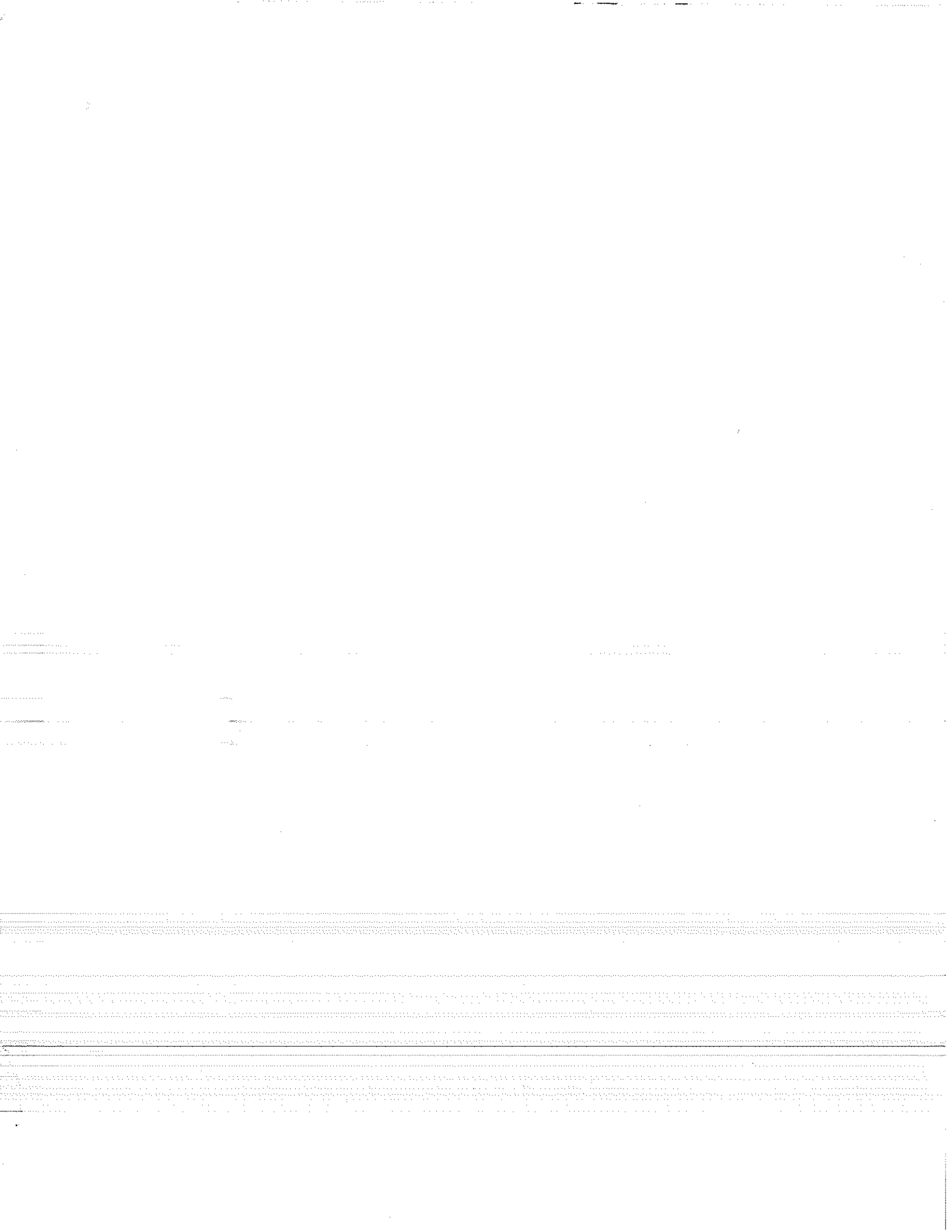


KIRKWOOD

COMMUNITY COLLEGE



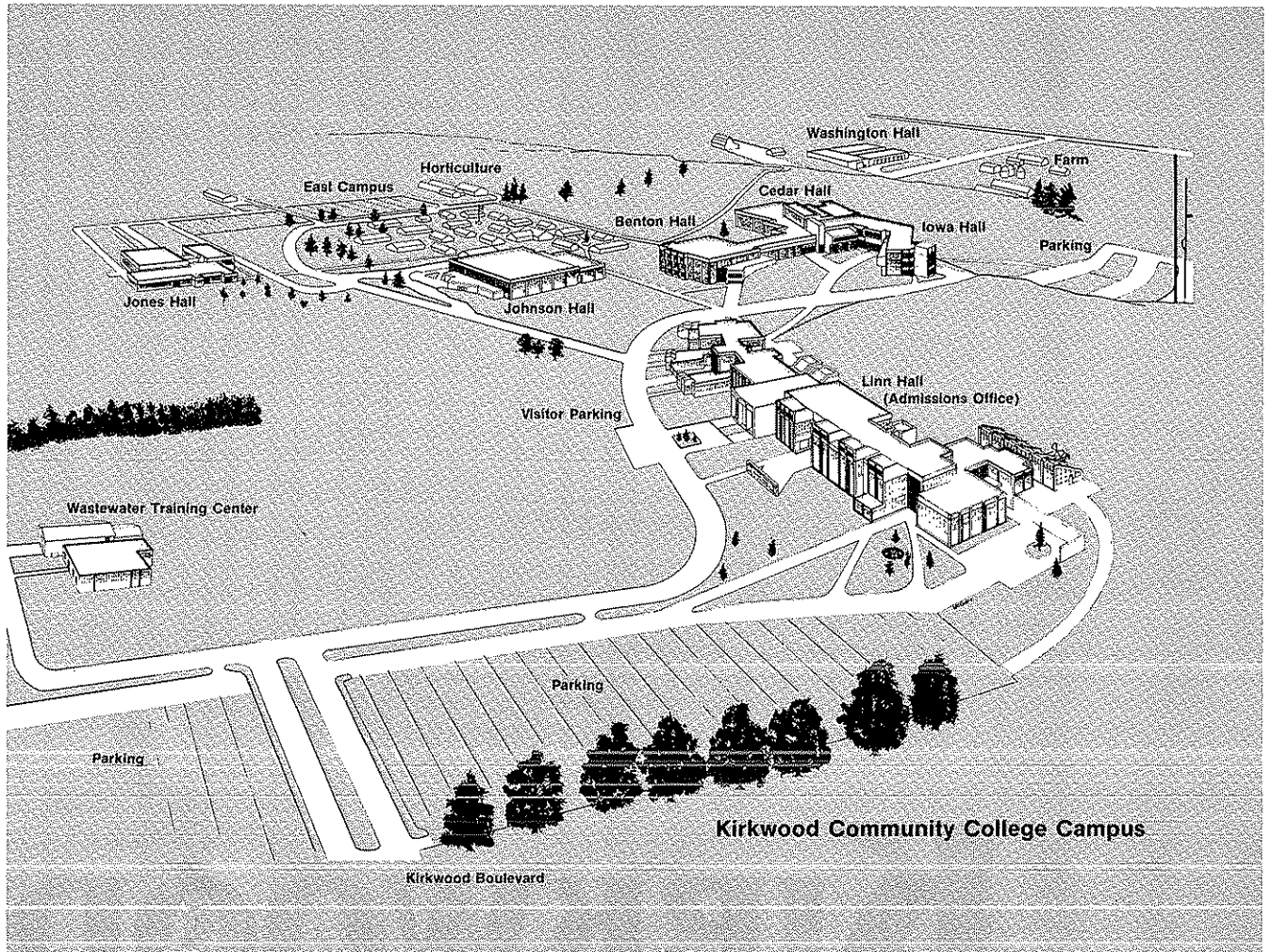
1983-85 CATALOG



KIRKWOOD

COMMUNITY COLLEGE

**6301 KIRKWOOD BLVD. S.W.
CEDAR RAPIDS, IOWA**

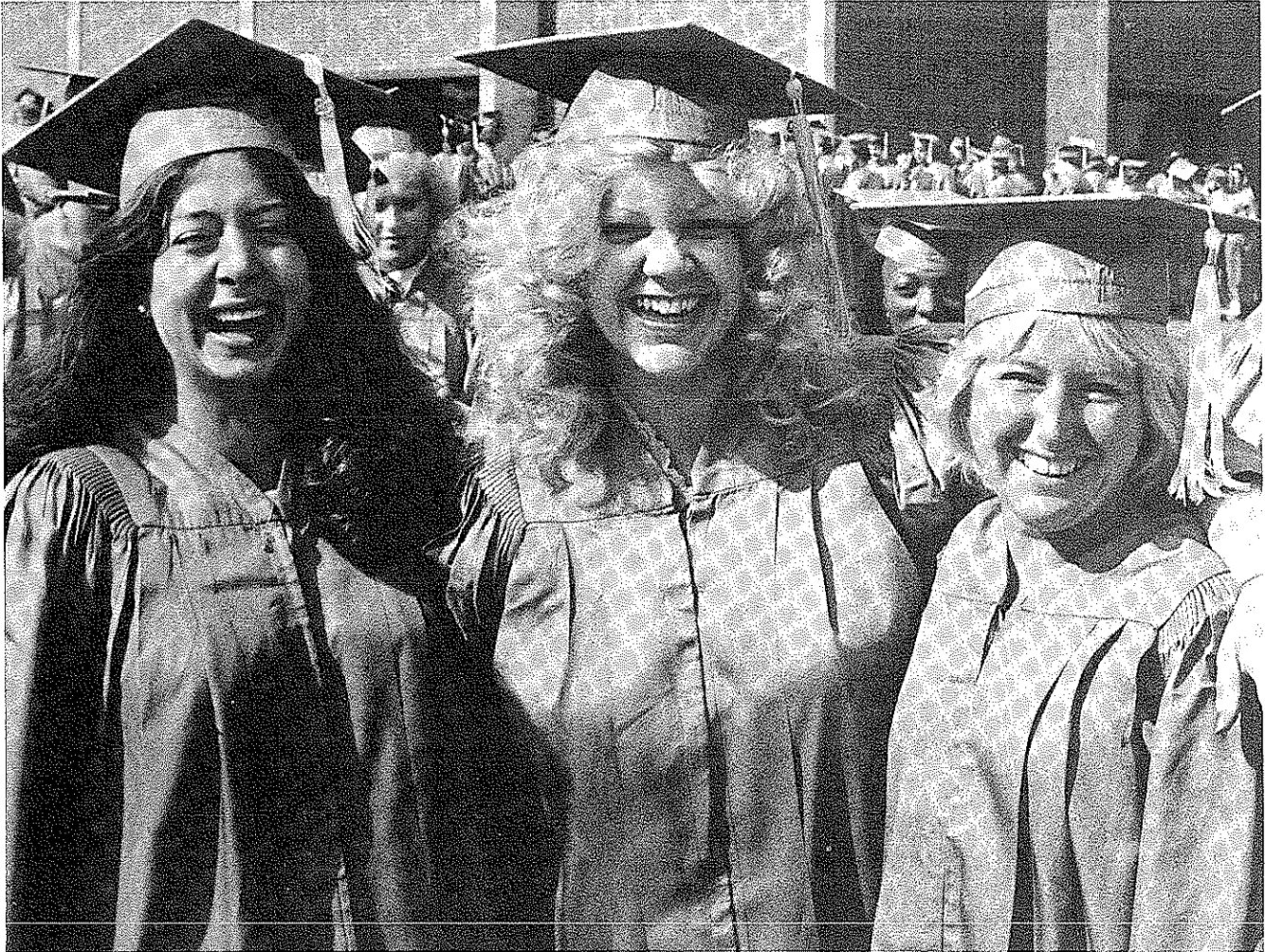


CONTENTS

The College	3
Academic Calendar	10
Instructional Program	
Guide to College Programs	12
Arts and Sciences	13
Vocational-Technical	23
Community Education	57
Student Life	
Student Affairs	62
Policies and Regulations	69
Course Descriptions	78
Administrative Staff and Faculty	131
Index	138

The information contained in this catalog is subject to cancellation or change without notice. This catalog cannot be considered as an agreement or contract between individual students and Kirkwood Community College, its faculty, staff, administrators or directors.

Kirkwood Community College does not discriminate on the basis of handicap, sex, race, color, religion, or national origin in its educational programs, activities, employment practices or admission procedures.



THE COLLEGE

KIRKWOOD: RESPONSIVE TO THE COMMUNITY

The true test of a college, as with any human endeavor, is to continue to improve and expand, even when conditions are less than ideal. Kirkwood Community College has demonstrated that unique character throughout its history and especially so during difficult economic times. The College has continued to serve students and the community and to live up to the commitment made when its doors first opened seventeen years ago.

The basic concept that gives life to a community college is that it is responsive to the community which it serves. Kirkwood certainly adheres to that philosophy as new programs are developed and as continuing programs are reaffirmed.

The telecommunications system allows non-traditional students from nearly every community in our seven-county area to participate in programs without having to travel to campus. New and modified facilities make attendance possible for our handicapped and elderly citizens. The community education division continues to offer credit and non-credit courses, workshops and seminars nearly every day of the year. The sense of "Community" is taken very seriously, and we are proud to have it as part of our name.

Kirkwood has always distinguished itself as being future-oriented, with a special talent for anticipating the needs of the community and its citizenry. As the country moves into an increasingly high technological age, Kirkwood will keep pace. Our vocational-technical programs are currently being revised in order to reflect the latest developments in business and industry. Programmatic changes will allow greater flexibility in our technical course offerings, allowing students to choose components of the curriculum which meet their most immediate needs.

A computer literacy center has been completed which will enrich current instructional programs and allow growth in our data processing and information science curriculum.

The Arts and Sciences departments of the College find themselves housed in a beautiful new facility. Cedar Hall provides additional classroom space, the



Dr. Bill F. Stewart

latest in photo-journalism laboratories, and excellent theatrical and musical performance areas. The fine arts programs are expanding in scope and quality to meet the challenge of this new facility. Any student aspiring to perform in a first-class theater will certainly have the opportunity for that experience here at Kirkwood.

The physical education and recreation programs have also been expanded since that department has moved into its new facility, Johnson Hall. Kirkwood now offers a comprehensive physical education program and athletic opportunities for its students and a fine recreational center for the community.

This catalog will explain further the academic changes and physical improvements that have been made or are currently underway at Kirkwood. As in years past, this success of the College is due to a dedicated board of directors, an excellent teaching faculty and staff and, of course, to the support of the community members we serve. It is through the combined efforts of all these people that Kirkwood offers this high quality and great variety of educational experiences.

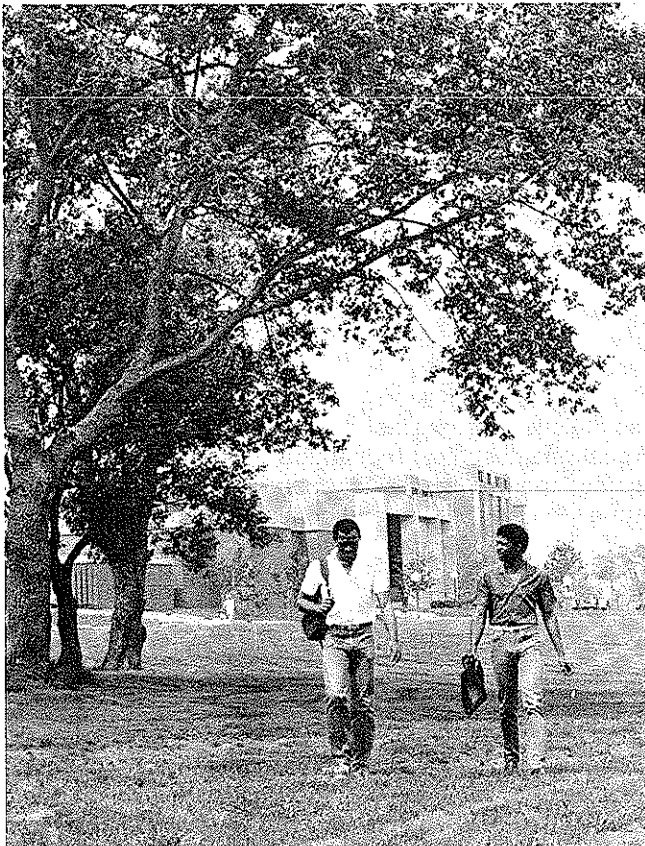
Dr. Bill F. Stewart
President

Kirkwood Community College is a publicly supported college serving the Iowa counties of Benton, Linn, Jones, Iowa, Johnson, Cedar and Washington as well as portions of nine adjacent counties which are part of the merged area. This represents a total population of 327,000 persons. The total land area of the seven major counties served is 4,292 square miles or 7.8 percent of the land area of the state of Iowa.

The college operates under the regulations of the Iowa State Board of Public Instruction with the board of directors of merged Area Ten as its governing board.

Area Ten

Merged Area Ten represents an emerging socio-politico-economic unit. It is an area in transition, mingling rapidly developing urban centers and rich farm lands dotted with small rural communities. Within its borders are many space-age industries, prosperous farms, a major state university, several private liberal arts colleges, and myriad supportive and service institutions and industries. In this setting of vigorous economic expansion and rapid population growth, advancing technology has created unprecedented demands for formal education and training programs. This same technology simultaneously has placed greater demands upon the individual in his or her role of responsible citizen.



The Community College

For years, American society has taken for granted the importance of secondary schooling for the many and higher education for the few. It has only been in the past 15 years or so that recognition has been extended to the need for post-high school education for the majority of adults. Accordingly, institutions of higher education, although well suited to the service of a relatively select few, have not been prepared to satisfy the needs of the growing numbers of individuals who desire to participate in post-high school education. Thus, the citizens of Iowa have delegated this responsibility to the comprehensive community college.

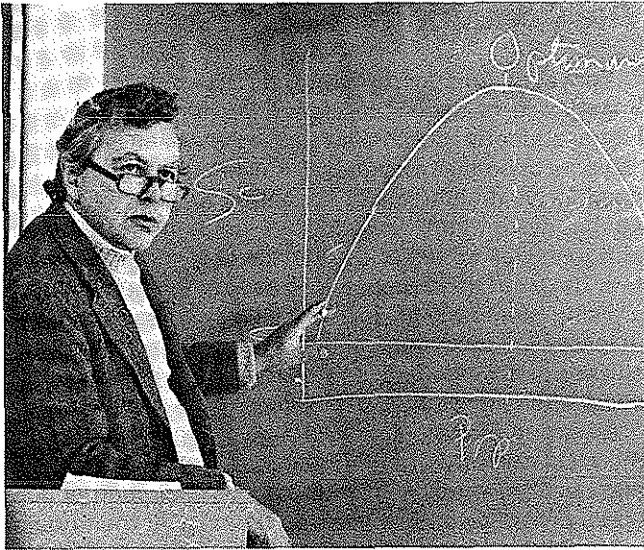
Kirkwood Community College is charged by law with the responsibility of identifying the educational needs and desires of adult citizens and of designing educational programs which will help them fulfill their goals.

Philosophy and Mission

Philosophy

Kirkwood Community College believes that the opportunity to develop capacities consistent with one's needs and aspirations is every person's right. To recognize and foster the uniqueness of each individual and to meet diverse educational and related service needs, the college should apply available resources to provide accessible and comprehensive programs. These programs should respond to individuals who seek to understand, adapt to and appreciate the environment, and to the other constituencies who look to the college for assistance. Kirkwood Community College should contribute to a steadily improving quality of life for the people of the district by developing and maintaining a comprehensive range of outstanding educational offerings and services.

Education expands one's mind, spirit and abilities. The concepts of growth and change define education as a continuous process. Schools and colleges, therefore, must relate their programs and policies to lifelong learning. Kirkwood Community College believes education provides an important means for each person to grow toward greater self-fulfillment, as well as a means by which societies preserve and interpret their culture and global heritage. Learning is enhanced when people can apply what they learn. Similarly, the application of skills, values and attitudes is improved when people have an understanding of related theory. Education provides balance among these elements and thus contributes to success in the various aspects of an individual's life.



State Law

The law under which Kirkwood was established and continues to operate, Section 280A in the Code of Iowa, states in part, that area community colleges offer to the greatest extent possible, educational opportunities and services in each of the following, when applicable, but not necessarily limited to:

1. The first two years of college work including pre-professional education.
2. Vocational and technical training.
3. Programs for in-service training and retraining of workers.
4. Programs for high school completion for students of post-high school age.
5. Programs for all students of high school age who may best serve themselves by enrolling for vocational and technical training while also enrolled in a local high school, public or private.
6. Student personnel services.
7. Community services.
8. Vocational education for persons who have academic, socioeconomic or other handicaps which prevent succeeding in regular vocational education programs.
9. Training, retraining and all necessary preparation for productive employment of all citizens.
10. Vocational and technical training for persons who are not enrolled in a high school and who have not completed high school.

