellite transmission, and new technologies. PREREQUISITES: TELE431, 432, ELEM462, 463

TELE441   3 0 6 0 0
Telephony Experience IV   Voc/Tech
Provides hands-on learning experiences on digital carrier, fiber-optics and local area networks.

TOOL480   2 0 4 0 0
Blueprint Reading I   Voc/Tech
A beginning and intermediate blueprint reading course covering basic visualization of shapes and sizes, and freehand sketching of objects. Includes section lining, print alterations and projections.

TOOL481   3 1 4 0 0
Blueprint Reading II   Voc/Tech
An advanced blueprint reading course involving study of industrial metal work drawings as they apply to planning and laying out of jigs and fixtures. PREREQUISITE: TOOL480

TOOL482   2 1 2 0 0
Machine Shop Measurements I   Voc/Tech
A study of measurements as used in industry. Units of instruction include tools, gauges, comparators, gauge blocks, and inspection practices.

TOOL484   3 3 0 0 0
Machine Tool Operations I   Voc/Tech
Machine shop procedures beginning with hand tools and benchwork. Lecture on safety, layout, & tool grinding operations on saws, drill press, grinders & lathes.

TOOL485   4 4 0 0 0
Machine Tool Operations II   Voc/Tech
Theoretical procedures of the vertical and horizontal milling machines. PREREQUISITE: TOOL484

TOOL486   5 0 10 0 0
Machine Tool Operations Lab I   Voc/Tech
Machine shop procedures beginning with hand tool and benchwork. Lab activities in safety, layout, and tool grinding operations on saws, drill press, grinders and lathes.

TOOL487   7 0 14 0 0
Machine Tool Operations Lab II   Voc/Tech
Practical experience with the following machine shop equipment: vertical and horizontal milling machines. PREREQUISITE: TOOL486 COREQUISITE: TOOL485

TOOL489   2 1 2 0 0
Heat Treatment Of Materials   Voc/Tech
An introduction to the physical and mechanical characteristics of metals that are directly associated with the area of heat treatment. Includes 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. PREREQUISITE: TOOL487 COREQUISITE: TOOL491

TOOL491   4 4 0 0 0
Machine Tool Operations III   Voc/Tech
Theoretical explanation of procedures in surface grinding. CNC Milling and manual programming of CNC Mill. PREREQUISITE: TOOL485

UPHL433   2 0 4 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. PREREQUISITES: AUTC403, HLCR314, WELD468

UPHL460   2 0 4 0 0
Basic Upholstery   Voc/Tech
Instruction on the correct operation of the sewing machine. Apply these skills by constructing a project.

UPHL461   2 0 4 0 0
Pattern Layout   Voc/Tech
In this course, you will identify measuring and layout principles for upholstery fabrics, and perform measurements and layout for a piece of furniture.

UPHL462   2 0 4 0 0
Cushion Construction   Voc/Tech
You will identify cushion construction procedures and complete basic cushion construction projects.

UPHL463   2 0 4 0 0
Padding Procedures   Voc/Tech
You will identify padding procedures and perform padding procedures on furniture.

UPHL464   1 0 2 0 0
Frame Preparation   Voc/Tech
You will identify the process for removing old fabric, identify wood types, and reglue frames. You will prepare frames for recovering.

UPHL465   2 1 2 0 0
Technical Problems   Voc/Tech
Instruction will be provided in using graphic techniques to estimate job material needs and supply needs. PREREQUISITE: UPHL460

UPHL466   2 1 2 0 0
Business Problems   Voc/Tech
Included in this course is identification of basic business skills in upholstery-listing equipment needs, ordering procedures, meeting customers, locating facilities, identifying physical needs in shop construction, advertising needs, insurance needs, etc. PREREQUISITES: UPHL460, MATH410

UPHL470   2 0 4 0 0
Skirt & Attached Pillow Construction   Voc/Tech
You will identify the procedure for constructing skirts for upholstered furniture, then make skirts with fabric. You will identify attached pillow construction procedures, then make attached pillows for furniture. PREREQUISITES: UPHL460, 461, 462

UPHL471   2 0 4 0 0
Nosing & Advanced Cushion Const.   Voc/Tech
In this course you will identify nosing construction procedures, then perform nosing construction on furniture. You will develop skills in making a pattern for a cushion by measuring and marking out a proper pattern to fit the frame of the chair. PREREQUISITES: UPHL460, 461, 462, 463

UPHL472   1 0 2 0 0
Overstuffed Chair Project   Voc/Tech
Students will identify the procedures in upholstering an overstuffed chair, then reupholster an overstuffed chair in fabric. COREQUISITE: UPHL471

UPHL473   2 0 4 0 0
Tufting Techniques   Voc/Tech
In this course you will identify tufting techniques, then perform tufting techniques on furniture. PREREQUISITES: UPHL465, 461

UPHL474   2 0 4 0 0
Pillow Back Chair Project   Voc/Tech
Students will identify the procedures in upholstering a pillow back chair, then, reupholster a pillow back chair in fabric. PREREQUISITES: UPHL470, 471, 464, 465

UPHL475   2 0 4 0 0
Recliner Chair Project   Voc/Tech
Students will identify the procedures in upholstering a recliner chair, then reupholster a recliner chair in fabric. PREREQUISITES: UPHL470, 471, 464, 465

UPHL476   2 0 4 0 0
Large Sofa Project   Voc/Tech
Students will identify the procedures in upholstering a large sofa, then will reupholster a large sofa in fabric. PREREQUISITES: UPHL470, 471, 464, 465

UPHL477   1 0 2 0 0
Loveseat/Small Sofa Project   Voc/Tech
Students will identify the procedures in upholstering a loveseat, then will reupholster a loveseat in fabric. PREREQUISITES: UPHL470, 471, 464, 465

UPHL480   2 0 4 0 0
Installing Vinyl Tops   Voc/Tech
The student will identify procedures for installing vinyl tops, then install a vinyl top. PREREQUISITES: UPHL461, 463, 465

UPHL481   2 0 4 0 0
Auto Bench/Bucket Seat Project   Voc/Tech
The students will identify procedures for upholstering automotive bench/bucket seat, then perform upholstery of a bench/bucket seat. PREREQUISITES: UPHL461, 462, 463, 464, 465

UPHL482   1 0 2 0 0
Boat Seat Project   Voc/Tech
The student will identify the procedures for upholstering a boat seat, then perform upholstery of a boat seat. PREREQUISITES: UPHL461, 462, 463, 464, 465