Mission

Consistent with the philosophy held by Kirkwood Community College, and in accordance with the charge given it by the State of Iowa, the mission of Kirkwood Community College is to enhance human and community resources,

by acting on its own initiative and in concert with other agencies, to provide quality educational programs and community services.

League for Innovation

Kirkwood is a member of the League for Innovation in the Community College, a select consortium of 18 leading two-year colleges. Activities of the league include experimentation in teaching, learning and administrative methods, information exchanges among member colleges, and national dissemination of information about educational methods. Kirkwood, the only Iowa college represented, was granted membership in 1982.

History

Kirkwood's history dates from January 1965, when a steering committee was formed to establish a vocational school to serve Area Ten. Work on the study began almost immediately and was completed by July 1965.

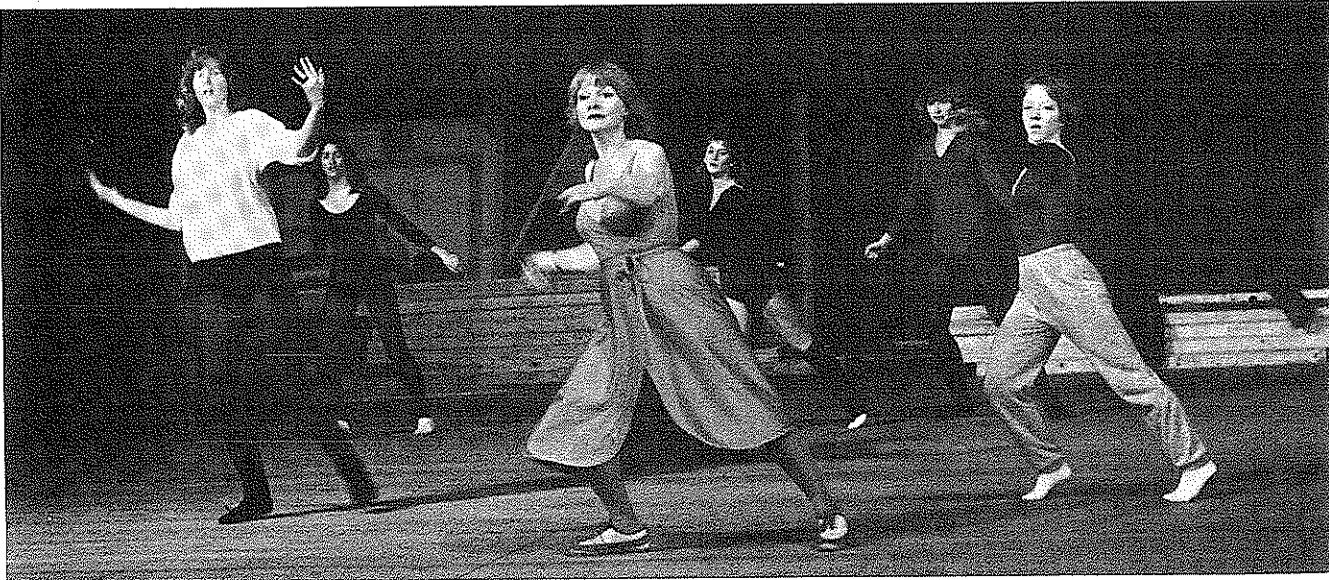
Soon after, the Iowa General Assembly passed enabling legislation which made possible the establishment of a system of community colleges and area vocational-technical schools throughout the state. Educators and laymen in Area Ten recognized the need for a comprehensive community college which would provide college transfer and adult education curricula as well as vocational-technical curricula. Therefore, the nine-man board of directors elected by the citizens of the area asked for and received permission from the State Board of Public Instruction to establish Kirkwood Community College. The college was formally established on July 1, 1966.

The college immediately assumed responsibility for federally funded vocational-technical programs, which had been provided by the Cedar Rapids Community School District since 1964. The Arts and Sciences, Student Services and Community Education Divisions were established in 1967.

In the college's short history, the foundation has been established for expanded educational opportunities in vocational-technical education, college transfer and career-oriented programs, adult and continuing education, student services and community services.

Accreditation

Kirkwood Community College is accredited by, and is a member of, the North Central Association of Colleges and Secondary Schools. Kirkwood is also approved by the Board of Regents and the State Board of Public Instruction. Individual programs within the college are accredited by appropriate associations within their respective fields. Many programs are approved for veterans.



College Facilities

The Kirkwood main campus, located at 6301 Kirkwood Boulevard S.W. in Cedar Rapids, is a 315-acre countryside site on the south edge of the city. The first permanent building, Linn Hall, was completed in the fall of 1969. It contains classrooms, various laboratories and offices, and two large multi-purpose rooms.

The building houses more than 40 full-time vocational-technical offerings, plus science laboratories and classrooms. Some day and evening adult Community Education classes also are offered in Linn Hall. The college's main administrative offices are located in Linn Hall in addition to the college's public radio station, KCCK-FM.

Iowa Hall, completed in January of 1975, is the second permanent building to be built on the Kirkwood campus. It contains the college cafeteria, bookstore, coffeehouse, Student Activities Office, conference rooms, multi-purpose rooms, lounges and study areas.

Just northeast of Iowa Hall is the East Campus, which consists of 16 relocatable buildings. This portion of the campus consists of classrooms, laboratories, a student lounge, and offices of the Community Education Division. The college's Horticulture and Natural Resources laboratory adjoins the East Campus.

Adjacent to the East Campus is Jones Hall. It houses Kirkwood's Skill Center, which offers a program of services for disadvantaged and handicapped persons. It also serves as a trades center with facilities for Kirkwood's welding and building trades programs.

Benton Hall is the college's Learning Resource Center, or library. It was completed in the spring of 1977 and connects the east and west campuses.

Linking Benton and Iowa Halls is a new fine arts center. Cedar Hall provides additional classrooms,

laboratories, a lecture hall and a 470-seat auditorium geared to the performing arts. The facility was completed in 1983.

Johnson Hall, a physical education and recreation center, provides much needed space for both educational and community activities. A large central area contains seating for 1500 spectators at college commencement exercises, student assemblies, athletic contests and other special events. Completed in 1982, Johnson Hall is located just north of Benton Hall.

Kirkwood's agricultural programs are located on the south side of the campus. This area includes the new agricultural mechanics program and other classes related to farm mechanization. Other programs having facilities on the farm site include Agribusiness Technology, Horse Science Technology (including barn, stall and arena) and Small Animal Service. There are also hog farrowing houses, beef feed lots and a feed mixing laboratory for the beef testing station.

Located to the west of the agriculture campus is the college's truck driving range.

On the north edge of the campus is the Environmental Center, constructed through a grant from the Environmental Protection Agency for the purpose of providing training and upgrading of skills for water and wastewater plant operators in Iowa. The center also houses the college's Analytical Lab Technology program.

Access for Handicapped

The college has undertaken an effort to remove architectural barriers and improve accessibility to campus facilities for handicapped and disabled persons. The college is committed to providing handicapped and disabled individuals with equal access to all college programs and services.

Benton Hall Learning Resource Center

The Learning Resource Center (LRC) is located in Benton Hall, situated in the center of Kirkwood's main campus. The LRC, a 33,000 square-foot area, is designed to be a multi-functional center. It houses the traditional functions of a library with the varied components of a learning resource center.

Public services are located on the first floor. These include the circulation department, the card catalog and the reference department. Current copies of the 400-title periodical collection are housed here, as well as microforms and a viewing area, a teacher-preparation room, archives, a copy machine and work space for the LRC staff.

The second floor contains a flexible arrangement of non-traditional learning spaces geared for individualized modular learning, and includes teacher stations and distribution centers for tapes and films. Also on the second floor are five typing carrels, videotape viewing areas, a classroom, a quiet study room, the legal reference collection and back copies of the periodical collection.

The 46,000-volume book collection is located on both the first and second floors, as are the study and lounge areas for students. The LRC provides the services of professional librarians and a support team of technicians, clerical staff and work/study students.

KCCK-FM Public Radio

KCCK-FM is a 10,000-watt radio station which broadcasts to communities throughout the college's seven-county area. The station is affiliated with National Public Radio, a network of more than 275 stations across the nation. The station broadcasts daily from 6 a.m. to midnight at 88 on the radio dial. KCCK offers a variety of programming, including jazz, folk, classical, news and public affairs.

KCCK is a membership-supported organization. Membership information is available by calling 398-5446 or by writing to: P.O. Box 2068, Cedar Rapids, Iowa 52406.

KCCK's studio and offices are located in Room 216, Linn Hall on the Kirkwood campus.

Computer Literacy Center

Kirkwood's new Computer Literacy Center provides the opportunity for users to acquaint themselves with current computer technology and receive hands-on experience with computer hardware and software. The



center houses terminals, micro-computers and a library of programs including word processing, electronic spreadsheets, tutorial typing, graphing/bar charts, and various computer languages (BASIC, FORTRAN, PASCAL, COBOL).

The center is open to students, staff and the community for learning-related activities. Time usage of the computer equipment may be purchased through the Bookkeeping Office. Call the Computer Literacy Center at 398-5606 for further details.

Off-Campus Facilities

Lincoln Community Education Center in southwest Cedar Rapids is the site of general interest classes, adult basic education and high school completion classes, the Right-to-Read and English for the Foreign Born programs, KEY classes, G.E.D. testing, Community Education offices, congregate meals and the college's infant/child care center.

Other Community Education centers offer a similar educational program in Iowa City, Marion, Monticello, Washington and Williamsburg. (More information on off-campus programs and services is available in the Community Education Section of this catalog.)

As many as 1000 adult evening Community Education classes are offered per quarter in more than 100 locations in the seven counties, including schools, churches, factories, stores and community centers in

cooperation with 39 local school districts.

College credit courses are offered at many off-campus sites. Classes are available both in the traditional classroom format and via the Kirkwood Telecommunication System (KTS). A wide variety of courses are taught through Telelink which employs an interactive television system to link the main campus to classrooms in the seven-county area. Classes are also broadcast on cable and public television.

The state reformatory in Anamosa offers Kirkwood classes which serve approximately 500 of the 700 inmates.

Kirkwood-Welty Park, located south of Cedar Rapids, is a 22-acre recreational area consisting of a softball-baseball field and park area.

International Education

Study abroad is offered in both arts and sciences and vocational-technical areas, providing rich educational and cultural experience. Students may also take advantage of the college's Off-campus Study Center at the University of Konstanz, in Konstanz, West Germany. The center is coordinated by the Community Colleges for International Development, a nine-college group to which Kirkwood belongs.

Kirkwood Foundations

The primary objective of the Kirkwood Community College Foundation and the Kirkwood Community College Facilities Foundation is the strengthening of Kirkwood's scientific, literary and educational pursuits. As two private non-profit corporations, the foundations are empowered to solicit and receive tax deductible gifts, bequests and trusts, all for the benefit of Kirkwood Community College. Any gift to Kirkwood, restricted or unrestricted, may be made through the foundations.

The foundations encourage voluntary giving to provide more funds for scholarships, fellowships, student loans, library acquisitions, faculty grants and other college needs for which tax dollars are limited or unavailable.

Voluntary board members from Kirkwood's seven-county area assist in the many fund raising efforts.

Annual Fund Drives

The foundations serve to channel gifts from alumni, friends, corporations and foundations to the college through annual fund drives. Many gifts are received each year as a result of these campaigns.

The foundations also coordinate planned giving in the form of deferred gifts through bequests, living trusts, testamentary trusts, life insurance agreements, life income contracts and gift annuities.

Memorial Funds

Permanent memorials on the campus, "named" scholarships, professorships, facilities or areas in buildings also are coordinated through the foundations.

Kirkwood Alumni Association

The Kirkwood Alumni Association is made up of two branches, the Alumni Board of Directors and the Alumni Social Clubs.

The 14-member Alumni Board of Directors meets monthly to plan and organize a comprehensive Alumni program. Some activities the Board initiates are fund-raising projects such as chartered bus trips, suppers, game nights and fun runs. The Board also sponsors the annual Kirkwood Crafts & Collectors Show. Proceeds from these events are used for student scholarships and to buy needed equipment for campus buildings.

The Alumni Social Clubs are made up of those alumni wishing to make donations to the college. The Social Clubs have an activity planned each quarter to help them meet with other Kirkwood Alumni. These members also help with the activities sponsored by the Board of Directors.

Kirkwood Alumni remain visible and active on campus and in the community. Alumni have gone into all walks of life, using their Kirkwood experience as a catapult. Many of Kirkwood's graduates have a desire to remain aware of what is going on around campus and the Alumni Association strives to keep them informed.

Information regarding Alumni activities can be obtained from the Alumni Office in Iowa Hall.

Expanding Horizons for Women

Kirkwood offers a year-round program of activities for adult women through its "Expanding Horizons for Women" program. The program features short seminars and workshops on topics of interest to women, as well as career advising and counseling activities designed to assist women who are returning to school and entering careers. An information brochure is prepared quarterly listing college activities of interest to women, including information of arts and sciences courses, vocational-technical career programs, Community Education classes and other educational opportunities. The Expanding Horizons program sponsors Women's Assistance Sessions prior to each quarter for women who would like to continue their education and possibly pursue a career. These sessions provide information on counseling services, financial aid and registration procedures at Kirkwood. The college's Infant/Child Care Center is available to women attending Kirkwood classes and activities.

ACADEMIC CALENDAR

Kirkwood's academic year begins during the last week in August and ends during the third week in August of the following year. The year is divided into four quarters, with both six-week and twelve-week classes held during the summer. Each quarter has an average of 60 instructional days, including finals and registration. No classes are held on Labor Day, Thanksgiving Day, Christmas Day, New Year's Day, Good Friday or Memorial Day. In addition, there are recesses centering around the Christmas and Easter holiday seasons.

The exact calendar for each year is recommended by the Academic Policies and Procedures Committee to the Vice President of Instruction, and presented to the Board of Trustees in early spring. Once approved, the calendar is printed and made available to students.

The 1983-84 calendar is printed here. The calendars for 1984-85 and 1985-86 should be available in April 1984 and 1985 respectively.

1983-84

FALL 1983

August 29, 30

August 31

September 5

September 7

November 2

November 23

November 24, 25

Registration

Classes begin

College holiday, no classes,
offices closed

Last day to register late or add
classes

Last day to drop classes

Quarter ends

College holiday, no classes,
offices closed

WINTER 1983-84

November 28, 29

November 30

December 6

December 19-30

December 23-30

February 10

March 2

Registration

Classes begin

Last day to register late or add
classes

Student recess days

College holiday, no classes,
offices closed

Last day to drop classes

Quarter ends

SPRING 1984

March 5, 6

March 7

March 13

April 20

April 16-20

May 11

May 28

June 1

June 2

Registration

Classes begin

Last day to register late or add
classes

College holiday, no classes,
offices closed

Student recess days

Last day to drop classes

College holiday, no classes,
offices closed

Quarter ends

Commencement

SUMMER 1984

June 4

June 5

June 11

July 4

August 3

August 24

August 25

Registration

Classes begin

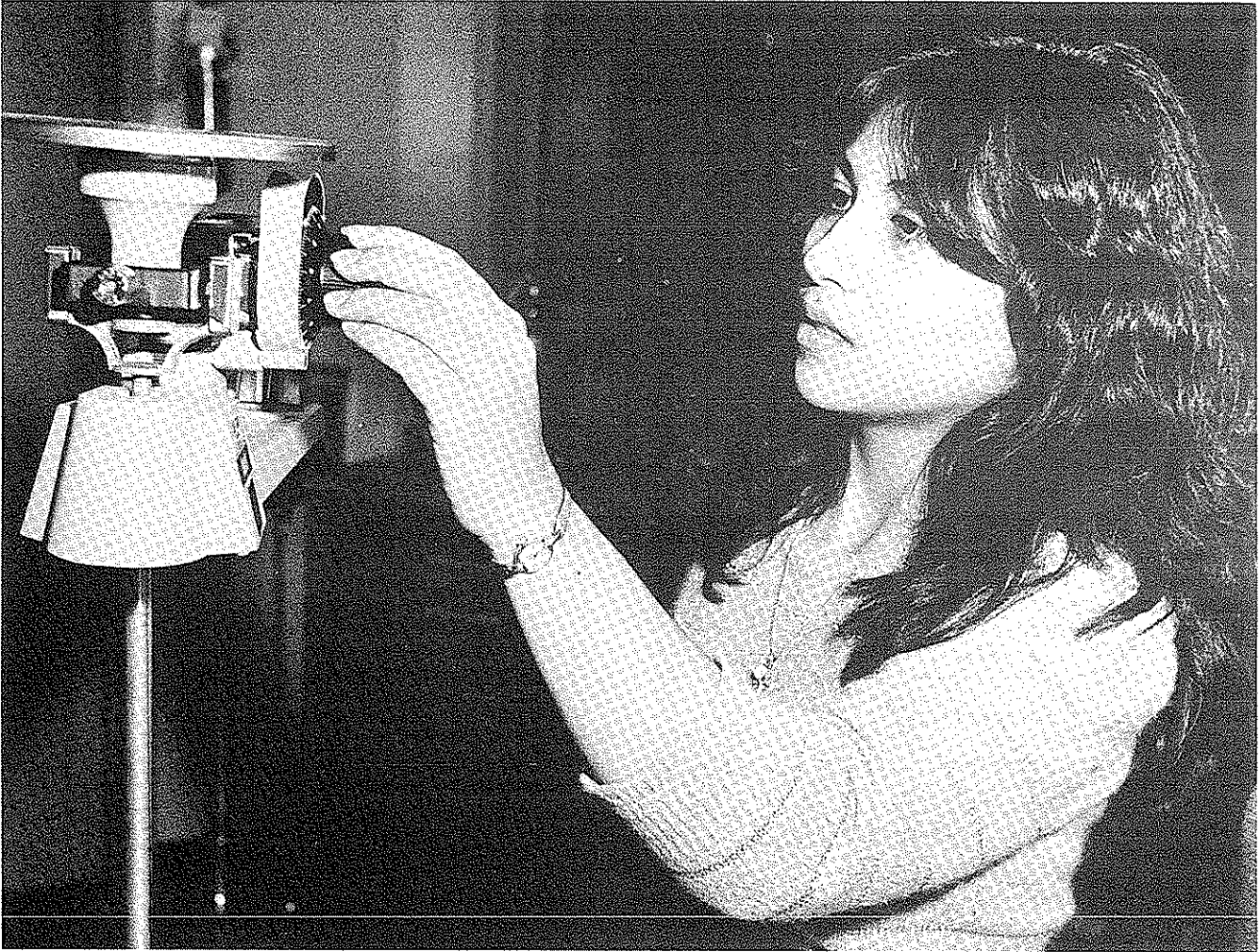
Last day to register late or add
classes