UPHL483   2 0 4 0 0
Auto Pillow Back Seat   Voc/Tech
The student will identify procedures for upholstering a pillow back seat, then perform upholstery of a pillow back seat. PREREQUISITES: UPHL461, 462, 463, 464, 465

UPHL484   2 0 4 0 0
Auto Door Panel & Headliner Project   Voc/Tech
The student will identify procedures for upholstering door panels and headliners, then perform upholstery of door panels and headliners. PREREQUISITES: UPHL461, 462, 463, 464, 465

UPHL485   2 0 4 0 0
Auto Carpeting Project   Voc/Tech
The student will identify procedures for installing carpeting, then perform the installation of carpeting in automotive project. PREREQUISITES: UPHL461, 463, 465

UPHL486   2 0 4 0 0
Vinyl/Convertible Top Project   Voc/Tech
The student will identify procedures for upholstering vinyl and convertible tops, then perform upholstery of vinyl and convertible tops. PREREQUISITES: UPHL461, 465, 480

UPHL487   1 0 2 0 0
Boat/Tonneau Cover Project   Voc/Tech
The student will identify the procedures for installing boat/tonneau covers, the perform the installation of boat/tonneau covers. PREREQUISITES: UPHL461, 465

WELD467   2 0 4 0 0
Related Weld-Transportation Trades   Voc/Tech
Skills will be developed in oxy-acetylene fusion and braze welding, shielded metallic arc welding as well as oxy-fuel flame cutting. Safety is emphasized and basic welding theory is discussed. Warnings concerning the danger and liability involved in welding high strength steels will be stressed (i.e. auto body and chassis, etc.).

WELD468   2 0 4 0 0
Related Welding - Auto Collision   Voc/Tech
Basic skills will be developed in Oxygen-Acetylene fusion welding and flame cutting. Gas Metal Arc (MIG) welding equipment; and attain basic understanding of procedures related to Auto Collision area.

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 Metallic Arc Welding I   Voc/Tech
Skills will be developed in welding beads and buildup surfacing in the flat position.

WELD478   3 0 6 0 0
Shielded Metallic Arc Welding II   Voc/Tech
Skills will be developed in welding multiple pass tee fillet welds in the flat position. PREREQUISITE: WELD474

WELD479   2 0 4 0 0
Shielded Metallic Arc Welding III   Voc/Tech
Skills will be developed in welding corner fillet joints, weld arounds, and sheet metal weldments in the flat position. PREREQUISITE: WELD478

WELD481   3 0 6 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 Metallic Arc Welding   Voc/Tech
Practical application in the use of the gas metallic arc welding process (including submerged arc and flux cored arc).

WELD486   3 0 6 0 0
Shielded Metallic Arc Welding IV   Voc/Tech
Skills will be developed in welding beads, buildup surfacing, and fillet weldments in the horizontal position. PREREQUISITE: WELD479

WELD487   2 0 4 0 0
Shielded Metallic Arc Welding V   Voc/Tech
Skills will be developed in welding fillet joints in the vertical downhill and vertical uphill position. PREREQUISITE: WELD486

WELD488   3 0 6 0 0
Shielded Metallic Arc Welding VI   Voc/Tech
Skills will be developed in welding fillet joints in the overhead position. Air carbon arc gouging and plasma arc cutting will also be practiced. PREREQUISITE: WELD487

WELD493   2 0 4 0 0
Gas Tungsten Arc Welding   Voc/Tech
A course to develop skills in the gas tungsten arc welding process using mild steel, stainless steel and aluminum.

WELD497   2 0 4 0 0
Advanced Shielded Met Arc Welding I   Voc/Tech
Skills will be developed in welding and testing vee groove joints in the flat and horizontal positions. PREREQUISITE: WELD488

WELD498   3 0 6 0 0
Advanced Shielded Met Arc Welding II   Voc/Tech
Skills will be developed in welding and testing in the vertical and overhead positions. PREREQUISITE: WELD497

WELD499   3 0 6 0 0
Intro-Shielded Met Arc Pipe Welding   Voc/Tech
Welding practice and testing on open groove plate weldments in the 1G, 2G, 3G, and 4G positions, and, as time permits, on pipe weldments in the 2G, 5G, and 6G positions. PREREQUISITE: WELD498

Adhav, Jagdeesh, 1979, *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, *Personal Computers. B.A., University of Northern Iowa*

Albrecht, L. Lynn, 1974, *Dean, Student Records and Services. B.S., M.A. University of Iowa*

Alexander, C. J., 1978, *Chemistry. B.Sc., M.Sc., Madras Christian College, South India; M.S., University of Minnesota; Ph.D., University of New Orleans*

Alley, Louis W., 1974, *Leisure Studies. B.S., M.A., University of Iowa*

Altemeier, Kent, 1991, *LAN Equipment Specialist.*

Amdahl, Maynard, 1978, *Tool & Die. Diploma, Dunwoody Industrial Institute; Certificate, U.S. Department of Labor Journeyman Tool & Diemaker*

Anderson, Duane, 1972, *Commercial Horticulture. B.S., Colorado State A and M; M.S., Colorado State University; University of Wyoming; University of Northern Iowa; Iowa State University; Drake University*

Anderson, Evelyn, 1972, *Counselor. B.S., Mount Mercy College; M.S.E., Drake University*

Anderson, Larry J., 1981, *Accounting. C.M.A., A.S., Fort Dodge Community College; B.S.B.A, M.B.A., Drake University; University of Northern Iowa; Iowa State University; University of Iowa*

Anderson, Robert L., 1974, *Hospitality Careers. A.O.S., Culinary Institute of America; Mankato Area Vocational Technical Institute*

Arbuckle, John, 1969, *Electronics. A.A.S., B.S., M.S., Iowa State University*

Aurelius, Ruth, 1970, *Speech. B.A., M.A., University of Iowa*

Baer, Beverly J., 1988, *Instructional Assistant. B.A., Wartburg College*

Baker, Dorothy, 1986, *Educational Advisor. B.S., Upper Iowa University; M.S., Drake University*

Baker-Brodersen, Beth, 1989, *English. B.A., Northwest Missouri State University; M.A., Iowa State University*

Ballard, Monte, 1985, *Commercial Art.*

Barrett, Larry, 1988, *Respiratory Therapy. A.A.S., Des Moines Area Community College; B.S., Iowa State University*

Beck, Thomas, 1970, *Political Science. B.A., M.A., Wartburg College; University of Northern Iowa*

Bell, Deborah P., 1987, *Dental Assistant. A.A., A.S., Des Moines Area Community College*

Bennett, Carroll, 1967, *Dean, Evening, Weekend, & Off-Campus College. B.S.C., M.A., University of Iowa; Iowa State University; University of Northern Iowa*

Bennett, James, 1980, *Data Processing. B.S., Northwest Missouri State University; A.A., Des Moines Area Community College; Iowa State University*

Bennett, Virginia, 1984, *Music. B.M.E., M.M.E., Drake University; Ph.D., University of Iowa*

Beyer, Darlene, 1990, *Mathematics/Science. B.S., Buena Vista College*

Biner, Willard, 1969, *Auto Mechanics. B.E., Colorado State University*

Bittner, James W., 1990, *English. A.B., University of Illinois; M.A., Southern Illinois University; Ph. D., University of Wisconsin*

Blanchfield, Sylvia Louise, 1988, *Nursing. B.S., Walla Walla College; M.S.N., Drake University*

Boldt, Eugene, 1969, *Manager, Human Resources. B.A., University of Iowa; M.B.A., Drake University*

Booth, Connie, 1982, *Nursing. B.S.N., Creighton University; M.S.N., University of Nebraska Medical Center*

Borgen, Joseph, 1981, *President. B.S., M.S., Stout State University; Ph.D., University of Illinois*

Bowdre, Leonard, 1984, *Electronics Maintenance. Certified by International Society of Certified Electronic Technicians (ISCET), U.S. Army Signal Corps, Iowa State University*

Brainard, Patricia, 1990, *Correctional Education Program. B.A., Simpson College*

Brand, Dennis, 1990, *Counselor. B.A., Central College, M.A., Northeast Missouri State University*

Brandmeyer, Vivian, 1974, *Office Technology. B.A., University of Northern Iowa*

Brewer, Robert C., 1988, *Criminal Justice. A.A.S., Central Piedmont Community College; B.S., University of North Carolina, M.C.J., University of South Carolina*

Brockelsby, John W., 1987, *Business Administration. B.G.S., University of Nebraksa at Omaha; M.A., Webster University*

Brown, Georgia K., 1970, *Academic Achievement Center. B.A., Simpson; M.S.E., Drake University*

Brown, Joyce, 1970, *Counselor. B.A., M.S.E., Drake University*

Burdick, Marilyn, 1971, *Counselor. B.S., M.S., Iowa State University; Drake University; University of Iowa*

Burrell, Gerald D., 1990, *LAN Equipment Specialist. B.S., M.S., Iowa State University*

Calkin, Jeffrey B., 1988, *Auto Mechanics.*

Campos, Kyle Ann, 1988, *Psychology. B.F.A., M.S., Drake University*

Carson, Linda A., 1972, *Child Development. B.S., M.S. Iowa State University*

Celania, Susan, 1991, *Nursing. A.A., B.S.N., Grandview College*

Chacko, Sandra J., 1980, *Nursing. R.N., Iowa Lutheran Hospital School of Nursing; B.S.N., M.A., University of Iowa*

Chapman, Richard, 1970, *English. B.A., M.A., University of Iowa*

Chase, Hal S., 1989, *History. Ph.D., University of Pennsylvania; M.A., Stanford University; B.A., Washington & Lee University*

Chopard, Lois, 1987, *Educational Advisor. B.A., University of Northern Iowa*

Christman, Rick L., 1989, *English. B.A., University of Wisconsin-Madison; M.A., Mankato State University, D.A., Drake University*

Claassen, Alan D., 1983, *Academic Achievement Center. B.A., University of Northern Iowa*

Clark, Jean, 1971, *Office Technology. B.A., Parsons College; M.A., Northeast Missouri University, University of Northern Iowa*

Clark, Kenneth, 1971, *Counselor. B.S.E., M.S.E., Drake University; Montana University; Iowa State University*

Clauson, Larry, 1974, *Counselor. B.A., University of Northern Iowa; M.S., Drake University, University of Iowa, Iowa State University*

Clauson, Linda, 1987, *Instructional Assistant. B.A., University of Northern Iowa*

Clinkenbeard, Theodore, 1969, *Mathematics. B.A., Yankton College; M.A., University of South Dakota*

Collier, Kenneth, 1971, *Welding. Des Moines Area Community College; Iowa State University*

Corwin, Marilyn K., 1984, *Dental Hygiene. B.A., University of Iowa*

Cory, Cynthia, 1980, *Nursing. B.S.N., University of Iowa*

Crall, Kathleen, 1983, *Office Technology. B.S., University of Northern Iowa, M.A., Colorado State University, University of Wisconsin Superior, Drake University, University of Iowa*

Daehler, Jeannette M., 1986, *Medical Laboratory Technology. B.S., Iowa State University*

Dally, Judith, 1973, *Child Development. B.S., Iowa State University*

Darling, David A., 1985, *Data Processing. B.A., University of Northern Iowa*

Deitrick, Anita, 1978, *Nursing. R.N., Iowa Lutheran Hospital School of Nursing; B.S.N., Drake University*

Delaney, Michael, 1972, *Sociology. B.A., St. Joseph's College; M.A., Northern Illinois University*

De Smet, Sharon, 1987, *Child Development Specialist. A.A., Des Moines Area Community College*

De Vries, Ruth, 1982, *Accounting. B.S., M.S., Drake University*

De Witt, Andrea, 1990, *English Communication. B.A., University of Northern Iowa*

Dimit, Catherine M., 1991, *Lab Assistant. B.A., Grandview College*

Dobbins, Willis, 1970, *Academic Achievement Center. B.S.E., Drake University; Northern Illinois University; Grandview College*

Doering, Laura, 1986, *Coordinator, Academic/Veterans Services. B.A., Western Michigan University*

Doidge, Mary, 1986, *Child Development. B.S., Iowa State University*

Doran, John M., 1980, *Mathematics. B.A., University of Northern Iowa; M.A., San Diego State University*

Dowie, Lori K., 1986, *Hospitality Careers. A.A.A., Des Moines Area Community College*

Dowis, James, 1968, *Data Processing. B.S., M.S.E., Drake University, Milwaukee Institute of Technology, Iowa State University*

Doyle, Judith, 1974, *Nursing. Diploma, West Suburban Hospital, Cedarville College, Marycrest College, B.S.N., University of Dubuque; M.S.N., University of Minnesota; Iowa State University*

Drinnin, Beverly, 1983, *Psychology. B.S., M.Ed., University of Illinois*

Dunsmore, Thomas, 1968, *Electronics. USAF Communication & Radar School, Iowa State University, Boone Junior College, Centerville Junior College, University of Northern Iowa*

Eischeid, Diane, 1992, *Lab Assistant. Certificate, Des Moines Area Community College*