College holiday, no classes,
offices closed

Last day to drop classes

Quarter ends

Commencement



INSTRUCTIONAL PROGRAMS

GUIDE TO COLLEGE PROGRAMS

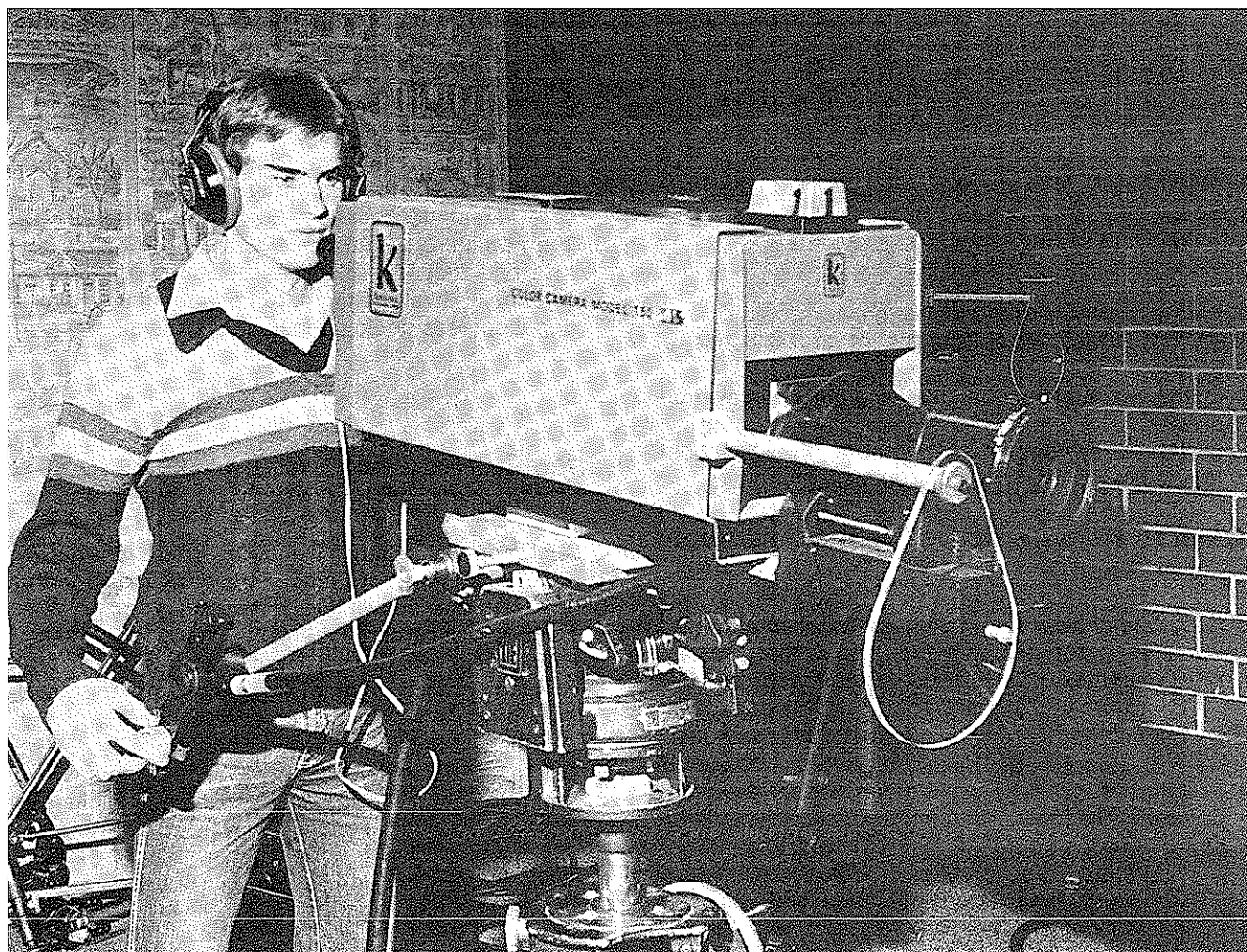
ARTS AND SCIENCES DIVISION

Degree Requirements	14
College Parallel — Transfer Curricula	15
College Areas	15
College Majors	15
College Transfer — Career Option Programs	16
Business Administration	16
Accounting	16
Banking	16
International Trade	16
Management Development	17
Marketing	17
Communications Media and Technology	17
Criminal Justice	18
Education Careers	19
Handicapped Services	19
Human Services	19
Legal Assistant	20
General Studies Degree	20
Pre-Environmental Science and Forestry	21
Credit by Examination	21
English as a Second Language	21
Core Courses	21

VOCATIONAL-TECHNICAL DIVISION

The Meaning of Vocational-Technical Education	24
Requirements	25
Agricultural Technologies	26
Agricultural Processing and Distribution	
Department	26
Agribusiness Technology	26
Horse Science Technology	27
Small Animal Services	28
Agricultural Production and Mechanization	
Department	28
Farm and Ranch Technology	28
Farm Equipment Mechanization Technology	30
Horticulture and Natural Resources Department	31
Floriculture	31
Grounds and Turfgrass Management	
Technology	32
Landscape, Nursery and Garden Center	
Technology	32
Parks and Natural Resources Technology	33
Business Technologies	34
Management Information Systems Department	34
Accounting Technology	34
Accounting	34
Administrative Secretarial Technology	35
Advanced Placement-Certified Professional	
Secretary	35
Clerical	36
General Secretarial	36
Information Processing	36
Legal Secretarial	36
Medical Secretarial	36
Medical Record Technology	37
Purchasing Technology	37
Management and Marketing Department	37
Food Service Management Technology	37
Food Service Training	38

Food Store Management Technology	38
Interior Design Technology	39
Management Development Technology	39
Retail Management Technology	41
Fashion Merchandising	42
Retail Marketing	42
Real Estate	42
Data Processing Technologies	43
Computer Programming Technology	43
Computer Operations	43
Health Technologies	44
Allied Health Department	44
Dental Assisting Technology	44
Dental Assisting Off-Campus Program	44
Dental Laboratory Technology	45
Electroencephalographic Technology	45
Medical Assisting	46
Occupational Therapy Assisting Technology	46
Orthopaedic Physician's Assisting Technology	47
Respiratory Therapy Technology	47
Nursing Department	48
Nursing Technology	48
Associate Degree Nursing	48
Licensed Practical Nursing	48
Industrial Technologies	49
Drafting and Design Department	49
Architectural Drafting	49
Graphic Arts	49
Jewelry Making and Repair Technology	50
Mechanical Design Technology	50
Welding	50
Environmental Science Department	51
Analytical Laboratory	51
Water and Wastewater Technology	51
Industrial Processes and Services Department	52
Automotive Collision Repair	52
Automotive Technology	53
Automotive Mechanics	53
Automotive Specialist	53
Marine and Small Engine Mechanics	54
Electro-Mechanical Technology	54
Communications Electronics	54
Electrical Equipment Servicing	54
Electronics Engineering Technology	55
Computer Technology	55
Communications Technology	55
Machinist	56
COMMUNITY EDUCATION	
Community Education Courses	58
Community Education Centers	58
Secondary Programs	58
General Interest and Recreational Classes	58
Supplementary Vocational Classes	59
In-Service, Seminars, Workshops	59
Transfer and Vocational Credit	59
High School Completion	59
Correspondence Studies	60
Adult Basic Education/Right to Read	60
Semi-Trailer Truck Driving	60
Institutional Programs	60



ARTS AND SCIENCES DIVISION

The Arts and Sciences Division offers three degrees: the Associate of Arts, the Associate of Science and the Associate of Science/Career Option.

General Degree Requirements

1. Earn a minimum of 90 quarter hours of credit.
2. Earn the last 24 quarter hours in residence at Kirkwood.
3. Maintain a minimum cumulative grade point average of 2.00.
4. Satisfactorily complete 8 quarter hours in Composition and 4 quarter hours in Speech.

Specific Requirements for the Associate of Arts Degree

1. Complete general requirements described above.
2. Complete group requirements as follows:*
 - A. Humanities - 12 quarter hours (at least 4 hours in Literature and at least 4 hours in Arts and Ideas);
 - B. Mathematics/Science - 12 quarter hours (at least 1 course in Math and at least 1 course in Science);
 - C. Social Sciences - 12 quarter hours;
 - D. Historical Cultural - 8 quarter hours;
 - E. Distributed requirements - 4 quarter hours from Communication Arts, Humanities, Math/Science, Social Sciences and Historical Cultural.

Specific Requirements for the Associate of Science Degree

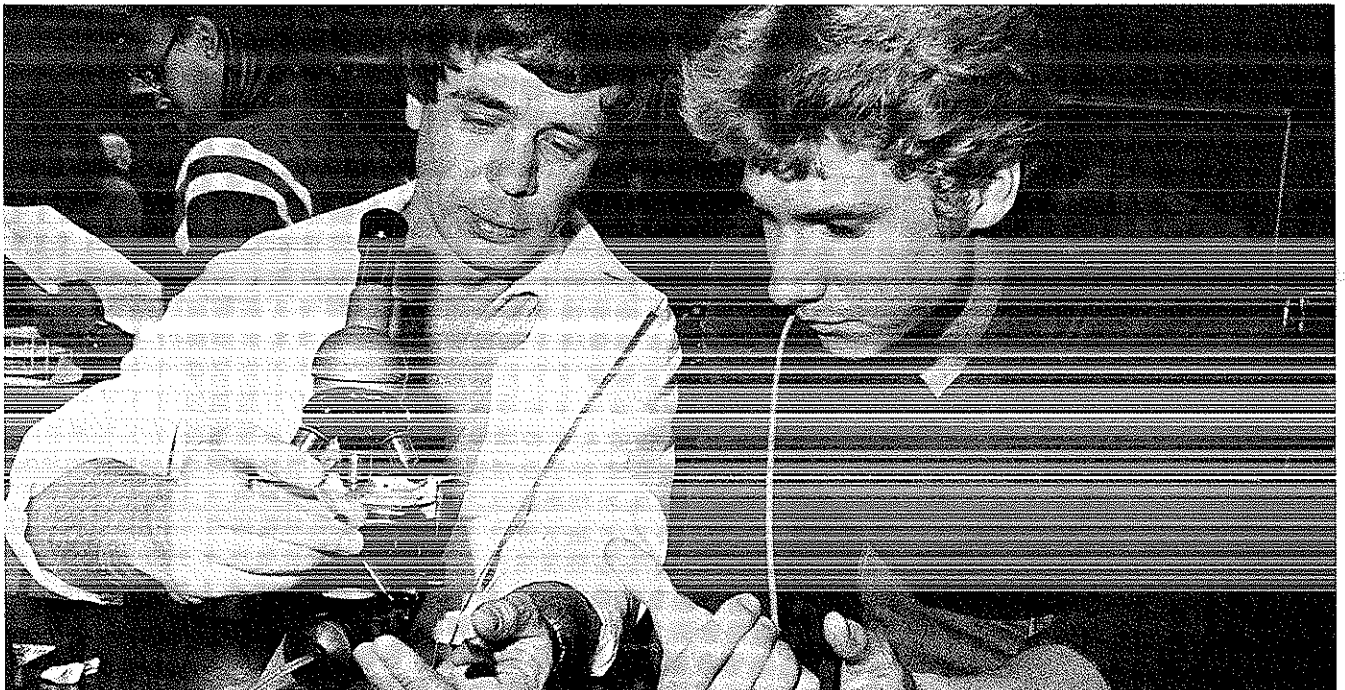
1. Complete general requirements described earlier.
2. Complete group requirements as follows:*
 - A. Humanities/Historical Cultural - 8 quarter hours;
 - B. Social Sciences - 8 quarter hours;
 - C. Mathematics/Science - 30 quarter hours.
3. The remaining 32 quarter hours will be taken from Arts and Sciences electives designed for transfer, with the understanding that 24 quarter hours of vocational courses could be included in the 32.

Specific Requirements for the Associate of Science/Career Option Degree

D.P.I. approved Career Option programs are authorized to offer the Arts and Sciences/Career Option degree with the following requirements.

1. Complete general requirements described earlier.
2. Complete group requirements as follows:*
 - A. Humanities/Historical Cultural - 8 quarter hours;
 - B. Mathematics/Science - 8 quarter hours;
 - C. Social Sciences - 8 quarter hours;
 - D. Career Option emphasis - 30 quarter hours.
3. The remaining 24 hours of electives may include 24 hours of vocational-technical credits.

*For complete definition of which courses fulfill which group requirements, see the Arts and Sciences core course description section.



College Parallel-Transfer Curricula

Career Areas

College parallel-transfer curricula permit completion of the first two years of a bachelor's degree program. Students can begin their preparation for post-baccalaureate careers by carefully selecting courses in their Associate of Arts or Associate of Science degree program. Kirkwood's Arts and Sciences curricula can provide the initial course work leading to any of the career areas listed below.

- Agriculture, Agribusiness and Natural Resources
- Business Administration
 - Management Development
 - Banking and Finance
 - Accounting
 - International Trade
 - Marketing
- Communication and Media
 - Broadcasting
 - Journalism
- Consumer Affairs and Homemaking
- Engineering
- Environment
 - Fisheries and Wildlife Biology
 - Pre-Environmental Science & Forestry
- Fine Arts and Humanities
- Health
 - Dentistry
 - Medicine
 - Nursing (BSN)
 - Pharmacy
 - Medical Technology
 - Physical Therapy
- Personal Services
- Physical Education/Recreation
- Public Service
 - Social Work
 - Education
 - Law
 - Government
 - Transportation



College Majors

The Arts and Sciences curricula also provide students with courses appropriate to most baccalaureate majors. With careful planning, students can complete the first two years of most college majors listed below. Faculty advisors and counselors can provide valuable assistance to students planning to transfer. Students should consult with their advisor when making course selections.

Accounting	Foreign Language
Agricultural Science	Forestry
Anthropology	History
Art	Journalism
Biochemistry	Liberal Arts
Biology	Literature
Biophysics	Mathematics
Broadcasting	Music
Business Administration	Nursing
Chemistry	Physical Education
Computer Science	Political Science
Economics	Psychology
Education	Recreation
Engineering	Sociology
English	Speech
Environmental Studies	Statistics
Finance	

College Transfer-Career Option Programs

Several college transfer-career option programs are available to students. Persons who wish to study for one or two years in college transfer courses, but who also want to develop occupational skills suitable for employment immediately upon completion of one or two years of study, may find these career-oriented programs especially attractive. Credits earned in these programs may be applied toward a baccalaureate program at a four-year university or college. Descriptions of the college transfer/career option programs follow.

Business Administration

Kirkwood provides both a college parallel-transfer curriculum in pre-business and several Associate of Science/Career Option degrees. Students should contact the Business Technologies area advisor regarding requirements for the various transferring institutions. Students should also contact the Business Technologies area advisor for information on the following Business Administration Associate of Science/Career Option programs.

Accounting

This program is designed to prepare individuals for semi-professional employment opportunities in the accounting field. Upon completion of the program, students should be prepared to enter business in the areas of cost accounting, general accounting and many other specialized areas of financial reporting. Requirements include accounting principles and practice in addition to general and occupational information.

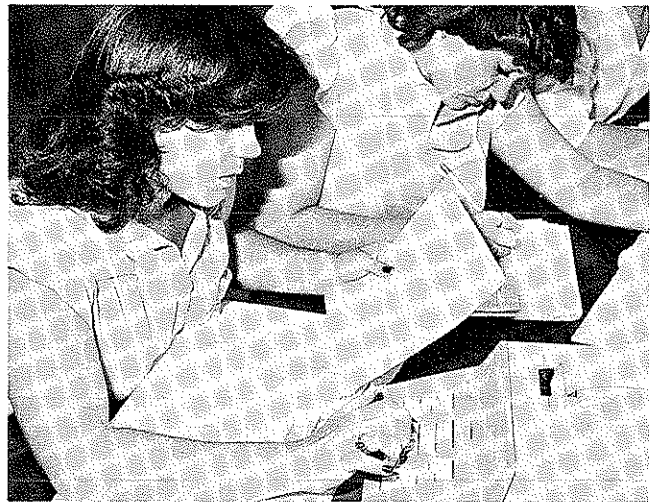
Upon completion of the required 90 quarter credit hours, graduates may receive an Associate of Applied Science degree, or an Associate of Science/Career Option degree.

Required Program Courses

	Credits	Hrs.
AC001T Principles of Accounting I	4	48
AC002T Principles of Accounting II	4	48
AC003T Principles of Accounting III	4	48
AC006T Intermediate Accounting I	4	48
AC007T Intermediate Accounting II	4	48
AC009T Intermediate Accounting III	4	48
AC004T Cost Accounting I	4	48
AC005T Cost Accounting II	4	48
AC018T Income Tax	4	48

Recommended Electives

	Credits	Hrs.
OE009T Electronic Office Machines	2	36
LW005T Business Law I	4	48
MA043T Finite Mathematics	5	60
MA041T Statistics	5	60
MA031T Intermediate Algebra	5	60



DP010T	Introduction to Micro Computers and Data Processing	4	60
AC021T	Computer Accounting Applications	4	48
EC013T	Principles of Economics (Macro)	4	48
EC014T	Principles of Economics (Micro)	4	48

Banking

The curriculum in Banking is designed for students seeking careers with financial institutions and for those already in banking who wish to attain advanced positions.

Students engaged in banking occupations may receive various certificates from the American Institute of Banking upon completion of identified required courses.

Students must fulfill the general requirements for the Associate of Arts or Associate of Science/Career Option degree in addition to completing the required program courses.

Required Program Courses

	Credit	Hrs.
MK007T Principles of Banking	3	36
18 credit hours to be selected from approved Banking courses		
AC001T Principles of Accounting I	4	48
AC002T Principles of Accounting II	4	48
AC003T Principles of Accounting III	4	48
MA031T Intermediate Algebra	5	60
MA043T Finite Math	5	60
MA041T Fundamentals of Statistics	5	60
EC013T Principles of Economics (Macro)	4	48
EC014T Principles of Economics (Micro)	4	48

International Trade

The International Trade program six quarters in length, is designed to prepare people to meet the challenge of increasing world trade in the years ahead. Students who complete the program will be prepared for employment managing export and import functions in businesses and industries.

The program is structured to prepare people for employment upon receiving the Associate of Arts, or Associate of Science degree. Students who desire increased opportunities for advancement may transfer to four-year colleges to complete a bachelor's degree. Course credits earned are transferable. Enrollment may be on a part-time or full-time basis.

Students must fulfill the general requirements for the Associate of Arts or Associate of Science/Career Option degree in addition to completing the required program courses listed below.

Required Program Courses		Credits	Hrs.
MK014T	Exploring World Trade	3	36
MK017T	Techniques of Exporting	3	36
MK022T	International Transportation	3	36
MK021T	Foreign Trade Documentation	3	36
MK800T	Independent Study in International Trade	1	24
IS047T	Understanding Cultures	4	48
MK024T	International Business	3	36
MK027T	Advanced Documentation	3	36

Recommended Elective Courses		Credits	Hrs.
AC001T	Principles of Accounting I	4	48
AC002T	Principles of Accounting II	4	48
AC003T	Principles of Accounting III	4	48
AM003T	Internship	9	324
MK003T	Principles of Selling	4	48
AM032T	Introduction to Business	4	48
DP010T	Introduction to Micro Computers and Data Processing	4	60
OE006T	Typing	3-6	
GE001T	Geography	3	60
LW005T	Business Law I	4	48
	Foreign Language	8	96
AM022U	Principles of Supervision	3	36
MK001T	Principles of Marketing	4	48

Management Development

The Management Development career option program is designed for students preparing for management careers or those who are already in entry level management careers. In addition to classroom instruction, students have the option of utilizing on-the-job training as a part of their program. This enables them to put into practice those skills learned in the classroom.

Students must fulfill the general requirements for the Associate of Science/Career Option degree in addition to completing the required program courses listed below.

Required Program Courses		Credits	Hrs.
AM062U	Organizational Communications	3	36
AM022U	Principles of Supervision	3	36
AM060U	Human Behavior in Organization	3	36
AC001T	Principles of Accounting I	4	48
AC002T	Principles of Accounting II	4	48
AC003T	Principles of Accounting III	4	48
DP010T	Introduction to Micro Computers and Data Processing	4	60

Recommended Electives		Credits	Hrs.
Management Development Electives		16	192

Marketing

The Marketing degree prepares graduates for careers as sales representatives in business or industry. Specifically, positions might include food equipment and pharmaceutical sales as well as other sales occupations. Long-term goals may include a position in sales management.

Students must fulfill the general requirements for the Associate of Science/Career Option degree in addition to completing the required program courses listed below.

Required Program Courses		Credits	Hrs.
AM032T	Introduction to Business	4	48
MK001T	Principles of Marketing	4	48
MK003T	Principles of Selling	4	48
AC001T	Principles of Accounting I	4	48
AC002T	Principles of Accounting II	4	48
DP010T	Introduction to Micro-Computers and Data Processing	4	48
EC013T	Principles of Economics (Macro)	4	48
EC014T	Principles of Economics (Micro)	4	48

Recommended Electives		Credits	Hrs.
MK025T	Principles of Advertising	4	48
MK016T	Counselor Selling	4	48
MK019U	Small Business Organization and Management	3	36

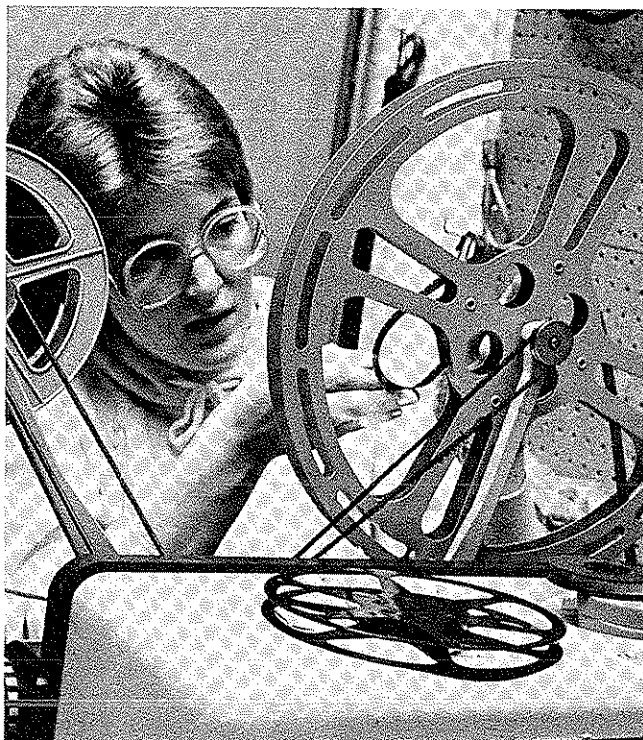
Communications Media and Technology

Kirkwood's program in Communications Media and Technology is designed to give students a broad base of experience with the communications industry. Built around a solid arts and sciences core, it is suited both for the student who wishes to pursue a four-year college degree and for the student who plans to seek employment following graduation from Kirkwood.