Elmore, Patricia, 1991, *Social Studies. B.A., Tennessee State University; M.A., University of Alabama; Ph.D., Iowa State University*

Emley, Bob, 1990, *Psychology. B.A., Central College, M.S., Drake University*

Esbeck, David M., 1985, *Library Technician. B.A.; M.A., University of Iowa*

Eubank, Cynthia C., 1987, *Nursing. B.A., Central College; M.Ed. East Carolina University; B.S.N., Grandview College*

Everett, Carleton S., 1975, *Marketing. B.M.E., M.S., Cornell University*

Fara, Kimberly, 1991, *Academic Achievement Center. B.S., University of Iowa*

Fenton, James F., 1990, *Director, Community Education. B.A., Parsons College; M.S., Wisconsin State University; Ed.S., Northeast Missouri State University*

Finnestad, Richard, 1971, *Coordinator, Boone Student Services. B.A., Buena Vista College, M.A.; University of Northern Colorado; University of Montana; Drake University; University of Northern Iowa*

Frette, Lloyd, 1969, *Auto Collision. Iowa State University; Des Moines Tech School*

Frisbie, Janet, 1970, *Nursing. R.N., Methodist Hospital School of Nursing, Sioux City; B.S.N., University of Dubuque, M.S.N.; University of Dubuque*

Frohling, Judith, 1987, *Instructional Assistant. B.S., Northeast Missouri State University*

Gaines, Peggy, 1972, *Academic Achievement Center. A.A., Des Moines Area Community College; B.S.E., Drake University*

Gano, Barbara, 1989, *Nursing. R.N., St. Joseph Mercy School of Nursing; B.S.N., University of Iowa; Briar Cliff College; Westmar College*

Gardner, Laurel, 1985, *Program Assistant, Health Care Administration. A.S., Kirkwood Community College; A.S., Des Moines Area Community College; B.A., Buena Vista College; University of Iowa; University of Northern Iowa*

Garvey, Patrick, 1974, *Chemistry. B.S., DePaul University; M.S., Iowa State University*

George, Kerry, 1977, *Respiratory Therapy. B.S., University of Illinois; University of Chicago Hospital and Clinic Schools; University of Iowa; Iowa State University*

Gerber, Helen L., 1989, *Office Technology. B.A., Wayne State College; M.A., Colorado State*

Ghanatabadi, Jolyne L., 1973, *Office Technology.B.S., M.S., Drake University; University of Iowa; University of Northern Iowa; Ph.D., Iowa State University*

Gilbert, Jr., Fred D., 1987, *Executive Director, Research and Federal Affairs. B.A., Dillard University; M.Ed., Loyola University; Ph.D., Iowa State University*

Giudicessi, Richard, 1980, *Marketing. B.B.A., University of Iowa*

Goode, Terry L., 1989, *Diesel. A.A.S., Des Moines Area Community College*

Gorman, William G., 1989, *Diesel. Iowa State University*

Granata, Michael, 1988, *Sociology. B.A., M.A., University of Miami; University of Southern California*

Grattan, Helen G., 1985, *Office Technology. M.A., Andrews University, Michigan*

Green, Kathy L., 1986, *Educational Advisor/Coordinator, Career Beginnings. B.S., M.S., Iowa State University*

Green, Mary Jane, 1985, *Office Technology. B.A., Buena Vista College, M.A., University of Northern Iowa*

Griffiths, Martha E. , 1991, *English. B.S., Rockford College; M.A., Iowa State University*

Grimm, Carol, 1982, *Counselor.B.A., Quincy College; M.Ed., University of Illinois; Iowa State University*

Habermann, Patrick, 1989, *Ford Motor Project. Wyoming Technical Institute; Iowa Central Community College*

Halverson, Patricia, 1976, *Coordinator, Assessment Services. B.S., University of South Dakota; M.S. Illinois State University*

Hamann, Richard, 1977, *Accounting. B.S., Mankato State College; University of Iowa*

Hann, Bruce, 1969, *English/Speech. B.A., Simpson College; M.A., University of New Mexico; Ed.S., Drake University*

Hann, Sharon, 1983, *Art. B.A., University of Northern Iowa; M.A., University of New Mexico*

Hansen, Dennis, 1973, *Business Administration. B.B.A., University of Iowa*

Hansen, Paula, 1989, *Business Administration.B.S., University of South Dakota; M.A., Western Michigan University*

Harper, Joseph B., 1985, *Agri-Business. B.S., M.S., Iowa State University*

Harris, John R., 1981, *Diesel. Vocational Certified ASE-ACT Certified; Iowa State University*

Harris, Rudolph, 1972, *Sociology. B.A., Bemidji State University,; M.A., University South Dakota; University of North Dakota; Howard University; Iowa State University*

Harstad, Ruthanne, 1989, *English. A.A., Kirkwood Community College; B.A., University Without Walls,; M.A., Ed.S., University of Iowa*

Hays, Mary, 1990, *Social Development.B.A. University of Northern Iowa; M.A., Mankato State University*

Hedlund, Rosemary, 1973, *Hospitality Careers.B.S., Iowa State University*

Heimbaugh, Nancy J., 1977, *Educational Advisor. B.S. Ed., Drake University*

Hemenway, Horace Eli, 1991, *Biology. A.A., Worthington State Junior College;.B.S., Mankato State University; M.S., University of Minnesota*

Hendrick, William, 1979, *Auto Mechanics. A.A.S., Des Moines Area Community College*

Henry, Betty, 1970, *Academic Achievement Center. B.S., Jarnis Christian College*

Henry, C. Dean, 1968, *Diesel. ASE-ACT Certified, B.S.; Iowa State University, Drake University*

Heuer, Karen K., 1976, *Marketing. B.S.; Iowa State University*

Heysinger, Sue, 1986, *Counselor. B.A., American University; M.A., University of Iowa*

Hildreth, Carolyn, 1986, *Campus Nurse. R.N., Iowa Lutheran Hospital School of Nursing; Grandview College*

Hildreth, Thomas G., 1985, *Electronic Maintenance. B.M.E.T., United Electronics Institute, McPherson College, University of Iowa, Iowa State University*

Hilgers, Daniel, 1983, *Office Technology. B.S., Moorehead State University, M.S., Emporia State University*

Hill, Sherry, 1991, *Educational Interpreter. A.A., Iowa Western Community College*

Hofferber, Barbara A., 1987, *Nursing. B.S., R.N., Fort Hays Kansas State College; M.N., Wichita State University*

Hoffman-Toubes, Rose M., 1988, *English/Journalism. B.S.E., M.A., Drake University*