Because most jobs in the communications field require a generalist's view of the world combined with a specialist's expertise, the program requires all students to do both theoretical and practical course work. After learning how to use the technology across the field, students elect an area of specialization and work intensively to develop skills suited to their particular career interests. These might include working as a creative writer, TV news photographer, media aide or radio announcer.

A college parallel/career option program, the Communications Media and Technology course of study can be completed in two years by a full-time student or over a longer period of time by a part-time student.

In order to earn the degree of communications, students must fulfill the general requirements for either the Associate of Arts or Associate of Science degree and complete the required program courses listed on the next page.



Required Program Courses

All students in the program are required to take the core courses listed below.

		Credits	Hrs.
JO101T	Introduction to Communications Media	4	48
CM214T	Media Lab	3	48
JO106T	Promotion and Public Relations	3	36
CM319T	Legal and Ethical Issues in Communications	2	24
MK025T	Principles of Advertising		
	or		
MK001T	Principles of Marketing	4	48
CM316T	Special Projects	1-3	36-108
CM317T	Internship	4-8	
CM316T	Special Projects	1-3	36-108

Additional Required Program Courses

Depending upon the career specialization chosen, students must complete specified courses from the listing that follows. Possible areas of specialization are: community newspaper journalist, creative writer, advertising copy writer, radio/TV news reporter, radio announcer/operator, TV production assistant, media aide, media production specialist, news photographer, media artist, radio account executive and media buyer.

CM306T	Radio and TV Presentation	2	24
AT014T	Lettering	2	48
AT008T	Design I	2	48
AT009T	Design II	2	48
AT010T	Design III	2	48
AT011T	Drawing I	2	48
AT012T	Drawing II	2	48
AT013T	Drawing III	2	48
MK003T	Principles of Selling	4	48
MK001T	Principles of Marketing	4	48
JO103T	Introduction to Photography	3	48
AT019T	Intermediate Photography (Black & White)	3	48
JO104T	Photojournalism	3	48

JO105T	Newswriting and Reporting I	4	48
JO108T	Newswriting and Reporting II	4	48
CM320T	Introduction to AV Production	2	24
CM321T	Introduction to TV Production	2	24
CM322T	Introduction to Audio Production	2	24
CM323T	Advanced Production	2	24
AT036T	Color Photography	3	48
JO107T	Principles of Design & Layout	2	48
CM201T	Public Communication	4	48
CM318T	Broadcast Writing	3	36

Criminal Justice

The Criminal Justice program has two areas of emphasis: Law Enforcement and Corrections. The student need not select an area of emphasis until completion of approximately one-third of the program, thus providing each student the maximum opportunity to determine which career area to select.

The program's emphasis is on individual interests; therefore internships, experience credit examinations and certification procedures are offered. All are designed to assist the student to prepare for a career in the criminal justice system, either after completion of the Associate of Arts degree or after transfer to a four-year college or university.

Students must fulfill the general requirements for the Associate of Arts or Associate of Science degree, in addition to completing the required program courses listed below.

Law Enforcement

Required Program Courses*

		Credits	Hrs.
*LE009T	Introduction to Criminal Justice	4	48
*LW003T	Criminal Law	4	48
*SO007T	Criminology	4	48
*SO011T	Juvenile Delinquency and Deviance	4	48
*LW007T	Constitutional Law	4	48

Recommended Electives

LE002T	Patrol Procedures	4	48
LE010T	Traffic Safety and Accident Investigation	4	48
LW004T	Applications of Criminal Law	4	48
LE012T	History of the Police in America	4	48
CO006T	Race Relations in the Criminal Justice System	4	48
LW002T	Criminal Evidence	4	48
LE004T	Criminal Investigation	4	48
LE005T	Crime Scene Investigation	4	48
LW001T	Criminal Procedural Law	4	48
CO002T	Introduction to Community Corrections	3	36

*The law enforcement major must take the courses marked with an * plus at least three (3) of the recommended electives in order to receive the Associate of Arts degree with a major in Law Enforcement.

Corrections

Required Program Courses*

		Credits	Hrs.
*LE009T	Introduction to Criminal Justice	4	48
*LW003T	Criminal Law	4	48
*SO007T	Criminology	4	48

*S0011T	Juvenile Delinquency and Deviance	4	48
*LW007T	Constitutional Law	4	48

Recommended Electives

S0006T	Social Problems	4	48
PY020T	Psychology of Growth and Development	4	48
C0004T	Penology	4	48
S0013T	Sociology of Poverty	4	48
PY039T	Social Psychology	4	48
C0006T	Race Relations in the Criminal Justice System	4	48
C0002T	Introduction to Community Corrections	3	36

*The Community Corrections Associate must take the courses marked with an * plus at least three(3) of the courses from the list of recommended electives in order to receive the Associate of Arts degree with a major in Corrections.



Education Careers

This program is designed to prepare students to work in schools, day care centers and other "educational" settings as paraprofessionals. The program consists of specific skills training, general education and experience working with children or youth in a school setting. In addition, the student will have the option of transferring the credits earned in this program toward teacher certification degree programs at four-year colleges. The Education Careers curriculum serves as a strong first two years of a teaching degree program.

The student who completes the program should be prepared to function in a variety of roles as part of a teaching team and would typically work as an aide or associate to a teacher.

Students must fulfill the general requirements for the Associate of Arts or Associate of Science/Career Option degree, in addition to completing the required program courses listed below.

Required Program Courses

	Credits	Hrs.
PY002T	General Psychology	4 48
PY020T	Psychology of Growth and Development	4 48
LS008T	Introduction to Uses of Library I	1 12
LS009T	Introduction to Uses of Library II	1 12
OE006T	Typing I	2 48
PY007T	Field Experience/Education I	4 144
PY005T	American Public Education	4 48
PY009T	Introduction to Teaching	4 48
	or	
PY003T	Teacher Associate Seminar	1 12
LS001T	Instruction in Educational Media	3 36

Recommended Electives

PY025T	The Young Child	4	48
PS002T	American Government	4	48
MS001T	First Aid	1	12
AT001T	Art Appreciation	4	48
PY004T	Educational Psychology	4	48
PD005T	Human Potential	2	24
DP006T	Introduction to Data Processing and Computer Science	4	48
PY024T	The Exceptional Child	4	48
HY016T	Europe in the Age of Monarchy	4	48

Handicapped Services

The Handicapped Services program prepares students taking one year of study for work as paraprofessionals in a variety of school or community agencies serving the handicapped. Students learn to carry out special programs designed by a variety of professionals. After two years of study the student may be employed or may go on to pursue a four-year degree in a related field such as special education, social services or psychology. After successful completion of the required program courses, the student will be awarded a diploma.

Students working toward an Associate of Arts or Associate of Science degree must fulfill the general requirements for the degree, in addition to completing the required program courses listed on this page.

Required Program Courses

	Credits	Hrs.
PY026T	Handicapped Services Orientation	2 24
PY027T	Skill Development-Observation and Management of Behavior	4 48
PY028T	Skill Development-Mainstreaming and Mild Disabilities	4 48
PY031T	Skill Development-Physical and Multiple Disabilities	4 48
PY029T	Handicapped Service Seminar I	4 130
PY030T	Handicapped Service Seminar II	8 264
MS003T	First Aid	.5 6
MS004T	Cardio-pulmonary Resuscitation	.5 6
PD005T	Human Potential Lab	2 24
PY002T	General Psychology	4 48
PY020T	Psychology of Growth and Development	4 48
PY024T	Exceptional Child	4 48
CM202T	Group Communications	4 48

Human Services

This is a competency-based program that focuses on human psychology, record-keeping, social policy, social programs, communication, interviewing, observations, group process and problem solving. Mastery of the competencies will qualify students for a variety of entry-

level positions, such as income maintenance worker, youth care worker in an adolescent group home, recreational aide in a residential facility, intake worker in social service agencies, outreach worker, a social worker aide or a worker on a crisis line.

This college parallel/career option program can be completed in two years with the student earning an Associate of Arts or Associate of Science degree. Part-time students may also enter the program and complete the requirements over a longer period of time. After graduation from Kirkwood, students will be qualified either to enter as juniors in a four-year college or seek employment as human service workers.

Students must fulfill the general requirements for an Associate of Arts or Associate of Science degree, in addition to completing the required program courses listed below.

Required Program Courses

	Credits	Hrs.
SW009T Introduction to Human Services	4	48
SW010T Human Service Policy and Programs	4	48
SW011T Making Observations	4	48
SW012T Intervention Skills	4	48
SW005T Field Experience and Seminar I	6	192
SW007T Field Experience and Seminar II	9	300
PD005T Human Potential Lab	2	24
CM204T Speech Communication	4	48
PY002T General Psychology	4	48
PY020T Human Growth and Development	4	48
SO006T Social Problems	4	48
CM202T Speech Communication	3	36

Legal Assistant

Approved by the American Bar Association and the Iowa Bar Association, the program is designed for students desiring employment as Legal Assistants. The program requires a minimum of six quarters to complete.

The general objective of the Kirkwood Legal Assistant program is to train the student to perform the legal work that would enable the employer attorney to deliver better legal services. The specific program objectives are to train the students to perform tasks, listed below, which are frequently expected of a legal assistant. Upon completion of the program, the legal assistant, under the supervision of a lawyer, can be expected to:

1. Prepare or interpret routine legal documents.
2. Engage in dialogue with the attorney and others, on substantive areas of the law, including probate; tax, contracts, domestic relations, real estate, torts, litigation, bankruptcy, commercial law and business enterprises.
3. Research, select, compile and use technical legal information within the law library.
4. Comprehend and project the ethics of the lawyer as a member of the legal team, knowing the role of each member.

5. Communicate accurately, both orally and in writing.

Upon completion of the program, the student receives an Associate of Science/Career Option degree. In addition to the 36 quarter hour core requirement, the student must satisfactorily complete all the required program courses and a minimum of 14 hours of elective program courses for a total of 90 quarter hours.

As an alternative transfer degree, the student can receive an Associate of Arts degree. In addition to the 60 quarter hour core requirement, the student must satisfactorily complete all the required program courses for a total of 102 quarter hours.

Required Program Courses

	Credits	Hrs.
LW032T Legal Asst. Orientation	1	12
LW009T Research	3	36
LW005T Business Law I	4	48
AC018T Income Tax	4	48
LW029T Legal Writing	3	36
LW030T Legal Ethics	1	12
LW011T Estates and Trusts I	3	36
LW012T Estates and Trusts II	3	36
LW015T Torts	3	36
LW016T Civil Litigation	3	36
LW017T Business Organizational Law	3	36
LW014T Legal Internship	2	72
LW019T Real Estate Law	4	48
LW024T Domestic Relations	3	36

Program Electives

	Credits	Hrs.
AC001T Principles of Accounting I	4	48
LW026T Law Office Management	3	36
AC020T Tax III: Advanced	3	36
LW023T Bankruptcy Law	3	36
AC016T Income Tax for Business	3	36
LW013T Tax IV: Estate and Gifts	3	36
LW006T Business Law II	4	48
LW031T Substantive Criminal Law	3	36

General Studies Degree

The Associate of General Studies degree is designed to meet the needs of people whose goals cannot be met by traditional degree programs. It is intended for those adults who wish to continue their education, yet seek recognition of their past experiences in developing a program of study based upon their personal interests and career goals.

The general studies student may utilize any of the educational programs and services of the college in developing his or her study plan. They may include both credit and non-credit courses or seminars offered by Kirkwood, cooperative education-work experiences, and individualized general studies projects. Although some of the student's studies may not be accepted for college transfer credit, they will count toward the Associate of General Studies degree as long as they are approved to be a part of the student's study plan for the degree.

Special Program with the State University of New York

Pre-Environmental Science and Forestry

This program is designed for students who ultimately desire a B.S. degree in environmental science and/or forestry from the State University of New York (SUNY) College of Environmental Science and Forestry, an upper division/graduate center in Syracuse.

After the first two years of study at Kirkwood Community College, transfers to Environmental Science and Forestry may apply to a variety of programs at Syracuse, which include the **biological sciences** (botany and forest pathology, entomology, zoology, and wildlife biology), **chemistry** (natural products, polymers, biochemistry), **forest engineering, paper science and engineering, wood products engineering, and resource management** (forest resource science, management science, environmental education and communications, urban forestry, world forestry, applied resource management). This program in landscape architecture leads to a B.S. degree in environmental studies and, after one additional year, a Bachelor of Landscape Architecture degree.

Persons planning to transfer should follow the program requirements in consultation with Kirkwood's Pre-Environmental Science and Forestry advisors for selection of electives, which vary according to the curriculum in Environmental Science and Forestry.

Successful graduates of Kirkwood Community College's Pre-Environmental Science and Forestry program generally gain admission to the SUNY College of Environmental Science and Forestry with full junior class status.

Credit by Examination

Students in the Arts and Sciences Division may earn up to 32 quarter hours of credit through general examinations of the College Level Examination Program (CLEP). In addition, a wide variety of subject matter examinations are available to enable students to earn college credit for their knowledge in various subject areas, thereby allowing them to test out of individual courses. Information about these examinations may be obtained from the Counseling Office.

English as a Second Language

The English as a Second Language program is a full-time English and orientation program for non-English speaking persons. The English as a Second Language program is designed to provide instruction to help the non-English speaker to reach a level of proficiency in

speaking English that is necessary for employment or attending school. Students may learn at their own pace and stay in the program until reaching the level of proficiency necessary to enter a credit program.

Arts and Sciences Core Courses

Applicable to A.A., A.S. and A.S./ Career Option Degree Requirements

COMMUNICATION ARTS (12 cr.)		Credits
CM101T	Composition I	4
CM102T	Composition II or	4
CM117T	Composition II: Technical Writing	
CM204T	Speech Communication or	4
CM201T	Public Communication	
JO101T	Introduction to Communications Media	4

HUMANITIES (12 cr. A.A.; 8 cr. A.S.) **Literature**

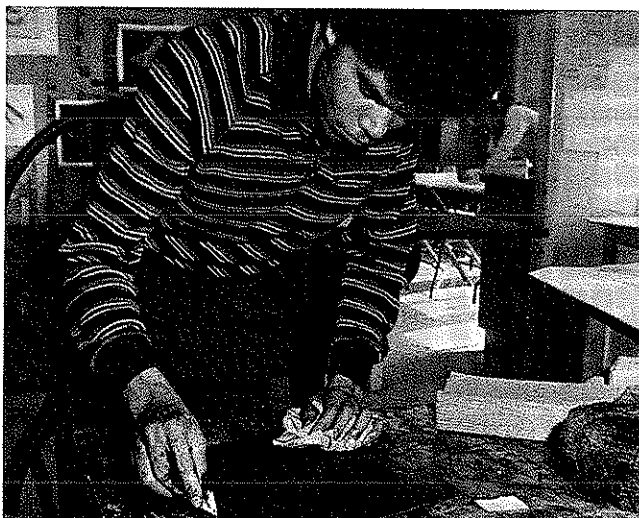
LT005T	American Literature I	4
LT004T	American Literature II	4
ISO42T	Encounters in Humanities (Lt. or A/I)	4
LT101T	Introduction to Fiction	4
LT102T	Introduction to Dramatic Literature	4
LT103T	Introduction to Poetry	4
LT201T	Masterpieces of Lit: Ancient World	4
LT202T	Master./Lit: Med., Renaiss., Neoclassical	4
LT203T	Master./Lit: 19th & 20th Centuries	4

Arts & Ideas

AT001T	Art Appreciation	4
AT002T	Art History: Pre-15th Century	4
AT003T	Art History: 15th-19th Century	4
AT004T	Art History: 20th Century	4
ISO42T	Encounters in Humanities	4
HU007T	Encounters with Ethics	2
LT211T	Introduction to Film	4
PR001T	Introduction to Philosophy	4
PR002T	Introduction to Religion	4
DR101T	Introduction to Theatre	4
CM319T	Legal & Ethical Issues in Communication	2
MU011T	Music Appreciation	4

SOCIAL SCIENCES (12 cr. A.A.; 8 cr. A.S.)

EC016T	Contemporary Economic Problems	4
EC013T	Principles of Economics (Macro)	4
EC014T	Principles of Economics (Micro)	4
EV007T	Energy Today	1
EV001T	Man in the Environment: Atmosphere	1
EV002T	Man in the Environment: Hydrosphere	1
EV003T	Man in the Environment: Lithosphere	2
GE001T	Human Geography	4
LE009T	Introduction to Criminal Justice	4
PS002T	American Federal Government	4
PS008T	Comparative Governments	4
PS004T	International Relations	4



PS006T	Iowa Government	4
PY004T	Educational Psychology & Measurement	4
PY024T	Exceptional Child	4
PY002T	General Psychology	4
PY020T	Psychology of Growth & Development	4
PY039T	Social Psychology	4
SO007T	Criminology	4
SO008T	Introduction to Cultural Anthropology	4
SO004T	Introduction to Sociology	4
SO011T	Juvenile Delinquency & Deviancy	4
SO005T	Marriage and the Family	4
SO006T	Social Problems	4
SW010T	Human Service Policies & Programs	4

MATHEMATICS/SCIENCES

(12 cr. A.A.; 30 cr. A.S.; 8 cr. A.S./Career Option)

MA034T	Analytic Geometry	5
MA051T	Business Calculus	4
MA035T	Calculus I	5
MA036T	Calculus II	5
MA037T	Calculus III	5
MA052T	Calculus IV	5
MA032T	College Algebra	5
MA053T	Differential Equations	5
MA043T	Finite Math	5
MA041T	Fundamentals of Statistics	5
MA031T	Intermediate Algebra	5
MA040T	Linear Algebra	5
MA050T	Mathematics for Liberal Arts	4
MA033T	Trigonometry	5
BY031T	Biology of Organisms	4
BY032T	Environmental Biology	4
BY019T	General Botany I	4
BY020T	General Botany II	4
BY039T	Human Anatomy & Physiology I	4
BY040T	Human Anatomy & Physiology II	4
BY041T	Human Anatomy & Physiology III	4
BY047T	Introductory Genetics	4
BY034T	Invertebrate Zoology I	4
BY035T	Invertebrate Zoology II	4
BY042T	Microbiology	5
BY030T	Principles of Biology	4
BY036T	Vertebrate Zoology I	4
BY037T	Vertebrate Zoology II	4
CH005T	General Chemistry I	5
CH006T	General Chemistry II	5

CH003T	Fundamentals of Biochemistry	4
CH002T	Fundamentals of Organic Chemistry	4
CH007T	Nutrition	4
CH008T	Organic Chemistry I	4
CH009T	Organic Chemistry II	4
CH010T	Organic Chemistry III	4
CH001T	Principles of Chemistry (lecture)	3
CH001T	Principles of Chemistry (lab)	1
CH004T	Quantitative Analysis	6
EA002T	Evolution of the Earth	4
EA004T	Evolution of the Earth (lab)	1
EA001T	Introductory Geology	4
EA003T	Introductory Geology (lab)	1
EG011T	Dynamics	5
EG007T	Engineering Graphics I	3
EG013T	Introduction to Electrical Science	5
EG015T	Introduction to Engineering	3
EG008T	Introduction to Engineering: Computations	3
EG009T	Materials Sciences	5
EG014T	Mechanics of Deformable Bodies	5
EG016T	Problem Solving Using Structured Language	5
EG010T	Statistics	3
EG012T	Thermodynamics I	6
EV007T	Energy Today	3
EV001T	Man in the Environment/Atmosphere	3
EV002T	Man in the Environment/Hydrosphere	3
EV003T	Man in the Environment/Lithosphere	2
IS010T	Man Evolving	4
IS008T	Science and Society	4
PH007T	Astronomy	4
PH001T	College Physics I	4
PH002T	College Physics II	4
PH003T	College Physics III	4
PH004T	General Physics I	4
PH005T	General Physics II	4
PH006T	General Physics III	4
PH011T	Medical Physics	4
PH008T	21st Century Introductory Physics	4

Historical Cultural (8 cr. A.A.)