Holmes, Patricia H., 1972, *Accounting. B.A., Simpson College; M.A., Iowa State University; Des Moines Area Community College; Drake University; Iowa State University; University of Iowa; New York University; CPA*

Holthus, Melvin F., 1986, *Accounting. B.A., M.A., University of Northern Colorado*

Hoover, Robert, 1992, *Educational Advisor. B.A., Indiana University*

Hotchkiss, Gordon G., 1987, *Telecommunications.*

Hotopp, Denise I., 1986, *Coordinator, Displaced Homemaker/Single Parent Projects. A.A., Marshalltown Community College; B.S., Iowa State University; M.S., University of Nebraska at Omaha*

Hughes, Larry, 1977, *Physical Education/Academic Achievement Center. B.S., Drake University; M.S., University of Missouri*

Husak, Sheri, 1976, *Educational Advisor. A.S., Des Moines Area Community College*

Hutchison, Alan J., 1988, *English. A.A., Iowa Central Community College; B.A., University of Northern Iowa; M.A., Drake University*

Irwin, Donald, 1974, *Psychology. B.S., M.S., Ph.D., Iowa State University*

Jansen, Robert, 1974, *Mathematics.B.A., Simpson College; Colorado State College; M.G.S., Drake University*

Jinkinson, Jane, 1974, *Dental Hygiene. B.A., M.A., University of Iowa*

Johnson, Delores, 1970, *Commercial Art. B.S., Iowa State University*

Johnson, Faye, 1983, *Senior Educational Advisor. B.A., University of Northern Iowa*

Johnson, Harold, 1969, *Biology. A.A., Emmetsburg Junior College; B.S., M.E., University of South Dakota; South Dakota State College; Iowa State University; University of Oklahoma*

Johnson, Roslea, 1974, *Human Services. B.A., Berea College; M.S., University of Kentucky; Colorado State University; Iowa State University; University of Iowa*

Kayser, Lori J. , 1990, *Educational Advisor. B.A., Briar Cliff College*

Keefe, Edward, 1971, *Data Processing. B.A., St. Ambrose College; M.A., University of Iowa*

Kelly, Bruce, 1988, *Political Science/History. B.A., Kearney State College; M.A., Iowa State University*

Kelly-Benck, Lora M., 1988, *Director, Financial Aid. B.A., Wartburg College*

Kessler, Vicky B., 1988, *STRIVE. B.S., Iowa State University; M.A., Drake University*

Keul, Ralph, 1969, *Data Processing. B.A., Drake University; M.S., Ph.D., Iowa State University*

Kliegl, Corinne, 1990, *Coordinator, Tutors/Lab Assistants. B.S., Western Michigan University*

Klinker, Janet R., 1979, *Office Technology. B.S., Drake University*

Knorr, Lou Ann V., 1985, *Office Technology. B.A., Concordia College; M.A., Moorehead State University; Bemidji State University*

Knott, James E., 1987, *Executive Dean, (Carroll Campus). B.A., Buena Vista College; M.A., Drake University*

Knowles, Keith A., 1988, *Educational Advisor.B.A., Adrian College*

Knutsen, Monna M., 1986, *Office Technology. B.A., University Northern Iowa*

Kockler, Lois M., 1988, *Mathematics.B.S., Valparaiso University; M.S., Ph.D., Iowa State University*

Konopka, Del N., 1987, *Nursing. B.S., Bradley University; M.S., Northern Illinois University*

Krogh, Beth, 1990, *Mathematics/Science. B.A., University of Northern Iowa*

Krumhardt, Barbara, 1990, *Biology. M.T., Mercy Hospital; B.S., Ph.D., Iowa State University*

Kramer, Clyde L., 1986, *Vice President, Community Education. B.A., Luther College; M.A., Northeast Missouri State University*

Krick, Frederick M., 1988, *Lab Assistant. A.A., Des Moines Area Community College; B.A., M.A., Drake University*

La Ville, Janet, 1991, *English. B.S., Northwest Missouri State University, M.S., Iowa State University*

Lawyer, Catherine, 1990, *Librarian. B.A., Mt. Marty College; M.S., Iowa State University*

Lee, William, 1974, *Data Processing. B.S., Iowa State University; Drake University; Grand View College*

Leetch, John, 1990, *Machine Drafting. A.S.M.E.T., Scott Community College*

Leggett, Sandra K., 1980, *Dental Hygiene. R.D.H., University of Iowa; B.G.S., Drake University; M.A., University of Northern Iowa*

Lenihan-Clark, Vickie L., 1986, *Nursing. B.S.N., Grand View College*

Liepa, John, 1971, *History. B.S., M.A., Iowa State University*

Lindsey-Robinson, Jon, 1970, *Academic Achievement Center.B.A., Drake University; Iowa State University; University of Minnesota*

Linduska, Kim J., 1981, *Dean, Academic Achievement. B.A., Augustana College; M.S., Iowa State University*

Loecke, Raymond, 1992, *Total Quality Management. B.A., Loras College; M.S., University of Iowa*

Lonsdale, Mary, 1977, *Coordinator, Student/Alumni Activities. A.S., Des Moines Area Community College*

Loss, Florence, 1974, *Psychology. B.S., B.A., M.S., Creighton University; Ed.D., Drake University*

Lowry, Dennis W., 1988, *Auto Collision.*

Luloff, Terry, 1990, *ABE/HSE. B.A., Wartburg College*

Macklin, Sandra, 1985, *Child Development Specialist. A.A., Des Moines Area Community College; B.A., University of Northern Iowa; Iowa State University*

Mann, Robert S., 1975, *English. B.A., M.A., Ed.S., University of Iowa*

Manning, Jerry, 1967, *Marketing. B.S., Bemidji State College; M.S., Drake University*

Marlow, Jerry, 1974, *Electronic Maintenance. B.A., University Northern Iowa*

Marmon, James, 1981, *GM Motor Project. A.A.S., Des Moines Area Community College*

Marten, Dennis, 1967, *Office Technology. B.A., Buena Vista College; University of Iowa; Northeast Missouri State University*

Maynard, Lyla, 1977, *Education/Psychology. B.S., M.S., Ph.D., Iowa State University; University of Northern Iowa*

Mc Caffrey, Jerrine, 1990, *English. B.S., Northeast Missouri State University; M.A., University of Nebraska*

Mc Cormick, Evan, 1990, *Personal Development. B.S., Iowa State University*

Mc Cullough, Sandy, 1991, *Counselor. B.A., Parsons College, M.S.E., Drake University*

Mc Enany, Craig A., 1988, *Agri-Business. B.S., Iowa State University*

Mc Farlin, Charles H., 1986, *Academic Dean, (Industrial and Technical). B.S., University of Minnesota; M.Ed., Iowa State University*

Mc Nair, Patricia F., 1990, *Correctional Education Program. B.S., University of Missouri; M.A., New Mexico Highlands University*

Mc Nair, R. Lee, 1982, *Sociology. A.S., St. Joseph Junior College; B.A., M.A., University of Missouri-Columbia, A.B.D., Iowa State University*

Meier-Cade, Constance, 1991, *Nursing. B.S.N., Marycrest College; M.S.N., University of Nebraska; M.A., University of Iowa*

Meredith, Sharon K., 1984, *STRIVE. B.A., University of Iowa, William Penn; M.A., Drake University*

Messersmith, Diana, 1973, *Librarian. B.A., University of Northern Iowa; M.A., University of Iowa*

Meyer, Barbara, 1970, *Counselor. B.S., Iowa State University; M.S.E., Drake University*

Meyer, Herbert L., 1989, *Accounting. B.A., M.S., Eastern Washington University*

Middendorf, Cheryl, 1975, *Nursing. Nursing Diploma, St. Joseph Hospital School of Nursing; B.S., Kearney State University; M.S.N., University of Minnesota*

Miles, Sharon, 1979, *Financial Aid Advisor. B.E., Washburn University*

Miller, Chanda, 1989, *Legal Assistant Program. B.A., Hastings College; J.D., University of South Dakota*

Miller, Linda C. , 1983, *Financial Aid Advisor. B.S., North Dakota State University*

Miller, Lloyd, 1970, *Anthropology/Spanish. B.A., M.A., University of Wisconsin; University of Veracruz, Mexico; University of Rio Grande do Sul, Brazil; University of Florida; Iowa State University*

Mitchell, Susan J., 1989, *Business Administration. B.A., Buena Vista College; J.D., Drake University*

Modtland, Ole, 1967, *Auto Mechanics. Automotive Industry Service Schools, Iowa State University, U.S. Air Force School, Drake University*

Moorehead, Russell P., 1984, *Marketing. B.A., University of Northern Iowa; M.B.A., Drake University*

Morlan, Joann G., 1987, *Educational Advisor. A.A., Des Moines Area Community College, B.A., Iowa State University*

Mosman, Michelle, 1980, *Mathematics/Academic Achievement Center. A.A., Grand View; B.S., Iowa State University; M.S., Drake University; University of Hawaii*

Muehlenthaler, Shirley, 1967, *Medical Assistant. R.N., Iowa Lutheran School of Nursing; Boone Junior College; Iowa State University; Grand View College; B.A., Stevens College*

Mueller, Kay E., 1985, *Speech. B.A., Iowa State University; M.A., Purdue University*

Myers, Douglas, 1982, *Data Processing. A.A., Iowa Central; B.S., University of South Dakota; M.S., Mankato State University*

Nelson, Gary M., 1975, *Biology. B.S., M.A., St. Cloud State University*

Nelson, John K., 1991, *Director, Automotive and Diesel Education and Training. B.S., M.I.E., Utah State University; Certificate; Idaho State University*

Nelson, Maura G., 1990, *English/French. B.A., M.A.T., Northwestern University; M.A., Washington State University*

Nelson, Tom, 1975, *Academic Dean, (Business and Management). B.S., Black Hills State University; M.S., University of Utah; Iowa State University*

Netcott, Curtis, 1989, *Instructional Assistant. B.S., Iowa State University*

Neumayer, John, 1990, *Tool & Die. A.A.S., Des Moines Area Community College*

Nicolet, L. Douglas, 1988, *Commercial Art. B.F.A., M.F.A., Drake University; National School of Art*

Nielsen, Lori J., 1985, *English. B.A., Dana College, M.A., Iowa State University*

Noring, Verlyn M., 1985, *Business Administration. B.A., M.A., University of Northern Iowa*

Oakley, Mardelle, 1992, *Educational Advisor. B.A., University of Iowa; M.A., Ed.S., Drake University*

Ocken, Scott, 1985, *Auto Mechanics. Certificate, Des Moines Area Community College; General Motors, Ford; Iowa State University; University of Northern Iowa*

Olds, Rosemary B., 1988, *English. B.A., University of Hawaii; M.A., University of Denver; D.Arts, Drake University*

Pering, Frank, 1989, *Lab Assistant. B.S.M.E., Iowa State University*

Perry, Michael, 1971, *Director, Recruitment and High School Articulation. B.S., M.S., Iowa State University; University of Iowa; University of Northern Iowa; Drake University; Northeast Missouri State University*

Peters, Randy, 1989, *Auto Mechanics. Diploma, Des Moines Area Community College*

Peterson, G. Shirley, 1979, *Librarian. B.A., University of Northern Iowa; M.L.S., University of Hawaii-Manoa*

Peterson, Thomas D., 1979, *Architectural Drafting. B.S., Idaho State University*

Phares, Therese, 1976, *Data Processing. B.S., M.S., Iowa State University*

Philips, Kriss, 1974 *Executive Dean, (Boone Campus). B.S., M.A., Northeast Missouri State University; University of Iowa; University of Utah; Drake University; Iowa State University*

Pittman, Dayna L. 1985, *English. B.A., M.A., Northeast Missouri State University*

Prager, Henry J., 1979, *Accounting. A.A., Graceland College; B.S.B.A., Northwestern University; M.A., Drake University; Ed.D., Northern Illinois University*

Pratt, Ewa J., 1983, *English As A Second Language. B.A., M.A., Adam Mickiewicz University, Poland*

Priestley, Russell, 1971, *Office Technology. B.S., Kansas State Teachers College; M.S., Colorado State College; Kansas State College; University of Northern Iowa.*

Putzier, Brian, 1983, *Electronics. Mankato Area Vocational Technical Institute; DEC Disk Drive School; DEC Processor School; Sperry Processor School*

Rathe, Dean M. , 1991, *Coordinator, Student Support Services. B.A., St. Cloud State University; M.A., Ph.D., University of Northern Colorado*

Ragner, David, 1982, *Conditioned Air. University of Wisconsin; Iowa State University*

Rees, Merrill, 1969, *Director, Library Services. B.A., Drake University; M.Ed., University of Iowa*

Reimers, David D. 1988, *Placement Specialist, Special Needs. B.S. Iowa State University; M.S., Drake University*

Robbins, Joe, 1988, *Executive Director, Information Technologies. B.A.; Upper Iowa University; CPA*