FL001T	Elementary French I	4
FL002T	Elementary French II	4
FL003T	Elementary French III	4
FL004T	Intermediate French I	5
FL005T	Intermediate French II	5
FL003T	French Civilization I	3
FL008T	French Civilization II	3
FL009T	French Civilization III	3
FL010T	Elementary German I	4
FL011T	Elementary German II	4
FL012T	Elementary German III	4
FL023T	Intermediate German I	3
FL024T	Intermediate German II	3
FL025T	Intermediate German III	3
FL013T	Elementary Spanish I	4
FL014T	Elementary Spanish II	4
FL015T	Elementary Spanish III	4
FL016T	Intermediate Spanish - Conversation	5
FL017T	Intermediate Spanish - Reading	5
FL020T	Spanish American Civilization	3
FL019T	Spanish Civilization	3
HY016T	Europe in the Age of Monarchy	4
HY017T	Europe in the Age of Revolution	4
HY018T	Europe in the Age of Totalitarianism	4
HY001T	U.S. History/17th & 18th Century	4
HY002T	U.S. History/19th Century	4
HY003T	U.S. History/20th Century	4
IS047T	Understanding Culture	4



VOCATIONAL- TECHNICAL DIVISION

The Meaning of Vocational-Technical Education

Why the Need for Vocational-Technical Education Has Arisen

A scientific revolution, underway the last several decades, has quickened the pace of change in all of the professions and transformed the occupational role and the educational requirements of the professional trained employee. In the past, the professional (the product of four or more years of college) had the time, the training and the duty to perform many practical functions in his/her work. An engineer, for example, may spend hours drawing or routinely testing a new product. New scientific discoveries and technological advances have so enlarged the body of theoretical knowledge underlying many of the professions that now there is too little precious time in the professional curricula to develop practical skills. The mastery of theory has become the first priority of the professional. The use of theoretical knowledge has become the dominant function of the professional in his/her day-to-day work.

As a consequence, the professional needs the assistance of a new member of the employment team, the technician or para-professional. And, to prepare him/her to work with the scientist, or the engineer, or the medical specialist, the technician requires a different type of post-secondary education. He/she must master, to some extent, the theoretical principles relating to the technology and develop the practical abilities the specialty requires.

Such educational preparation is above the high school level, but does not require the four or more years of college needed by the professional. An intensive program, usually of one or two years duration and designed to prepare the student for immediate and effective employment upon graduation, suffices. Such a program is vocational-technical education.

The need for technicians, already great, is growing rapidly. The federal government estimated that great numbers of new technicians' jobs will have come into existence in the nation during the 1980s. Hence the urgent need for expanded vocational-technical education.

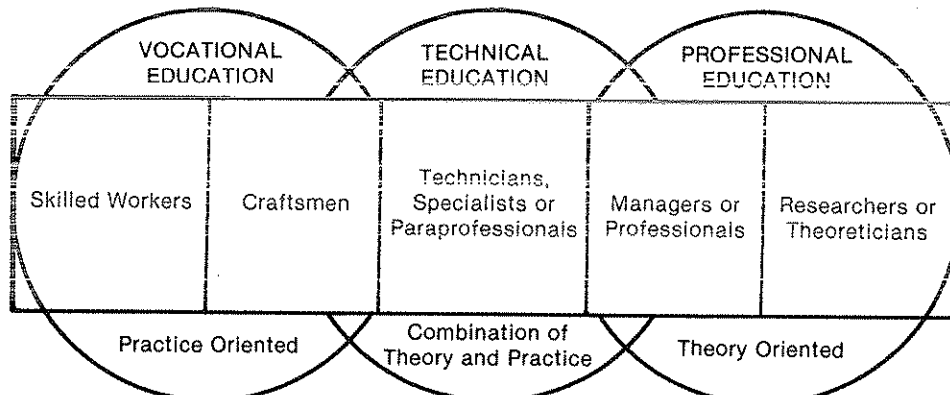
How a Technical Education Differs from Other Types of Higher Education

Technicians are action people. They must be trained to apply theory in support of the professionals with whom they work. Their education therefore differs markedly from that of the professionals.

Technicians need some theoretical preparation, but not in the breadth and depth required of the professional. As a consequence, the vocational-technical education curriculum must be practical in nature. The first years of a non-technical four-year college education prepare the professional-to-be for more advanced college work. In a one- or two-year educational program, the technician must learn all that is needed in order to be employable. The curricula needed by the two are in sharp contrast: the professional is academic and theoretical; the technician is practical and action-oriented. In the first college years, the professional-level student learns how to learn more; the vocational-technical education student learns how to do well those things required on the job — both the why and the how.

Vocational-technical education, to be effective, requires a special educational environment: a faculty dedicated to practical education; laboratory equipment adequate to make such education possible; a governing body and administration dedicated to the philosophy of this education; a close working relationship with business and industry. The Vocational-Technical Education Division of Kirkwood Community College provides that special environment.

The World of Career Education



Vocational-Technical Requirements

Requirements for the Associate of Applied Science Degree

1. Earn a minimum of 90-111 quarter hours of credit for a 6 quarter program.
2. Earn the last 24 quarter hours in residence at Kirkwood in a program for which the degree is sought.
3. Maintain a minimum cumulative grade point average of 1.80.
4. Satisfactorily complete 20 quarter hours of applied general education courses.
5. Satisfactorily complete group requirements as follows:
 - A. Technology diploma, where applicable — 45-66 quarter hours.
 - B. Additional general education support courses — 14 quarter hours.
 - C. Additional technology courses — 0-21 quarter hours.
 - D. Electives — 0-10 quarter hours.

Requirements for the Technology Diploma

1. Earn a minimum 45-66 quarter hours of credit for a 3 quarter program.
2. Earn the last 12 quarter hours in residence at Kirkwood in a program for which the diploma is sought.

3. Maintain a minimum cumulative grade point average of 1.80.
4. Satisfactorily complete 6 quarter hours of applied general education courses.
5. Satisfactorily complete group requirements as follows:
 - A. Technology vocational certificate, where applicable — 28-42 quarter hours.
 - B. Additional related technology courses — 15-24 quarter hours.

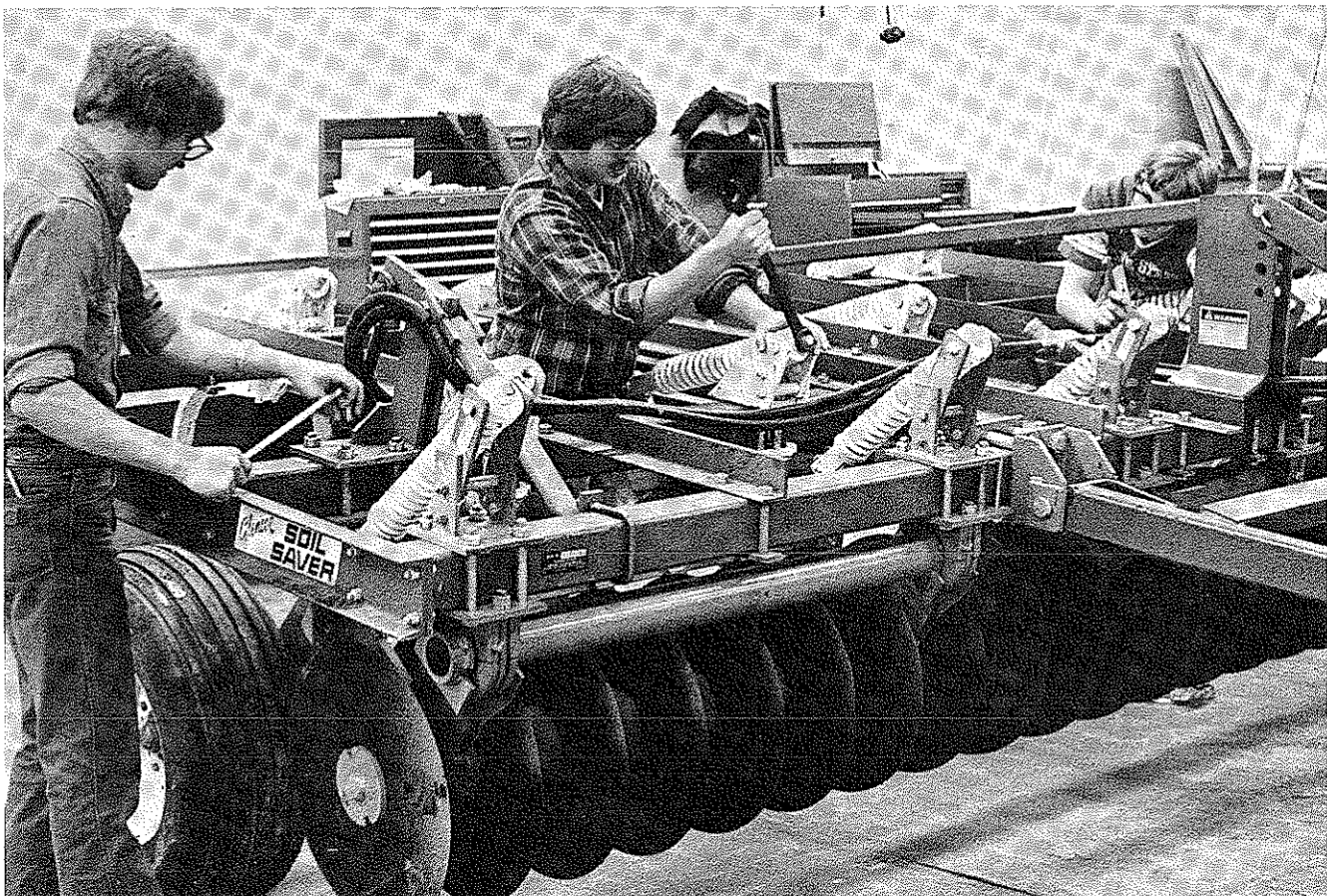
Requirements for the Vocational Certificate

1. Earn a minimum 28-42 quarter hours of credit.
2. Earn the last 9 quarter hours in residence at Kirkwood in a program for which the certificate is sought.
3. Maintain a minimum cumulative grade point average of 1.80.
4. Satisfactorily complete 6 quarter hours of applied general education courses.
5. Satisfactorily complete group requirements as follows:
 - A. Selected technology core — 22-36 quarter hours.
 - B. General education support courses — 6 quarter hours.

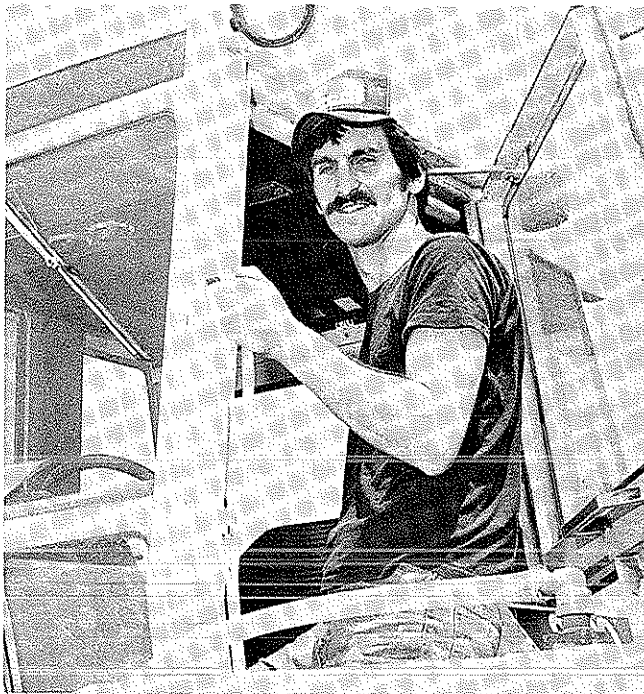
For a complete definition of which courses fulfill which group requirements, see the Vocational-Technical Instructional Program section.

Veterans Educational Benefits

Many programs are approved for veterans. All veterans must take the required number of credit hours per quarter in order to graduate within the approved number of quarters for the program.



AGRICULTURAL TECHNOLOGIES



Agricultural Processing and Distribution Department

Agribusiness Technology

Students enrolled in this program are prepared for positions such as department manager/assistant, production manager/assistant, and retail salesperson in feed, seed, chemicals, grain, fertilizer, hardware, and animal health sales and service job areas. In the future this program will provide the opportunity for students to pursue areas of specialization (options) in either Mid-Management, Agricultural Statistics and Data, Agricultural Distribution and Marketing, or Agricultural Processing. The Mid-Management area of specialization option is available at this time. Upon completion of the required 110 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

All students will develop an individual education plan approved by their academic advisor and program administration. Additional credit diplomas and credit certificates are being developed for students with special needs and interests. Questions regarding these awards

may be directed to the Office of Admissions or program personnel.

All students entering the Agribusiness Technology program, regardless of options, must perform selected minimum competencies either by completion of the courses listed below or by passing a pre-test (either in an interview or competency verification) at or near the beginning of the program. The courses are provided in a student-centered format and are primarily designed for the student with little or no quantifiable background or experience in agriculture. These courses are offered on a regular basis throughout the academic year. It may be suggested that individual students take a selection of, or all of, the courses. Included are courses in agricultural careers, agricultural machinery, animal health husbandry, agricultural crops and soils, agricultural experience, agricultural buildings and equipment, agricultural economics, agricultural business, agricultural mathematics, and agricultural communications.

Mid-Management Option

Technical Courses

Sales/Merchandising

51 Credits Offered, 26 Required

		Credits	Hrs.
+ MK002U	Basic Agricultural Salesmanship	3	48
+ MK035U	Agribusiness Sales	3	48
AG282U	Agricultural Service Center Operations	4	60
AG157U	Inventory Control Procedures	4	60
AG110U	Business Record Systems	4	60
AG111U	Agricultural Service Center Retailing	4	60
MK057U	Merchandising-Agricultural	3	48
AM025U	Introduction to Agricultural Business	3	36
+ AG012U	Employment Experience (AG012U to be repeated)	6	216
		6	216
AG311U	Employment Practicum	6	216
AG221U	Special Projects-Agribusiness	2	36
AG207U	Agricultural Service Center Management	3	48

Agricultural Economics

27 Credits Offered, 12 Required

+ EC004U	Agricultural Economics	3	36
+ AC019T	Agricultural Accounting	3	36
AG103U	Agricultural Finance	3	36
AC018U	Agribusiness Accounting	3	48
MK004U	Agricultural Futures Marketing	3	48
AM083T	Elements of Farm Management	3	36
MK003U	Agricultural Product Marketing	3	48
AG312U	Advanced Futures Marketing	3	36
LW002U	Agricultural Law	3	36

Agricultural Mechanization

21 Credits Offered, 5 Required

AG109U	Agricultural Power Unit Operation	2	48
MM011U	Rural Metals and Welding	3	48
CS060U	Rural Electricity	3	48
CS057U	Rural Concrete and Masonry	3	48
CS059U	Rural Carpentry	3	48
AG215U	Farm Machinery Management	3	48
MH047U	Farm Machinery Maintenance	3	48
AG316U	Chauffeur's Licensure	1	24

Agromony

52 Credits Offered, 12 Required

+ AG298U	Basic Soils	4	60
+ AG006T	Principles of Crop Production	3	48

AG001T	Fundamentals of Soil Science	3	36
AG089U	Agricultural Fertilizers	3	48
AG115U	Modern Corn Production	3	48
AG251U	Modern Soybean Production	3	48
AG002U	Forage and Oat Production	3	48
AG152U	Land Use and Conservation	3	48
AG137U	Grain Grading and Seed Analysis	3	48
AG005U	Agricultural Chemicals	3	36
AG313U	Crop Monitoring/Scouting Techniques	3	48
AG309U	Natural Resources Appreciation	4	60
AG218U	Special Projects-Agronomy	2	36
AG301U	Basic Small Grain Principles	4	60
AG302U	Basic Corn Principles	4	60
AG304U	Basic Soybean Principles	4	60

Animal Science

44 Credits Offered, 12 Required

+ AG005T	Animal Production	4	48
+ AG150U	Livestock Nutrition	3	48
AG230U	Livestock Evaluation and Selection	3	48
AG200U	Animal Health Products	3	48
AG342U	Agricultural Genetics	3	36
AG016U	Feed Rations	3	48
AG295U	Beef Husbandry	4	60
AG296U	Swine Husbandry	4	60
AG081U	Dairy Production	2	36
AG067U	Sheep Production	2	36
AG297U	Horse Husbandry	4	60
AG300U	Animal Feeding	4	60
AG088U	Swine Production	3	36
AG219U	Special Projects-Animal Science	2	36

Related Courses**Professional Support**

24 Credits Offered, 12 Required

AG263U	Agricultural Career Orientation	1	12
AG006U	Career Planning Seminar	1	12
AG266U	Agricultural Leadership	2	24
DP010T	Introduction to Microcomputers & Data Processing	4	60
AG322U	Computer Applications-Agriculture	3	48
AM004U	Agricultural Foremanship	3	48
AG291U	Agricultural Education Placement	2	24

General Education

18 Credits Offered, 12 Required

+ CM002U	Communication Skills I	3	36
+ CM005U	Oral Communications	3	36
AG314U	Agricultural Organization/Relationships	3	48
+ MA001U	Mathematics I-Agriculture	3	36
+ PY004U	Human Relations	3	36
AG315U	Influencing American Agriculture	3	36

+ Required course

NOTE: Students may select from the above courses, with the approval of the academic advisor, to meet the requirements for the Agricultural Supply Clerk diploma (55 credit hours) and the Agribusiness Management A.A.S. degree (110 credit hours).

Horse Science Technology

Students enrolled in this program are prepared for employment as assistant stable managers, horse breeding farm employees, and a variety of jobs involving racetracks. In the future the program will provide the opportunity for students to pursue areas of specialization (options) in Horse Production, Horse Mid-Management,

and Horse Services/Sales. The Horse Production area of specialization is available at this time. Upon completion of the required 110 quarter credit hours, the graduate will receive an Associate of Applied Science degree.

All students will develop an individual education plan approved by their academic advisor and program administration. Additional credit diplomas and credit certificates are being developed for students with special needs and interests. Questions regarding these awards may be directed to the Office of Admissions or program personnel.

Horse Production Option**Technical Courses****Horse Science**

82 Credits Offered, 41 Required

	Credits	Hrs.
AG290U	Orientation to Horse Production	4 60
+ AG050U	Horse Production I	3 60
+ AG075U	Horse Production II	2 48
+ AG054U	Horsemanship-Balanced Seat	5 96
AG229U	Extended Horsemanship Techniques	3 48
+ AG326U	Western Horsemanship	3 48
AG328U	Advanced Western Horsemanship	3 48
+ AG327U	Introduction to Horse Judging	1 24
+ AG325U	Basic Horse Judging	1 24
+ AG324U	Advanced Horse Judging	2 36
AG211U	Horse Judging Competition	3 72
+ AG022U	Horse Nutrition	5 72
+ AG280U	Horse Diseases Seminar	2 24
+ AG204U	Horse Breeding	3 48
+ AG317U	The Care and Understanding of the Equine Leg	1 12
+ AG201U	Horse Physiology and Hoof Care	3 48
AG223U	Principles of Farrier Science	1 24
AG272U	Horse Breeds	3 48
AG289U	Horse Projects	4 96
AG318U	Special Projects-Horse Nutrition	3 48
AG220U	Special Projects-Horse Science	2 36
AG319U	Special Projects-Equine Job Shadow	2 36
AG320U	Special Projects-Horse Sale	2 48
AG329U	Special Projects-Professional Horse Judging	3 48
AG051U	Horse Shows Management	3 48
+ AG210U	Fundamentals of Horse Training	4 72
AG321U	Principles of Training	2 36
AG228U	Training Management	3 48
+ AG239U	Horse Industry Problems	6 144

Agribusiness

10 Credits Offered, 7 Required

+ AG216U	Stable Management	3 48
+ AG019T	Agricultural Accounting	3 48
MK002U	Basic Agricultural Salesmanship	3 36
+ AG013U	Agricultural Tax Accounting	1 12

Agricultural Mechanization

6 Credits Offered, 6 Required

+ AG109U	Agricultural Power Unit Operation	3 48
+ AG323U	Equine Facility Maintenance	3 48

Agronomy

3 Credits Offered, 3 Required

+ AG002U	Forage and Oat Production	3 48
----------	---------------------------	------

Related Courses**Professional Support**

5 Credits Offered, 3 Required

+ AG266U	Agricultural Leadership	2 24
----------	-------------------------	------

+ AG006U	Career Planning Seminar	1	12
AG263U	Agricultural Career Orientation	2	24
General Education			
26 Credits Offered, 17 Required			
+ MA001U	Mathematics I-Agriculture	2	24
+ RE002U	Exercises for Horsemanship	1	24
+ CM002U	Communication Skills I	3	36
+ CM005U	Oral Communications	3	36
+ RE001U	Equestricise	1	24
+ DP010T	Introduction to Microcomputers & Data Processing	4	60
AG322U	Computer Applications-Agriculture	3	48
+ PY004U	Human Relations	3	36
EC004U	Agricultural Economics	3	36
AG342U	Agricultural Genetics	3	36
+ Required course			

NOTE: 55 credit hours of approved courses meet the Horse Husbandry diploma requirements. See advisor.

Small Animal Services

Students enrolled in this program are prepared for the following jobs: dog groomer, kennel worker, animal control officer, veterinarian assistant (not technician), and small animal supply sales. All students will develop an individual education plan approved by their academic advisor and program administration. Upon completion of the required 55 quarter credit hours, the graduate will be awarded a diploma.