Roberts, Darrell E. , 1990, *Vice President, Business Services. A.A., Iowa Central Community College; B.S., University of South Dakota; M.A., Chadron State College*

Rosenberry, Mark E. ,1990, *Tool & Die. A.A.S., Des Moines Area Community College*

Rossi-Le, Laura A., 1988, *English. B.A., Fairleigh Dickinson University; M.A., Duke University; Ed.D., Drake University*

Sartain, Harold, 1971, *Speech. B.S., M.A., University of Minnesota*

Saville, Larry D., 1970, *Business Administration. B.A., Northwest Missouri State University; M.Ed., University of Missouri*

Schon, Renee L., 1988, *Coordinator, Displaced Homemaker/Single Parent Projects. B.S., Iowa State University*

Schouten, Robert G. 1988, *Mathematics. B.S., M.S.M, Iowa State University*

Schreurs, Christian, 1973, *Coordinator, Recreation and Wellness. B.A., Wayne State College*

Schulte, M. Anne, 1988, *Social & Behavorial Sciences. B.A., Creighton University; M.A., California State University-Fullerton*

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*

Scott, Tara R. , 1991, *Educational Interpreter. A.A.S., Iowa Western Community College.*

Scoville, Lewis, 1969, *Diesel. Nebraska Vocational Technical School; University of Omaha; Iowa State University; ASE/ACT certified*

Sheaff, James, 1974, *Criminal Justice. B.A., Creighton University; M.A., Boston University; University of Nebraska*

Sheets, Judith, 1983, *Dental Assistant. A.A., Iowa Central Community College; B.A., Grand View College*

Shlaes, Ben, 1968, *Accounting. CPA; B.S.C., University of Iowa; M.B.A., Drake University; Iowa State University; University of Northern Iowa; Augustana College; Des Moines Area Community College*

Shriver, Burgess, 1970, *Academic Dean, (Sciences and Humanities). B.A., University of Oklahoma; M.S., Iowa State University*

Siemann, Carolyn M., 1989, *Academic Achievement Center. B.A., University of Iowa*

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*

Slykhuis, Lynn, 1990, *ABE/HSE. B.A., Upper Iowa University*

Small, Sharon, 1983, *English/Speech. B.A., M.A., Iowa State University*

Smart, Charles, 1973, *Upholstery. Iowa State University, Des Moines Area Community College*

Smith, Jayne M., 1985, *Librarian. B.A., University of Northern Iowa; M.A., University of South Dakota*

Smith, John, 1969, *Accounting. B.S., Southern State College; M.A., Colorado State College; University of South Dakota; University of Minnesota; Northern State College; University of Northern Colordo*

Sommerville, Abraham D., 1984, *Educational Advisor. A.A., Des Moines Area Community College, B.A., Drake University*

Sorenson, Shirley K., 1987, *Program Aide, Health Care Administration. R.T., St. Joseph Mercy Hospital; B.S., College of St. Francis*

Stahr, Curtis B., 1988, *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*

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, *Office Technology. A.A., Des Moines Area Community College; B.S., Drake University*

Stock, Kathryn, 1970, *Nursing. R.N., Mercy Hospital School of Nursing; B.S.N., M.S.N., University of Dubuque.*

Stone, Margaret, 1987, *Coordinator, Displaced Homemaker/Single Parent Projects. 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*

Taylor, W. Robert, 1984, *Psychology. B.A., Nebraska State Teachers College; M.A., Colorado State College; Ed.D., University of Northern Colorado; University of Colorado; University of Denver; Columbia University; University of Utah; University of California-Santa Barbara*

Thornton, Dorothy, 1974, *Placement Officer.*

Tomes, Cynthia, 1975, *Accounting. CPA, A.A., Southwestern Community College; B.S., Northwest Missouri State; MBA, Drake University*

Trieff, 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 Univeristy*

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; Northeast Missouri State*

Twedt, John, 1980, *Building Trades. B.S., Iowa State University*

Underbakke, Richard, 1990, *Ford Motor Project. Diploma, Northeast Iowa Community 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, Economic Development Institute, University of Oklahoma, Iowa State University*

Vander Ploeg, Diane, 1977, *Medical Assistant. B.B.A., M.S., Iowa State University*

Vandivier, Curt, 1972, *Vice President, Ankeny Campus. 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*

Verrips, Patricia, 1989, *Instructional Assistant, B.A., Dordt College*

Waddell, N. Carolyn, 1987, *Dean, Student and Educational Development. B.S., M.S.Ed., East Central State University; M.A., Unviersity of Houston/Clearlake*

Wager, Susan E., 1976, *Director, Nursing. B.S.N., M.A., University of Iowa*

Wagner, Dale, 1971, *Counselor. B.S., M.S., Iowa State University*

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*

Waldron, Barbara, 1977, *Nursing. R.N., B.S.N., University of Nebraska*

Walker, Richard W., 1986, *Biology. B.A., University of Iowa; B.S., M.S., Ph.D., Iowa State University*

Wangerin, Virginia S., 1989, *Nursing. B.S., Drake University*

Ward, John C., 1989, *Printing. B.S., Ferris State University; M.A., Central Michigan University*

Warner, Joy A., 1988, *Program Assistant, Legal Assistant Program. B.A., Iowa State University; A.S., Des Moines Area Community College*

Warren, Donalla, 1986, *STRIVE. B.S., Drake University*

Wehage-Gardner, Linda D., 1988, *Academic Achievement Center. B.A., University of Iowa; University of Northern Iowa; M.Ed., University of Nevada-Las Vegas; PanAmerican University*

Westergard, Joanne E., 1977, *Health Care Administration. M.P.H., University of Minnesota; B.A., University of Michigan; Iowa State University; Drake University; University of Iowa; University of Northern Iowa*

Whalen, Jerold, 1975, *Electrical Trades. A.A., Iowa Central Community College; B.A., University of Northern Iowa; Iowa State University*

Wheeler, Vickie, 1990, *English Communication. B.S.E., Drake University*

Whitehurst, Calvin L., 1987, *Academic Achievement Center. B.A., M.A., University of Northern Iowa*

Whitaker, Christine A., 1989, *LAN Equipment Specialist.*

Wickham, Susan, 1971, *Academic Achievement Center. B.A., M.S.E., Drake University*

Wiese, Daryl W., 1988, *Lab Assistant. Certificate, Des Moines Area Community College*

Wilk, Mary Beth, 1975, *English/Speech. B.A., University of Nebraska; M.A., University of New Mexico; Ph.D., University of Massachusetts*