Students have the option of taking their second year in the Agribusiness Technology program, Horse Science Technology program, or other approved programs. Students successfully completing the required number of credits will be awarded an Associate of Applied Science degree in the appropriate program.

Technical Courses

53 credits offered, 27 required		Credits	Hrs.
+ AG234U	Small Animal Behavior	5	72
+ AG235U	Small Animal Health	5	72
+ AG236U	Kennel Management	5	72
+ AG311U	Employment Practicum	3	108
AG231U	Pet Grooming	3	48
AG294U	Lab Techniques-Animal Health	1	24
+ AG263U	Agricultural Career Orientation	3	36
+ AG200U	Animal Health Products	3	48
+ AG003U	Agribusiness Procedures	3	48
AG005T	Animal Production	4	48
BY115U	Mammalian Wildlife	4	48
BY114U	Avian Wildlife	4	48
AG237U	Special Projects-Animal Health	3	48
AG266U	Agricultural Leadership	2	24

Related Courses

15 credits offered, 6 required		Credits	Hrs.
+ CM002U	Communication Skills I	3	36
BY030T	Principles of Biology	4	72
MA001U	Mathematics I-Agriculture	2	24
CH001T	Principles of Chemistry	3	36
+ PY004U	Human Relations	3	36
+ Required course			

Agricultural Production and Mechanization Department

Farm and Ranch Technology

Students enrolled in this program are prepared to work in such occupations as farm manager, livestock production specialist and crop production specialist. This program offers the opportunity for students to pursue areas of specialization (options) in Beef, Swine, and Crops. Upon completion of the required 110 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

The Farm and Ranch Technology program is fully approved by accrediting agencies. All students will be aided in developing an individual education plan, and this plan will be approved by the academic advisor and program administrator. Additional credit diplomas and credit certificates are being developed for students with special needs and interests. Questions regarding these awards may be directed to the Office of Admissions or departmental personnel.

All students entering the Farm and Ranch Technology program, regardless of options, must perform selected minimum competencies either by completion of the courses listed below or by passing a pre-test (either an interview or competency verification) at or near the beginning of the program. The courses are provided in a student-centered format and are primarily designed for the student with little or no quantifiable background or experience in agriculture. These courses are offered on a regular basis throughout the academic year. It may be suggested that individual students take a selection of, or all of, the courses. Included are courses in agricultural careers, agricultural machinery, animal husbandry, agricultural crops and soils, agricultural experience, agricultural buildings and equipment, agricultural economics, agricultural business, agricultural mathematics and agricultural communications.

Beef Production Option

Technical Courses

Agricultural Mechanization

32 Credits Offered, 8 Required		Credits	Hrs.
+ AG109U	Agricultural Power Unit Operation	2	36
+ AG205U	Farmstead Planning and Mechanization	3	48
+ AG215U	Farm Machinery Management	3	48
MM011U	Rural Metals and Welding	3	48
CS060U	Rural Electricity	3	48
CS059U	Rural Carpentry	3	48
MH050U	Diesel Fuel Systems I	3	48
MH013U	Engines I	3	48
MH047U	Farm Machinery Maintenance	3	48
CS057U	Rural Concrete and Masonry	3	48
AG338U	Alternate Farm Energy Systems	3	48

Agricultural Economics

21 Credits Offered, 18 Required

+ AG339U	Farm Land Acquisition	3	36
+ AC019T	Agricultural Accounting	3	36
+ AG103U	Agricultural Finance	3	36
+ LW002U	Agricultural Law	3	48
+ MK004U	Agricultural Futures Marketing	3	36
+ MK056U	Principles of Agricultural Marketing	3	36
EC004U	Agricultural Economics	3	36

Agronomy

13 Credits Offered, 7 Required

+ AG115U	Corn Production	2	36
+ AG002U	Forage and Oat Production	2	36
+ AG152U	Land Use and Conservation	3	48
AG131U	Field Crop Planning I	3	48
AG079U	Field Crop Planning II	3	48

Animal Science

45 Credits Offered, 39 Required

+ AG063U	Beef Industry	3	48
+ AG064U	Beef Feedlot Management	3	48
AG016U	Feed Rations	3	36
+ AG150U	Livestock Nutrition	3	48
+ AG336U	Beef Enterprise Planning	3	48
+ AG337U	Beef Science Management	3	48
+ AG250U	Beef Cow/Calf Production	3	48
AG230U	Livestock Evaluation and Selection	3	48
+ AG012U	Employment Experience	6	216
AG012U	(to be repeated)	6	216
+ AG092U	Beef Breeding and Reproduction	3	48
+ AG061U	Principles of Ruminant Nutrition	3	48
+ AG065U	Applied Ruminant Nutrition	3	36

Related Courses

General Education

26 Credits Offered, 14 Required

+ CM002U	Communication Skills I	3	36
+ CM005U	Oral Communications	3	36
+ MA001U	Mathematics I - Agriculture	2	24
+ PY004U	Human Relations	3	36
+ AG342U	Agricultural Genetics	3	48
MK002U	Basic Agricultural Salesmanship	3	36
JO103T	Introduction to Photography	3	48
MK057U	Merchandising - Agriculture	3	36
CM202T	Group Communication	3	36

Support

22 Credits Offered, 14 Required

AG249U	Beef and Dairy Artificial Insemination	2	36
AG266U	Agricultural Leadership	2-6	36-108
+ DP010T	Introduction to Microcomputers and Data Processing	4	60
+ AG322U	Computer Applications - Agriculture	3	48
+ AG343U	Beef Orientation	1	12
+ AG341U	Livestock Anatomy and Physiology	3	48
+ AG171U	Principles of Animal Breeding	3	48

+ Required course
NOTE: 55 credit hours of approved courses meet the Beef Production Specialist diploma requirements. See advisor.

Swine Production Option

Technical Courses

Agricultural Mechanization

30 Credits Offered, 6 Required

+ AG344U	Swine Facility Management	Credits	Hrs.
CS058U	Rural Plumbing	3	48

CS057U	Rural Concrete and Masonry	3	48
CS059U	Rural Carpentry	3	48
+ AG338U	Alternate Farm Energy Systems	3	48
AG205U	Farmstead Planning and Mechanization	3	48
MH047U	Farm Machinery Maintenance	3	48
MM011U	Rural Metals and Welding	3	48
CS060U	Rural Electricity	3	48
AG215U	Farm Machinery Management	3	48

Agricultural Economics

15 Credits Offered, 15 Required

+ EC004U	Agricultural Economics	3	36
+ AG103U	Agricultural Finance	3	36
+ AC019T	Agricultural Accounting	3	36
+ MK056U	Principles of Agricultural Marketing	3	36
+ MK004U	Agricultural Futures Marketing	3	36

Agronomy

33 Credits Offered, 9 Required

AG115U	Corn Production	2	36
AG002U	Forage and Oat Production	2	36
AG251U	Soybean Production	2	36
AG131U	Field Crop Planning I	3	48
AG079U	Field Crop Planning II	3	48
AG152U	Land Use and Conservation	3	48
AG005U	Agricultural Chemicals	3	36
AG284U	Crop Harvesting and Drying	3	48
AG114U	Crop Production Orientation	3	48
AG089U	Agricultural Fertilizers	3	48
AG006T	Principles of Crop Production	3	48
AG001T	Fundamentals of Soil Science	3	36

Animal Science

51 Credits Offered, 39 Required

AG016U	Feed Rations	3	36
+ AG150U	Livestock Nutrition	3	48
AG335U	Swine Health Programs	3	48
+ AG073U	Swine Breeding Stock Selection	3	48
+ AG071U	Swine Breeding and Genetics	3	48
+ AG334U	Swine Reproduction and Management	3	48
+ AG333U	Swine Enterprise Management	3	48
+ AG072U	Swine Records and Management	3	48
AG159U	Swine Nutrition and Feeding	3	48
+ AG332U	Swine Production and Marketing	3	48
+ AG331U	Swine Farrowing and Nursery Management	3	48
+ AG233U	Swine Facilities and Equipment	3	48
+ AG012U	Employment Experience	6	216
AG012U	(to be repeated)	6	216
AG230U	Livestock Evaluation and Selection	3	48

Related Courses

General Education

23 Credits Offered, 8 Required

+ MA001U	Mathematics I - Agriculture	Credits	Hrs.
+ CM002U	Communication Skills I	2	24
+ CM005U	Oral Communications	3	36
PY004U	Human Relations	3	36
JO103T	Introduction to Photography	3	48
MK057U	Merchandising - Agriculture	3	36
CM202T	Group Communication	3	36
CH001T	Principles of Chemistry	3	48

Support

23 Credits Offered, 17 Required

+ AG340U	Swine Orientation	1	12
AG266U	Agricultural Leadership	2-6	36-108
+ DP010T	Introduction to Microcomputers and Data Processing	4	60
+ AG322U	Computer Applications - Agriculture	3	48
+ AG341U	Livestock Anatomy and Physiology	3	48

+ AG171U	Principles of Animal Breeding	3	48
+ AG342U	Agricultural Genetics	3	48

+ Required course

NOTE: 55 credit hours of approved courses meet the Swine Production Specialist diploma requirements. See advisor.

Crop Production Option

Technical Courses

Agricultural Mechanization

38 Credits Offered, 17 Required

		Credits	Hrs.
+ AG109U	Agricultural Power Unit Operation	2	36
+ AG215U	Farm Machinery Management	3	48
AG205U	Farmstead Planning and Mechanization	3	48
CS060U	Rural Electricity	3	48
CS059U	Rural Carpentry	3	48
CS057U	Rural Concrete and Masonry	3	48
MM011U	Rural Metals and Welding	3	48
AG338U	Alternate Farm Energy Systems	3	48
MH050U	Diesel Fuel Systems I	3	48
MH013U	Engines I	3	48
MH049U	Field Crop Harvesting Equipment Operation and Adjustment	3	60
MH048U	Planting and tillage Equipment Operation and Adjustment	3	60
MH047U	Farm Machinery Maintenance	3	48

Agricultural Economics

21 Credits Offered, 15 Required

+ AC019T	Agricultural Accounting	3	36
+ MK056U	Principles of Agricultural Marketing	3	36
+ MK004U	Agricultural Futures Marketing	3	36
AM083T	Elements of Farm Management	3	36
AG103U	Agricultural Finance	3	36
LW002U	Agricultural Law	3	48
AG339U	Farm Land Acquisition	3	36

Agronomy

45 Credits Offered, 39 Required

+ AG114U	Crop Production Orientation	3	48
+ AG284U	Crop Harvesting and Drying	3	48
AG131U	Field Crop Planning I	3	48
AG079U	Field Crop Planning II	3	48
AG115U	Corn Production	2	36
AG251U	Soybean Production	2	36
AG002U	Forage and Oat Production	2	36
AG152U	Land Use and Conservation	3	48
AG005U	Agricultural Chemicals	3	36
AG089U	Agricultural Fertilizers	3	48
AG006T	Principles of Crop Production	3	48
AG001T	Fundamentals of Soil Science	3	36
+ AG012U	Employment Experience	6	216
+ AG012U	(to be repeated)	6	216

Animal Science

15 Credits Offered, 9 Required

AG072U	Swine Records and Management	3	48
AG336U	Beef Enterprise Planning	3	48
AG337U	Beef Science Management	3	48
AG150U	Livestock Nutrition	3	48
AG230U	Livestock Evaluation and Selection	3	48

Related Courses

General Education

30 Credits Offered, 11 Required

+ CM005U	Oral Communications	3	48
CM202T	Group Communications	3	36
+ CM002U	Communication Skills I	3	36
+ MA001U	Mathematics I - Agriculture	2	24

CH001T	Principles of Chemistry	3	48
CH005T	General Chemistry I	5	72
AG018U	Wildlife Reserves	4	60
PY004U	Human Relations	3	36
BY019T	General Botany I	4	60

Support

17 Credits Offered, 10 Required

AG266U	Agricultural Leadership	2-6	36-108
+ AG345U	Crop Orientation	1	12
+ DP010T	Introduction to Microcomputers and Data Processing	4	60
AG171U	Principles of Animal Breeding	3	48
+ AG322U	Computer Applications - Agriculture	3	48

+ Required course

NOTE: 55 credit hours of approved courses meet the Crop Production Specialist diploma requirements. See advisor.

Farm Equipment Mechanization Technology

Students enrolled in this program are prepared to work in such occupational areas as tractor mechanics, parts and service, and equipment management. In the future this program will offer the opportunity for students to pursue areas of specialization (options) in Equipment Sales, Equipment Parts, Line Mechanic, Equipment Management and Equipment Servicing. Upon completion of the required 112 quarter credit hours, the graduate will be awarded an Associated of Applied Science degree.

All students will be aided in developing an individual educational plan. This plan will be approved by the academic advisor and specific program administration. Additional credit diplomas and credit certificates are being developed for students with special needs and interests. Questions regarding these awards may be directed to the Office of Admissions or departmental personnel.

Line Mechanic Option

Technical Courses

Basic Mechanics

21 Credits Offered, 15 Required

		Credits	Hrs.
+ MH002U	Hydraulics I	3	48
+ MH032U	Electrical Systems I	3	48
+ MH013U	Engines I	3	48
+ MH016U	Power Transfer Systems I	3	48
MH048U	Planting and Tillage Equipment Operation and Adjustment	3	48
MH049U	Field Crop Harvesting Equipment Operation and Adjustment	3	60
+ MH050U	Diesel Fuel Systems I	3	48

Advanced Mechanics

71 Credits Offered, 57 Required

+ MH058U	Hydraulics II	5	96
+ MH033U	Electrical Systems II	5	96
+ MH059U	Engines II	5	96
+ MH060U	Diesel Fuel Systems II	5	96
+ MH018U	Power Transfer Systems II - Standard Transmissions	3	60

+ MH057U	Power Transfer Systems III - Power Shift	6	120
MH062U	Planting and Tillage Equipment Servicing	5	96
MH061U	Field Crop Harvesting Equipment Repair	5	96
+ MH021U	Unit Diagnosis and Overhaul I	8	156
+ MH051U	Unit Diagnosis and Overhaul II	8	156
+ MH052U	Unit Diagnosis and Overhaul III	8	156
AG012U	Employment Experience	4	144
	or		
+ AG311U	Employment Practicum	4	144

Related Courses

General Education

22 Credits Offered, 16 Required

+ CM002U	Communication Skills I	3	36
+ CM005U	Oral Communications	3	48
+ PY004U	Human Relations	3	36
AG266U	Agricultural Leadership	1-6	12-72
+ MH067U	Shop Practices and Safety	2	24
+ AM003U	Business Practices	3	36
+ MA001U	Mathematics I - Agriculture	2	24

Support Courses

12 Credits Offered, 7 Required

+ MH019U	Equipment Reconditioning and Repair	2	36
MH042U	Vehicular Air Conditioning	1	18
AG108U	Shop Facilities and Equipment	3	60
AG109U	Agricultural Power Unit Operation	1	18
+ MM011U	Rural Metals and Welding	3	48
+ AG263U	Agricultural Career Orientation	1	12
+ MH063U	Technical Manual Interpretation	1	12

+ Required course

+ AT008V	Floral Design-Special Projects	1	24
----------	--------------------------------	---	----

Plant Materials

11 Credits Offered, 11 Required

+ AG017V	Basics of Plant Growth	3	36
+ AG014V	Plant Growth	3	48
+ AG013V	Plant Identification and Care	3	36
+ AG018V	Diagnosing Plant Disorders	2	24

Technical Support

20 Credits Offered, 13 Required

+ AG012U	Employment Experience	6	216
AG012U	(to be repeated)	6	216
AG222U	Special Projects-Horticulture	1-6	24-144
AG266U	Agricultural Leadership (elective each quarter)	1	12
+ AG016V	Floriculture Seminar	1	12

Related Courses

Business

33 Credits Offered, 29 Required

+ MK003T	Principles of Selling	4	48
+ AC005V	Floriculture Bookkeeping	4	48
+ MK001T	Principles of Marketing	4	48
+ MK001V	Retail Advertising and Display	4	48
+ MK011V	Retail Flower Shop Operation I	5	60
+ MK012V	Retail Flower Shop Operation II	3	36
+ MK013V	Retail Flower Shop Operation III	3	36
+ MK014V	Retail Flower Shop Operation IV	2	24
DP010T	Introduction to Microcomputers and Data Processing	4	60

General Education

8 Credits Offered, 8 Required

+ MA001U	Mathematics I - Agriculture	2	24
+ PY004U	Human Relations	3	36
+ CM002U	Communication Skills I	3	36

+ Required course

Horticulture and Natural Resources Department

Floriculture

The Floriculture program prepares students to work as floral designers, retail flower shop managers, greenhouse specialists and other similar positions. Upon completion of the required 72.5 quarter credit hours, the graduate will be awarded a diploma.

The program is fully approved by accrediting agencies. All students will be aided in developing an individual educational plan. This plan will be approved by the academic advisor and specific program administration.

Additional credit certificates and advanced training programs are being developed for students with special needs and interests. Questions regarding these awards may be directed to the Office of Admissions or departmental personnel.

Technical Courses

Floral Design

11.5 Credits Offered, 11.5 Required

		Credits	Hrs.
+ AT001V	Floral Designing I	5	108
+ AT002V	Floral Designing II	2	48
+ AT003V	Floral Designing III	2	48
+ AT004V	Floral Designing IV	1.5	36



Grounds and Turfgrass Management Technology

The Grounds and Turfgrass Management Technology program prepares students for employment as industrial and institutional grounds managers, golf course greenskeepers, municipal horticulturists and many other similar jobs. Upon completion of the required 106 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

The Grounds and Turfgrass Management Technology program is fully approved by accrediting agencies. All students will be aided in developing an individual education plan. This plan will be approved by the academic advisor and specific program administration.

Additional credit diplomas and credit certificates are being developed for students with special needs and interests. Questions regarding these awards may be directed to the Office of Admissions or departmental personnel.

Technical Courses

Plant Materials Science

44 Credits Offered, 20 Required

	Credits	Hrs.
+ AG057U Turfgrass Management	4	60
+ AG044U Plant Materials I	4	60
+ AG045U Plant Materials II	4	60
+ AG252U Plant Material Maintenance	4	72
+ AG039U Plant Disease and Insects	4	60
AG308U Park Practices	4	60
AG206U Greenhouse Practices	4	60
AG047U Herbaceous Plant Materials	4	72
AG046U Plant Materials III	4	60
AG027U House Plants	4	60
AG036U Fruit and Vegetable Production	4	60

Landscape Design and Construction

24 Credits Offered, 12 Required

+ AG029U Landscape Construction	4	72
+ AG030U Basic Landscape Drawing	4	72
+ AG330U Park Planting Design	4	72
AG032U Recreation Area Design	4	72
AG034U Commercial Landscape Design	4	72
AG031U Residential Landscape Design	4	72

Horticulture Facilities and Equipment

12 Credits Offered, 8 Required

+ AG062U Horticulture Equipment	4	72
+ CS002U Facility Construction	4	72
AG010U Park Maintenance Programs	4	60

Natural Resources

18 Credits Offered, 0 Required

AG309U Natural Resources Appreciation	4	60
AG018U Wildlife Reserves	4	60
BY113U Aquatic Wildlife	2	24
BY115U Mammalian Wildlife	4	48
BY114U Avian Wildlife	4	48

Technical Support

15 Credits Offered, 8 Required

+ AG012U Employment Experience	6	216
+ AG006U Career Planning Seminar	1	12
AG006U (to be repeated)	1	12
AG266U Agricultural Leadership (elective each quarter)	1	12
AG222U Special Projects - Horticulture	1-6	24-144

Related Courses

Business Management

24 Credits Offered, 4 Required

AG015U Park and Recreation Administration	4	60
AG310U Golf Course Maintenance	4	84
+ AG254U Grounds Management Problems	4	72
AG026U Garden Center Operations	4	60
AG035U Commercial Plant Production	4	60
DP010T Introduction to Microcomputers and Data Processing	4	60

General Education

24 Credits Offered, 21 Required

+ CM002U Communication Skills I	3	36
+ CM005U Oral Communications	3	48
+ PY004U Human Relations	3	36
+ MA001U Mathematics I - Agriculture	4	48
MK055U Merchandising - Horticulture	3	48
+ AG048U Plant Propagation	4	72
+ AG056U Soil and Water Conservation	4	60

+ Required course

Landscape, Nursery and Garden Center Technology

The Landscape, Nursery and Garden Center Technology program prepares students for employment in career areas such as landscape design and construction, garden center operations, nursery stock production, greenhouse management, and many other related areas. Upon completion of the required 105 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

The Landscape, Nursery and Garden Center Technology program is fully approved by accrediting agencies. All students will be aided in developing an individual educational plan. This plan will be approved by the academic advisor and specific program administration.

Additional credit diplomas and credit certificates are being developed for students with special needs and interests. Questions regarding these awards may be directed to the Office of Admissions or departmental personnel.

Technical Courses

Plant Materials Science

44 Credits Offered, 20 Required

	Credits	Hrs.
+ AG057U Turfgrass Management	4	60
+ AG044U Plant Materials I	4	60
+ AG045U Plant Materials II	4	60
+ AG252U Plant Material Maintenance	4	72
+ AG039U Plant Disease and Insects	4	60
AG206U Greenhouse Practices	4	60
AG047U Herbaceous Plant Material	4	72
AG046U Plant Materials III	4	60
AG027U House Plants	4	60
AG036U Fruit and Vegetable Production	4	60
AG308U Park Practices	4	60

Landscape Design and Construction

24 Credits Offered, 12 Required

+ AG092U Landscape Construction	4	72
+ AG030U Basic Landscape Drawing	4	72

+ AG031U	Residential Landscape Design	4	72
AG034U	Commercial Landscape Design	4	72
AG330U	Park Planting Design	4	72
AG032U	Recreation Area Design	4	72

Horticulture Equipment & Facilities

12 Credits Offered, 8 Required

+ AG062U	Horticulture Equipment	4	72
+ CS002U	Facility Construction	4	72
AG010U	Park Maintenance Programs	4	60

Natural Resources

18 Credits Offered, 0 Required

AG309U	Natural Resources Appreciation	4	60
AG018U	Wildlife Reserves	4	60
BY113U	Aquatic Wildlife	2	24
BY115U	Mammalian Wildlife	4	48
BY114U	Avian Wildlife	4	48

Technical Support

15 Credits Offered, 8 Required

+ AG012U	Employment Experience	6	216
+ AG006U	Career Planning Seminar	1	12
AG006U	(to be repeated)	1	12
AG266U	Agricultural Leadership (elective each quarter)	1	12
AG222U	Special Projects - Horticulture	1-6	24-144

Related Courses

Business Management

24 Credits Offered, 4 Required

+ AG026U	Garden Center Operations	4	60
AG035U	Commercial Plant Production	4	60
AG254U	Grounds Management Problems	4	72
AG015U	Park and Recreation Administration	4	60
AG310U	Golf Course Maintenance	4	84
DP010T	Introduction to Microcomputers and Data Processing	4	60

General Education

24 Credits Offered, 24 Required

+ CM002U	Communication Skills I	3	36
+ CM005U	Oral Communications	3	48
+ PY004U	Human Relations	3	36
+ MA001U	Mathematics I - Agriculture	4	48
+ MK055U	Merchandising - Horticulture	3	48
+ AG048U	Plant Propagation	4	72
+ AG056U	Soil and Water Conservation	4	60

+ Required course

terests. Questions regarding these awards may be directed to the Office of Admissions or departmental personnel.

Technical Courses

Plant Materials Science

44 Credits Offered, 20 Required

	Credits	Hrs.
+ AG057U	Turfgrass Management	4 60
+ AG044U	Plant Materials I	4 60
+ AG045U	Plant Materials II	4 60
+ AG252U	Plant Material Maintenance	4 72
+ AG039U	Plant Disease and Insects	4 60
AG308U	Park Practices	4 60
AG206U	Greenhouse Practices	4 60
AG047U	Herbaceous Plant Material	4 72
AG046U	Plant Materials III	4 60
AG027U	House Plants	4 60
AG036U	Fruit and Vegetable Production	4 60

Landscape Design and Construction

24 Credits Offered, 12 Required

+ AG029U	Landscape Construction	4 72
+ AG030U	Basic Landscape Drawing	4 72
+ AG330U	Park Planting Design	4 72
AG032U	Recreation Area Design	4 72
AG031U	Residential Landscape Design	4 72
AG034U	Commercial Landscape Design	4 72

Horticulture Equipment and Facilities

12 Credits Offered, 8 Required

+ AG062U	Horticulture Equipment	4 72
+ CS002U	Facility Construction	4 72
AG010U	Park Maintenance Programs	4 60

Natural Resources

18 Credits Offered, 10 Required

AG018U	Wildlife Reserves	4 60
+ BY113U	Aquatic Wildlife	2 24
+ BY114U	Avian Wildlife	4 48
+ BY115U	Mammalian Wildlife	4 48
AG309U	Natural Resources Appreciation	4 60

Technical Support

15 Credits Offered, 8 Required

+ AG012U	Employment Experience	6 216
+ AG006U	Career Planning Seminar	1 12
AG006U	(to be repeated)	1 12
AG266U	Agricultural Leadership (elective each quarter)	1 12
AG222U	Special Projects - Horticulture	1-6 24-144

Related Courses

Business Management

24 Credits Offered, 4 Required

AG015U	Park and Recreation Administration	4 60
+ AG254U	Grounds Management Problems	4 72
AG310U	Golf Course Maintenance	4 84
AG026U	Garden Center Operations	4 60
AG035U	Commercial Plant Production	4 60
DP010T	Introduction to Microcomputers and Data Processing	4 60

General Education

24 Credits Offered, 21 Required

+ CM002U	Communication Skills I	3 36
+ CM005U	Oral Communications	3 48
+ PY004U	Human Relations	3 36
+ MA001U	Mathematics I - Agriculture	4 48
MK055U	Merchandising - Horticulture	3 48
+ AG048U	Plant Propagation	4 72
+ AG056U	Soil and Water Conservation	4 60

+ Required course

Parks and Natural Resources Technology

The Parks and Natural Resources Technology program prepares students for careers such as county or state park attendant, park ranger, horticulturist, municipal park technician, and many others. Upon completion of the required 112 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

The Parks and Natural Resources Technology program is fully approved by accrediting agencies. All students will be aided in developing an individual education plan. This plan will be approved by the academic advisor and specific program administration.

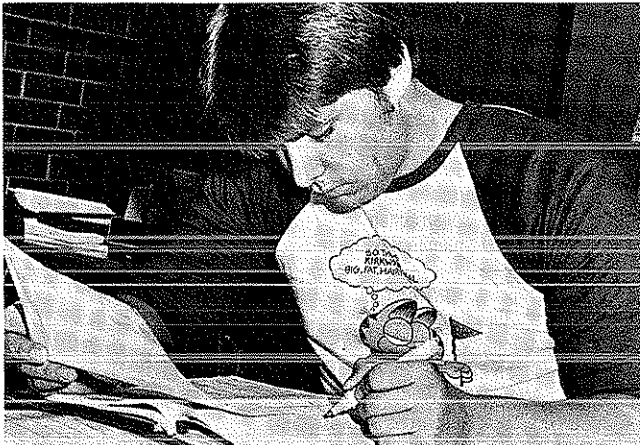
Additional credit diplomas and credit certificates are being developed for students with special needs and in-

Additional Departmental Offerings of Special Interest

Technical Courses

		Credits	Hrs.
AG278U	Ornamental Trees and Shrubs	1-3	12-84
AG269U	Greenhouse Production	1-3	12-84
AG276U	Residential Planting Design	1-3	12-84
AG277U	Native Trees and Shrubs	1-3	12-84
AG274U	Horticulture Pesticide Application	1-3	12-84
AG268U	Interior Plants	1-3	12-84

BUSINESS TECHNOLOGIES



Management Information Systems Department

Accounting Technology

This program is designed to prepare individuals for semiprofessional employment opportunities in the accounting field. Upon completion of the program, the student should be prepared to enter business in the areas of cost accounting, general accounting and many other specialized areas of financial accounting and financial reporting. Requirements include accounting principles and practice and general and occupational information.

Upon completion of the required 91 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree. An Associate of Science/Career Option degree may be earned by election of 10 quarter credit hours of humanities in place of the business internship/business electives.

Technical Courses

		Credits	Hrs.
AC001T	Principles of Accounting I	4	48
AC002T	Principles of Accounting II	4	48
AC003T	Principles of Accounting III	4	48
AC006T	Intermediate Accounting I	4	48
AC007T	Intermediate Accounting II	4	48
AC009T	Intermediate Accounting III	4	48
AC004T	Cost Accounting I	4	48
AC005T	Cost Accounting II	4	48
AC018T	Income Tax	4	48
MK022U	Employment Seminar	1	24
AM003T	Business Internship	8	288
MK024U	Business Internship Seminar	1	12
	or		
	Business Electives	10	120

Related Courses

OE009T	Electronic Office Machines	2	36
LW005T	Business Law I	4	48
MA043T	Finite Mathematics	5	60
MA041T	Fundamentals of Statistics	5	60
DP010T	Introduction to Microcomputers & Data Processing	4	60
AC021T	Computer Applications - Accounting	4	72
EC013T	Principles of Economics (Macro)	4	48
EC014T	Principles of Economics (Micro)	4	48
CM101T	Composition I	4	48
	or		
CM002U	Communication Skills I	3	36
CM117T	Composition II: Technical Writing	4	48
	or		
CM003U	Communication Skills II	3	36
CM201T	Public Communication	4	48
	Humanities Electives (in lieu of Business Internship for A.S. requirements)	10	120

Accounting

This program is designed to provide fundamental knowledge of accounting, an understanding of basic concepts, definitions and terminologies, an insight into characteristics and methods of operating accounting systems. The program includes group instruction, individual instruction and laboratory practice. The program also provides on-the-job training periods through which the students gain actual work experience.

Upon completion of the required 60 quarter credit hours, the graduate will be awarded a diploma.

Technical Courses

		Credits	Hrs.
AC001V	Accounting Fundamentals I	5	60
	or		
AC001T	Principles of Accounting I	4	48
AC002V	Accounting Fundamentals II	5	60
	or		
AC002T	Principles of Accounting II	4	48
AC003V	Accounting Fundamentals III	5	60
	or		
AC003T	Principles of Accounting III	4	48
AC018T	Income Tax	4	48
AM003T	Business Internship	6	216
AC009U	Accounting Problems	2	36
AC009U	(To be repeated)	2	36
AC009U	(To be repeated)	2	36

MK024U	Business Internship Seminar	1	12
MK022U	Employment Seminar	1	24

Related Courses

DP010T	Introduction to Microcomputers and Data Processing	4	60
AC021T	Computer Applications - Accounting	4	72
LW005T	Business Law I	4	48
CM002U	Communication Skills I	3	36
	or		
CM101T	Composition I	4	48
CM003U	Communication Skills II	3	36
	or		
CM102T	Composition II	4	48
MA037U	Mathematics I - Business	2	24
	or		
MA031T	Intermediate Algebra	5	60
OE006T	College Typing I	2	48
OE009T	Electronic Office Machines	2	36
PY004U	Human Relations	3	36

Administrative Secretarial Technology

The core approach to the curricula allows the student certain flexibility in selecting a major interest area in an office occupation. Completion of the following 15 core courses is a part of the requirement for graduation from the Administrative Secretarial, Clerical, General Secretarial, Information Processing, Legal Secretarial, and Medical Secretarial programs. Each student entering these programs will be given the opportunity for advanced skill placement in certain courses through testing.

Office Education Core Courses

		Credits	Hrs.
**OE006T	College Typing I	3	72
**OE007T	College Typing II	3	72
OE008T	College Typing III	3	72
**OE020U	Office Careers	1	12
**CM002U	Communication Skills I	3	36
**OE001U	Office Procedures I	4	48
OE019U	Machine Transcription	3	48
MK024U	Business Internship Seminar	1	12
**OE005U	Business Spelling/Proofreading	2	24
CM001U	Business Communications	4	48
AM003T	Business Internship	5	180
**OE009T	Electronic Office Machines	3	48
OE026U	Word Processing I	3	60
**AC016U	Office Accounting	4	48
	or		
**AC001T	Principles of Accounting I	4	48
**PY004U	Human Relations	3	36
	or		
PY002T	General Psychology	4	48
**OE010T	Filing Systems	2	24
OE044T	Records Management	2	24

**Upon completion of these 28 credits, the student will receive an Office Clerk Vocational Certificate.

Office Education Shorthand Core Courses

OE001T	College Shorthand I	4	60
--------	---------------------	---	----

OE002T	College Shorthand II	4	60
OE003T	College Shorthand III	4	60
OE004T	College Shorthand Transcription	3	48

The Administrative Secretarial program trains students in advanced secretarial skills, office administration techniques, and general education areas. The graduate is prepared for a high-level position as a participating member of an executive team. Upon completion of the required 120 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

Core Courses

	Credits	Hrs.
Office Education Core Courses	49	960
Office Education Shorthand Core Courses	15	228

Technical Courses

OE011T	Administrative Office Procedures	4	48
OE012T	College Typing IV	3	72
AM019U	Office Administration	4	48
AM076U	Time Management Seminar	1	12
AC002T	Principles of Accounting II	4	48
AM003T	Business Internship	4	144

Related Courses

AM032T	Introduction to Business	4	48
LW005T	Business Law I	4	48
EC013T	Principles of Economics (Macro)	4	48
DP010T	Introduction to Microcomputers and Data Processing	4	60
CM204T	Speech Communication	4	48
	or		
CM201T	Public Communication Electives	4	48
		12	144

Advanced Placement - Certified Professional Secretary

Any person who holds a Certified Professional Secretary Certificate may make a request to receive up to 40 credit hours applied toward an Associate of Applied Science degree. The following courses are accepted for credit:

	Credits	Hrs.	
LW005T	Business Law I	4	48
EC013T	Principles of Economics (Macro)	4	48
OE011T	Administrative Office Procedures	4	48
AC001T	Principles of Accounting I	4	48
AC002T	Principles of Accounting II	4	48
OE010T	Filing Systems	2	24
OE044T	Records Management	2	24
OE007T	College Typing II	3	72
OE008T	College Typing III	3	72
AM019U	Office Administration	4	48
PY004U	Human Relations	3	36
DP010T	Introduction to Microcomputers and Data Processing	4	60

Clerical

The Clerical program provides training in basic office skills needed for employment in many kinds of business, industrial and professional offices in positions that require no shorthand skills. Emphasis is placed on typing proficiency, office machine skills, and filing and telephone techniques. Upon completion of the required 55 quarter credit hours, the graduate will be awarded a diploma.

Core Courses

	Credits	Hrs.
Office Education Core Courses	49	960

Technical Courses

OE002U Office Procedures II	3	60
OE030V Clerical Seminar	1	12

Related Courses

Electives	2	24
-----------	---	----

General Secretarial

The General Secretarial program prepares students for careers in a number of businesses such as banking firms, advertising agencies, educational institutions, and travel agencies. Emphasis is placed on shorthand proficiency in this program. Upon completion of the required 73 quarter credit hours, the graduate will be awarded a diploma.

Core Courses

	Credits	Hrs.
Office Education Core Courses	49	960
Office Education Shorthand Core Courses	15	228

Technical Courses

OE012T College Typing IV	3	72
OE002U Office Procedures II	3	60

Related Courses

Electives	3	36
-----------	---	----

Information Processing#

The Information Processing program provides the specialized training necessary to work with the sophisticated electronic equipment in today's modern offices. In addition to advanced training in basic office skills, students complete specialized course work on word processors and microcomputers. Word processing management and supervisory techniques are also included.

College Typing II (45 wpm) is a prerequisite for admission to the Information Processing program. Upon completion of the required 60 quarter credit hours, the graduate will be awarded a diploma.

Core Courses

	Credits	Hrs.
Office Education Core Courses	49	960

Technical Courses

OE031U Word Processing II	2	48
OE032U Word Processing III	3	72
OE028U Information Processing Systems Management	2	24
DP010T Introduction to Microcomputers and Data Processing	4	60

#New program pending State Department of Public Instruction approval.

Legal Secretarial

This program provides specialized training for successful employment in the legal secretarial field. In addition to instruction in general office skills, the student completes seven technical courses. A typing skill of 35 words per minute is required for admission to program. Upon completion of 92 quarter credit hours, the graduate will be awarded a diploma.

Core Courses

	Credits	Hrs.
Office Education Core Courses	49	960
Office Education Shorthand Core Courses	15	228

Technical Courses

OE006V Legal Terminology	3	48
OE003V Legal Terminology Review	2	24
OE005V Legal Typing	3	48
OE003V Legal Dictation	3	48
OE004V Legal Machine Transcription	3	48
OE002V Law Office Procedures	3	36
AC008V Income Tax Procedures	3	36

Related Courses

LW005T Business Law I	4	48
LW006T Business Law II	4	48

Medical Secretarial

The Medical Secretarial program provides the specialized training needed for secretarial work in a health office setting, including doctors' offices, insurance offices, clinics, hospitals and laboratories. A typing skill of 35 words per minute is required for admission to the program. Upon completion of the required 83 quarter credit hours, the graduate will be awarded a diploma.

Core Courses

	Credits	Hrs.
Office Education Courses	49	960

Technical Courses

MS061U Medical Terminology I	3	36
MS068U Medical Terminology Practice	1	12
MS062U Medical Terminology II	3	36
MS068U Medical Terminology Practice	1	12
BY006U Basic Anatomy and Physiology	4	60
OE014U Legal Aspects of Medical Records	2	24
OE032V Medical Insurance Seminar	2	24
OE016U Medical Secretarial Machine Transcription I	3	48
OE021U Medical Secretarial Machine Transcription II	3	48
OE017U Medical Secretarial Office Procedures	4	48
MS063U Pharmacology	2	24

Related Courses

Electives	6	72
-----------	---	----

DP010T	Introduction to Microcomputers and Data Processing	4	60
OE026U	Word Processing I	3	60
	Electives	10	120

Medical Record Technology

The Medical Records program prepares students for careers in the medical record field, including hospital records departments, medical clinics, nursing homes, state and federal health agencies, and health research societies. An unpaid directed practicum is offered in various types of health facilities.

Graduates are eligible to take the National Accreditation Test offered by the American Medical Record Association to become accredited record technicians. This program is accredited by the Committee on Allied Health Education and Accreditation (CAHEA) of the American Medical Association, in collaboration with the American Medical Record Association.

Upon completion of the required 107 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

	Credits	Hrs.
OE027U	Medical Transcription	5 72
MA036U	Health Data Statistics	4 48
MS061U	Medical Terminology I	3 36
MS068U	Medical Terminology Practice	1 12
MS062U	Medical Terminology II	3 36
MS068U	Medical Terminology Practice	1 12
OE015U	Medical Record Science I	4 48
OE009U	Medical Record Science II	4 48
OE012U	Medical Record Science III	4 48
OE022U	Medical Record Science IV	4 48
OE010U	Nosology	4 48
OE013U	Documentation of Medical Records	3 36
OE014U	Legal Aspects of Medical Records	2 24
OE011U	Directed Practicum	5 180
OE011U	Directed Practicum	8 288
OE011U	Directed Practicum	1 36
OE023U	Medical Record Seminar	1 12
OE024U	In-service Education	1 12

Related Courses

AM019U	Office Administration	4	48
CM002U	Communication Skills I	3	36
	or		
CM101T	Composition I	4	48
CM001U	Business Communications	4	48
	or		
CM117T	Composition II: Technical Writing	4	48
PY002T	General Psychology	4	48
	or		
PY004U	Human Relations	3	36
MS063U	Pharmacology	2	24

Related Courses

OE007T	Typing II	3	72
BY006U	Basic Anatomy and Physiology	4	60
BY009U	Homeostatic Physiology	4	48
BY112U	Introduction to Pathology	4	48
OE005U	Business Spelling/Proofreading	2	24

Purchasing Technology

The Purchasing Technology program is currently under development and will be designed to prepare students for careers in the purchasing field. Job opportunities exist in the private industrial sector as well as in federal, state and local governments. Purchasing includes such activities as the research and development required for the proper selection of materials and the sources of supply from which those materials may be bought; the follow-up procedures necessary to insure proper delivery; the negotiations with suppliers for the final price; the assurance that both quality and quantity are in compliance with specifications and orders as placed; and the development of proper procedures, methods and forms to enable the purchasing department to carry out established policies.

The program will feature a combination of general education, business education and technical purchasing courses. It will also provide on-the-job training in which the student will gain actual work experience. Upon completion of the required number of quarter credit hours, graduates will be awarded an Associate of Applied Science degree.

Management and Marketing Department**Food Service Management Technology**

The Food Service Management program is designed to prepare people for entrance into careers in restaurant or institution food management. Through specialized training, students are provided with the opportunity to develop the skills and knowledge necessary to meet the requirements of this growing, competitive industry.

The Food Service Management program features classroom and laboratory instructions in technical, related and general education courses. This includes quantity meal preparation and service in the kitchen-dining area operated by Food Service students.