Wilson, Delores, 1990, *Personal Development. B.S., Iowa State University, M.A., Marycrest College*

Wilt, Maureen G., 1984, *STRIVE. B.A., Texas Tech University; M.S., Iowa State University*

Winter, Janis F., 1989, *Lab Assistant. 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*

Wollaston, Robert B., 1982, *Biology. B.A., St. Vincent College; M.S., Clarion State University; Gannon University; Iowa State University*

Wood, Amy, 1988, *Educational Advisor. B.B.A., University of Iowa*

Wood, Christine, 1977, *Nursing. A.D., Iowa Central Community College; B.S.N., University of Iowa; M.S.N., Drake University.*

Woods, Janice E., 1981, *Associate Dean, Urban Campus. A.A., Des Moines Area Community College; B.S., Upper Iowa University; M.S., Iowa State University*

Woods, Nancy A., 1987, *Mathematics/Physics. B.S., B.A., University of Nebraska at Omaha; M.S., Iowa State University*

Worley, Barbara W., 1978, *Mathematics. B.S., Phillips University; M.S., Butler University*

Wray, Randy, 1987, *GM Motor Project.*

Yarrow, Marvin, 1984, *Building Trades. Diploma, Nebraska Vocational Technical School*

Young, Robert, 1973, *Accounting. B.S.B.A., Drake University*

Zarr, Harold, 1989, *Business Administration. B.S., Iowa State University; M.B.A., Drake University*

Zuck, Don, 1969, *Vice President, Operations. B.S., Iowa State University; M.B.A., Drake University*

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DES MOINES AREA COMMUNITY COLLEGE
APPLICATION FOR ADMISSION

| PLEASE SEND ALL APPLICATIONS TO THE ANKENY CAMPUS | ANKENY CAMPUS 2006 S. Ankeny Boulevard Ankeny, Iowa 50021 (515) 964-6200 | BOONE CAMPUS 1125 Hancock Drive Boone, Iowa 50036 (515) 432-7203 | CARROLL CAMPUS 906 North Grant Road Carroll, Iowa 51401 (515) 792-1755 | URBAN CAMPUS 1100 7th Street Des Moines, Iowa 50314 (515) 244-4226 |

SOCIAL SECURITY NUMBER

PERSONAL INFORMATION

LEGAL LAST NAME   FIRST   MI   FORMER LEGAL LAST NAME

CURRENT MAILING ADDRESS

NUMBER & STREET   APARTMENT NUMBER / LOT NUMBER ETC.

CITY   STATE   ZIP CODE

(AREA) TELEPHONE NUMBER   (AREA) BUSINESS TELEPHONE NUMBER   COUNTY

DATE OF BIRTH   SEX   ☐ MALE ☐ FEMALE

RACIAL/ETHNIC INFORMATION (OPTIONAL)

1. ☐ ASIAN OR PACIFIC ISLANDER
2. ☐ AMERICAN INDIAN OR ALASKAN NATIVE
3. ☐ AFRO-AMERICAN
4. ☐ HISPANIC
5. ☐ OTHER AMERICAN MINORITIES
6. ☐ WHITE NON-HISPANIC
7. ☐ NON-RESIDENT ALIEN

RESIDENCY

ARE YOU A U.S. CITIZEN? ☐ YES ☐ NO

IF YOU ARE NOT A U.S. CITIZEN, ARE YOU A PERMANENT RESIDENT OF THE U.S.? ☐ YES ☐ NO

IF YES, PRINT YOUR ALIEN REGISTRATION NUMBER _____
IF NO, INDICATE TYPE OF VISA _____
AND 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 LEGAL RESIDENT OF IOWA SINCE _____ _____
                                              MONTH   YEAR

☐ I AM NOT A RESIDENT OF IOWA

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

FOR OFFICE USE

NOTE: THE ABOVE IS CONSIDERED DIRECTORY INFORMATION AND WILL BE USED AT THE COLLEGES DISCRETION.

EDUCATIONAL INFORMATION

HIGH SCHOOL

NAME OF HIGH SCHOOL LAST ATTENDED	CITY	STATE	

ARE YOU CURRENTLY ATTENDING HIGH SCHOOL?	DID YOU GRADUATE FROM HIGH SCHOOL?	HAVE YOU TAKEN THE GED? (HIGH SCHOOL EQUIVALENCY TEST)
☐ Yes If Yes, anticipated graduation year: _____ ☐ No	1. ☐ Yes Month _____ Year _____ 2. ☐ No	1. ☐ Yes When? _____ At DMACC? ☐ Yes ☐ No 2. ☐ No

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			

NOTE: AN OFFICIAL TRANSCRIPT FROM EACH INSTITUTION ATTENDED MUST BE SUBMITTED DIRECTLY TO DMACC

ADMISSION INFORMATION

SEMESTER YOU PLAN TO ENTER DMACC	CAMPUS YOU PLAN TO ATTEND
1. ☐ Fall 2. ☐ Spring 3. ☐ Summer Year: _____	☐ ANKENY ☐ BOONE ☐ CARROLL ☐ URBAN ☐ EXTENSION CENTER

I PLAN TO ATTEND   ☐ FULL-TIME   ☐ PART-TIME   I PLAN TO TAKE CLASSES   ☐ DAYTIME   ☐ EVENING/WEEKENDS

DMACC EDUCATIONAL OBJECTIVES

(Please check the **ONE** that best describes your current objective at DMACC)

11. ☐ Transfer to another college/university   15. ☐ Remedy or review basic skills

12. ☐ Prepare to enter job market   16. ☐ Personal interest or self-improvement

13. ☐ Improve skills for present job   17. ☐ Prepare to change careers

14. ☐ Explore courses to decide on career   18. ☐ Undecided

Are you seeking a degree, diploma or certificate at DMACC?

☐ Yes   ☐ No

If yes, be sure to complete the Degree and Program Intent Information below.

DMACC DEGREE AND PROGRAM INTENT

PROGRAM OF STUDY _____   ☐☐☐☐☐☐☐

AWARD YOU ARE SEEKING (CHECK ONE BOX)

☐ ASSOCIATE IN ARTS (AA) DEGREE   ☐ DIPLOMA

☐ ASSOCIATE IN SCIENCE (AS) DEGREE   ☐ ASSOCIATE IN APPLIED ARTS (AAA) DEGREE

☐ ASSOCIATE IN GENERAL STUDIES (AGS)

☐ ASSOCIATE IN APPLIED SCIENCE (AAS)

☐ CERTIFICATE OF SPECIALIZATION

I CERTIFY THAT THE ABOVE 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 _____