Upon completion of the required 51 quarter credit hours and the Food Service Training program, the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

	Credits	Hrs.
AM052U	Food Service Management I	4 96

AM053U	Food Service Management II	4	96
AM075U	Food Service Management III	4	96
HE012U	Equipment and Design	4	60
HE013U	Garde Manger	3	72
LW005U	Food Service Law	4	48

Related Courses

CM003U	Communication Skills II	3	36
EC015T	Principles of Business Economics	4	48
CM201T	Public Communication	4	48
MK019U	Small Business Organization	3	36
AC016U	Office Accounting	4	48
	or		
AC001T	Principles of Accounting I	4	48
AM032T	Introduction to Business	4	48
AM022U	Principles of Supervision	3	36
	Elective	3-4	36-48

Food Service Training

Food Service Training is a specialized program designed to provide men and women with the technical and specialized knowledge and skills required to enter the quantity food preparation and service industry.

The program for food production personnel includes a combination of classroom and laboratory instruction in general education, technical and professional courses. The internship period provides the student with actual work experience in commercial or institution food service establishments throughout Iowa. The graduate is prepared for employment in restaurants, hotels, motels, institutions, industrial cafeterias, delicatessans and other facilities.

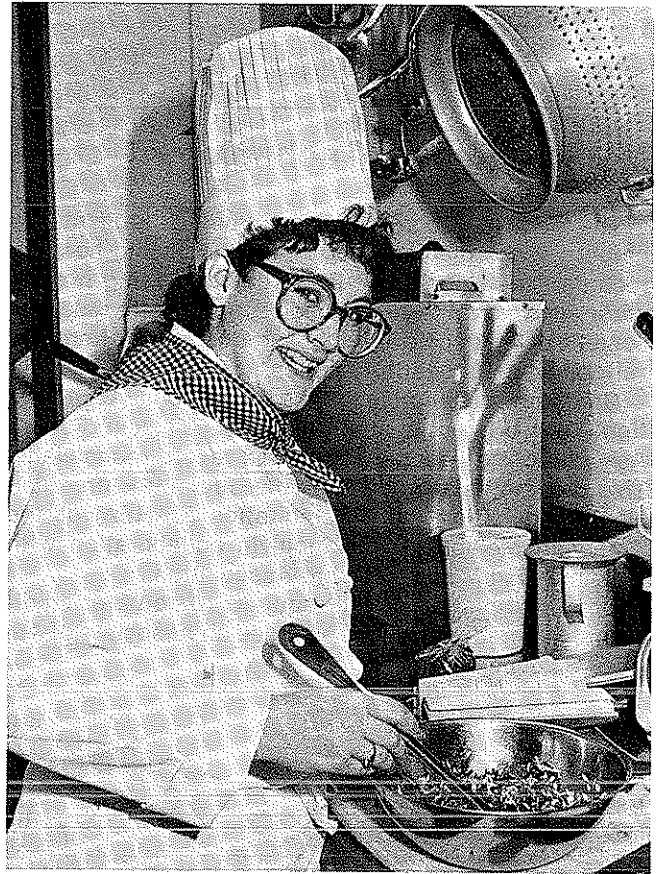
Upon completion of the required 54 quarter credit hours, graduates of the Food Service Training program will be awarded a diploma.

Technical Courses

		Credits	Hrs.
HE001U	Introduction to Food Service/Hospitality Careers	1	12
HE010U	Food Composition I	3	36
HE011U	Food Composition II	3	36
HE022U	Food Composition III	3	36
HE009U	Food Service Sanitation and Safety	2	24
HE005U	Food Production I	6	144
HE006U	Food Production II	6	144
HE007U	Food Production III	6	144
HE008U	Menu Planning and Servicing Fundamentals	3	36
HE016U	Quantity Food Purchasing	3	36
HE017U	Food Service Internship	6	216
MK024U	Business Internship Seminar	1	12

Related Courses

MA037U	Mathematics I - Business	2	24
CM002U	Communication Skills I	3	36
PY004U	Human Relations	3	36
	Elective	3-4	36-48



Food Store Management Technology

Through general and specialized business training, students in Food Store Management are provided with the background and skills necessary for meeting the requirements of this vast and rapidly expanding career field. Students typically enter the retail or wholesale food industry. The program has excellent industry support throughout Iowa and the Midwest. The graduate is prepared to be employed in super markets, convenience stores, wholesale operations, and as sales people for various food companies.

Upon completion of the required 122 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

		Credits	Hrs.
MK012U	Introduction to Food Store Marketing	4	48
AM003T	Business Internship	12	432
AM003T	(to be repeated)	12	432
MK011U	Food Store Seminar	6	144
	(to be repeated 6 times at 1 credit each)		
MK013U	Food Store Planning & Layout	3	36
AM005U	Front End Management	3	36
MK041U	Food Store Merchandising I	3	36
AM012U	Food Store Management	5	60
MK042U	Food Store Merchandising II	3	36
MK024U	Business Internship Seminar	1	12

Related Courses

AM032T	Introduction to Business	4	48
MA037U	Mathematics I - Business	2	24
MK003T	Principles of Selling	4	48
PY004U	Human Relations	3	36
LW005T	Business Law	4	48
	or		
LW025T	Personal Law	4	48
CM002U	Communication Skills I	3	36
	or		
CM101T	Composition Skills I	4	48
CM003U	Communication Skills II	3	36
	or		
CM102T	Composition Skills II	4	48
AC001T	Principles of Accounting I	4	48
	Electives	16	192
EC015T	Principles of Business Economics	4	48

Related Courses

MK025T	Principles of Advertising	4	48
CM201T	Public Communication	4	48
MK001T	Principles of Marketing	4	48
AC006U	Management Accounting	4	48
AM022U	Principles of Supervision	3	36
DP010T	Introduction to Microcomputers and Data Processing	4	60

Interior Design Technology

The Interior Design program combines professional-technical education, business education, and general education. It is designed to prepare students for careers in design and merchandising as decorators, sales representatives, consultants, retail designers, buyers in furniture, drapery, wall/floor coverings, design, and related accessory areas of retail stores and related professional fields.

Upon completion of the required 123 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

		Credits	Hrs.
AT003U	Survey of Interiors I	3	36
AT006U	Survey of Interiors II	2	24
AT015U	Survey of Interiors III	2	24
MK032U	Home Furnishings I	3	36
MK033U	Home Furnishings II	4	48
GR042U	Elementary Drawing	2	48
HE021U	Kitchen & Bath Planning	3	36
MK048U	Window Design Treatment	3	36
MK029U	Professional Practices	4	48
HE003U	Textiles	4	60
HE020U	Interior Analysis and Design	5	72
AT007U	Design Relationships	2	24
AT002U	Decorative Accessories	2	24
AT008U	Color in Interiors	2	24
AM003T	Business Internship	12	432
MK024U	Business Internship Seminar	1	12

Related Courses

MK003T	Principles of Selling	4	48
AM032T	Introduction to Business	4	48
AM001U	Merchandise Analysis and Control	3	36

MK002T	Principles of Retailing	4	48
EC015T	Principles of Business Economics	4	48
MK001T	Principles of Marketing	4	48
MK025T	Principles of Advertising	4	48
AM022U	Principles of Supervision	3	36
LW005T	Business Law I	4	48
DP010T	Introduction to Microcomputers and Data Processing	4	60
AM020U	Retail Management	4	48
AC001T	Principles of Accounting I	4	48

Related Courses

MK014U	Merchandising	4	48
PY004U	Human Relations	3	36
MK019U	Small Business Organization	3	36
CM201T	Public Communication	4	48
CM002U	Communication Skills I	3	36
CM003U	Communication Skills II	3	36
MA037U	Mathematics I - Business	2	24
MK022U	Employment Seminar	1	24

Management Development Technology

The Management Development Technology program is designed to develop and improve management skills for those persons currently in first-line to mid-level management positions or those seeking advancement into a supervisory capacity. The program is also designed for pre-business students completing an Associate of Science or Associate of Arts degree who desire a management certificate.

Courses are offered daytime and evenings, on and off-campus, and by arrangement at business locations, in order to accommodate both the full-time employed worker taking courses on a part-time basis and the regularly enrolled Kirkwood students.

The program provides an extensive selection of both introductory and advanced, general and technical management courses offered on either a credit or audit basis. Students may select various courses of their choice or select tracks that lead to a vocational certificate, diploma, Associate of Arts degree, Associate of Science degree, or Associate of Applied Science degree.

Students who have completed a vocational certificate or diploma in a program other than Management Development, may be able to apply that vocational certificate toward the completion of the diploma or Associate of Applied Science degree. Courses completed at other accredited institutions that parallel the offerings of the Management Development program may be considered for credit.

Students enrolled in the Management Development program may be eligible for employer reimbursement, scholarships, financial aid, student loans, and/or veterans' benefits and should contact the Enrollment Services Office for details.

REQUIREMENTS SUMMARY

Option I: Certificate in Management Development

Complete the support course requirements (6-8 credits) and the certificate courses (22-36 credits) of one of the technology selections (Supervisory Management, Administration, Traffic and Transportation, Industrial Technologies, Money and Banking), or the vocational certificate courses of a discipline offered by another discipline at Kirkwood.

Option II: Diploma in Supervisory Management

Complete the support course requirements (6-8 credits), the Supervisory Management certificate courses (36 credits) plus either (a) the additional diploma courses (15 credits) in Management Development or (b) another vocational certificate.

Option III: Associate of Applied Science Degree#

Complete the support course requirements (20-23 credits), the Supervisory Management certificate courses (36 credits), the additional diploma courses in Management Development (15 credits), and either (a) the 21 credits from the Management Development selectives or (b) another vocational certificate. A diploma from another Kirkwood program may substitute for the vocational certificate, the electives requirement, and, on approval, the Management Development diploma courses.

Associate of Applied Science Illustrations (credit requirements may be less because of course duplications between programs)

20-23	credits	Supportive Courses
3	credits	Supervisory Management Certificate Courses
10	credits	Electives
15	credits	Supervisory Management Diploma Courses
21	credits	Supervisory Management selectives
102-105	credits	
20-23	credits	Support Courses
36	credits	Supervisory Management Certificate Courses
10	credits	Electives
15	credits	Supervisory Management Diploma Courses
28-42	credits	Vocational Certificate
109-126	credits	
20-23	credits	Support Courses
36	credits	Supervisory Management Certificate Courses
45-78	credits	Diploma from another discipline
101-137	credits	

#New program pending State Department of Public Instruction approval.

Option IV: Associate Degree

For an Associate of Arts degree with Supervisory Management (or other) certificate or an Associate of Science degree with Supervisory Management (or other) certificate, complete the normal liberal arts course requirements for either degree including the requirements for a vocational certificate, and insuring at least 66 "T" credits in the total program.

Technical Courses

SUPERVISORY MANAGEMENT

CERTIFICATE (complete 36 Credits)

	Credits	Hrs.
AM022U Principles of Supervision	3-4	36-48
AM090U Intermediate Supervision	3	48
AM095U Leadership Styles	3-4	36-48
AM094U Productivity Improvement	3	36
AM049U Labor Relations	4	48
AM051U Principles of Safety (required course)	4	48
AM042U Decision Making	3	36
DP010T Introduction to Microcomputers and Data Processing	4	60
AM092U Employee Training and Development	4	48
AM047U Principles of Personnel Management	4	48
AM050U Results Oriented Management (MBO)	3	36
AM093U Time Management	1	12
AM058U Work Habits and Absenteeism	1	12
AM079U Performance Appraisal	1	12

ADMINISTRATION

CERTIFICATE (complete 22 credits)

AM019U Office Administration	3-4	36-48
AM029U Wage and Salary Administration	2	24
AM054U Public Administration	3	36
AM031U Management Information Systems	3	36
AM067U Organizational Behavior	3	36
AM089U Applied Organizational Study	3	36
LW005T Business Law I	4	48
AM005T Introduction to Management	4	48
Supervisory Management Selectives	1-4	12-48

TRAFFIC AND TRANSPORTATION

CERTIFICATE (complete 9 courses below)

AM036U Traffic and Transportation I	3	36
AM037U Traffic and Transportation II	3	36
AM038U Traffic and Transportation III	3	36
AM039U Traffic and Transportation IV	3	36
AM040U Traffic and Transportation V	3	36
AM041U Traffic and Transportation VI	3	36
AM064U Interstate Commerce Law and Practice I	3	36
AM068U Interstate Commerce Law and Practice II	3	36
AM069U Interstate Commerce Law and Practice III	3	36

INDUSTRIAL TECHNOLOGIES

CERTIFICATE (complete 29 credits below)

AM035U Introduction to Industrial Engineering	2	24
AM048U General Production and Inventory Control	4	48
AM032U Production Quality Control	3	36
MK063U Purchasing I	3	36
MK064U Purchasing II	3	36
AM051U Principles of Safety	4	48
MK023U Industrial Marketing	3	36
EV054U Introduction to Water and Wastewater Treatment	2	24
AM078U Time and Motion Study	1	12
MM032U Production Machinery	2	56
MM001U Manufacturing Processes I	3	72
MM002U Manufacturing Processes II	3	72

MONEY AND BANKING

CERTIFICATE (complete 24 credits)		Credits	Hrs.
AM083U	Introduction to Savings and Loan Associations	2	24
AM084U	Residential Mortgage Lending	2	24
MK060U	Real Estate Principles/Practices I	4	48
MK019T	Real Estate Portfolio	3	36
AM074U	Savings Accounts	2	24
AM085U	Savings Accounts Administration	2	24
AM086U	Financial Institutions	2	24
AM087U	Savings Association Operations	2	24
AM088U	Teller Operations	2	24
LW019T	Real Estate Law	4	48
MK058U	Real Estate Appraisal	3	36

OTHER KIRKWOOD VOCATIONAL CERTIFICATE OR DIPLOMA (45-78 credits)

Review other Kirkwood vocational certificate and diploma programs in the catalog that may be continued in the Management Development program.

Support Courses

*CM002U	Communication Skills I	3	36
	or		
*CM101T	Composition I	4	48
CM003U	Communication Skills II	3	36
	or		
CM117T	Composition II: Technical Writing	4	48
EC015T	Principles of Business Economics	4	48
	or		
EC013T	Principles of Economics (Macro)	4	48
*AM062U	Organizational Communications	3	36
PS002U	Citizen's Role in Government	3	36
	or		
PS006T	Iowa Government: Today and Tomorrow	4	48
PY004U	Human Relations	3	36

*The two courses required for a certificate, career option, or a diploma are designated *. For the AAS, all six courses (or alternates) are required.

Management Development Diploma

(complete 15 credits or approved alternates)

AM091U	Advanced Supervision	3	36
AC001T	Principles of Accounting I	4	48
MA037U	Mathematics I - Business	2	24
AM044U	Work Simplification	1	12
AM081U	Professional Profile	2	24
AM055U	Current Topics in Management	1-2	12-36
AM095U	Leadership Styles (4th credit)	1	12

Management Development Selectives

(complete 21 credits or approved alternates)

AM077U	Age of Robotics	1	12
AC005U	Small Business Record Keeping	2	24
AM080U	Word Processing for Managers	3	36
AM082U	Risk Management	1	12
LW006T	Business Law II	4	48
SO001U	Industrial Organization	3	36
DP010U	Computer Applications for Managers	3	48
MK019U	Small Business Organization	3	36
	Selections from Technical Certificate Courses		

Electives

For the AAS degree, ten credits are required

**Retail Management Technology**

This program is designed to prepare graduates for career goal positions in retail management. Occupations include small shop owner, department manager/buyer as well as other retail careers. In addition to classroom instruction, the program includes on-the-job training. Also the student will participate in a "shadowing" experience whereby they will observe someone involved in an occupation that is similar to their career interest.

Graduates of the Fashion Merchandising, Retail Marketing, or Real Estate program who also complete the 61 credit hours of the Retail Management program will be awarded an Associate of Applied Science degree. A certificate in Sales/Marketing is under development and will incorporate coursework from these three programs as well as others. Questions regarding this award may be directed to the Office of Admissions or departmental personnel.

Technical Courses

		Credits	Hrs.
MK054U	Management Seminar	4	72
AM003T	Business Internship	10	360
AM001U	Merchandise Analysis & Control	3	36
AM014U	Merchandising	4	48
MK019U	Small Business Organization	3	36
AM020U	Retail Management	4	48
MK024U	Business Internship Seminar	1	12

Related Courses

MK001T	Principles of Marketing	4	48
EC015T	Principles of Business Economics	4	48
AC001T	Principles of Accounting I	4	48
MK053U	Consumer Behavior	3	36
AM022U	Principles of Supervision	3	36
AC006U	Management Accounting	4	48
LW005T	Business Law I	4	48
	or		
LW025T	Personal Law	4	48
CM003U	Communication Skills II	3	36
	or		
CM102T	Composition II	4	48

Fashion Merchandising

Fashion Merchandising provides technical training for individuals interested in the field of retailing fashion products. Typical careers may include fashion sales, specialty shop management, bridal consulting, department management, fashion coordinating and fashion buying.

Upon completion of the required 66 quarter credit hours, the graduate will be awarded a diploma.

Technical Courses

		Credits	Hrs.
HE003U	Textiles	4	60
AT004U	Fashion Analysis and Coordination	2	24
MK022U	Employment Seminar	1	24
MK007U	Principles of Fashion Merchandising	3	36
MK018U	Visual Merchandising	2	36
MK008U	Fashion Show Procedures	3	60
MK006U	Fashion Merchandising Seminar	1	24
AM003T	Business Internship	10	360
MK024U	Business Internship Seminar	1	12

Related Courses

MA037U	Mathematics I - Business	2	24
MK003T	Principles of Selling	4	48
PY004U	Human Relations	3	36
AM032T	Introduction to Business	4	48
CM002U	Communication Skills I	3	36
	or		
CM101T	Composition I	4	48
MK016T	Counselor Selling	4	48
DP010T	Introduction to Microcomputers and Data Processing	4	60
MK002T	Principles of Retailing	4	48
CM201T	Public Communication	4	48
MK025T	Principles of Advertising	4	48

Retail Marketing

The Retail Marketing program prepares graduates for sales-oriented positions in retail establishments. Students receive instruction in salesmanship, communication skills, human relations and data processing.

Included in the program is on-the-job training whereby the student is able to practice those skills and knowledges learned in the classroom. Upon completion of the required 54 quarter credit hours, the graduate will be awarded a diploma.

Technical Courses

		Credits	Hrs.
MK022U	Employment Seminar	1	24
MK003T	Principles of Selling	4	48
AM003T	Business Internship	10	360
MK024U	Business Internship Seminar	1	12
MK016T	Counselor Selling	4	48
MK010U	Retail Seminar	1	24
MK018U	Visual Merchandising	2	36

Related Courses

CM201T	Public Communication	4	48
PY004U	Human Relations	3	36
AM032T	Introduction to Business	4	48
MK002T	Principles of Retailing	4	48
MA037U	Mathematics I - Business	2	24
CM002U	Communication Skills I	3	36
DP010T	Introduction to Microcomputers and Data Processing	4	60
MK025T	Principles of Advertising	4	48
	Elective	4	48

Real Estate

The Real Estate program provides the student an opportunity to acquire the skills and understanding needed to enter the now growing field of real estate sales and management. The curriculum offers a wide range of technical expertise courses.

The courses are designed to accommodate full-time, part-time and non-degree seeking students alike. Prospective students seeking to enter the field will need a strong preparation in areas of law, finance, appraisal and salesmanship. Those individuals already working as sales associates or realtors may find enrollment beneficial in increasing their knowledge and awareness of current developments.

Upon completion of the required 61 quarter credit hours, the graduate will be awarded a diploma.

Technical Courses

		Credits	Hrs.
MK060U	Real Estate Principles/Practices I	4	48
MK061U	Real Estate Principles/Practices II	4	48
LW019T	Real Estate Law	4	48
MK059U	Real Estate Finance	4	48
MK058U	Real Estate Appraisal	4	48
MK062U	Real Estate Seminar	4	48
CS070U	Principles of Surveying and Construction	3	48
MK025T	Principles of Advertising	4	48
MK003T	Principles of Selling	4	48
MK016T	Counselor Selling	4	48
MK002T	Principles of Retailing	4	48

Related Courses

CM201T	Public Communication	4	48
PY004U	Human Relations	3	36
CM002U	Communication Skills I	3	36
AM032T	Introduction to Business	4	48
DP010T	Introduction to Microcomputers and Data Processing	4	60

DATA PROCESSING TECHNOLOGIES



Computer Programming Technology

Training in computer programming stresses applied technical knowledge so that the student can step directly into the occupation of computer programming with a business orientation. Units of training change frequently to keep pace with the industry. Upon completion of the required 94 quarter credit hours the graduate will be awarded an Associate of Applied Science degree. New students may begin each quarter and also enroll on a part-time basis.

Students must select, with the consent of an advisor, courses from the following list:

Technical Courses		Credits	Hrs.
DP006T	Computer and Data Processing Concepts	3	36
DP001U	Self Service Aids	1	24

DP041U	Program Design and Documentation	3	36
DP021U	Disk Operating Systems (DOS/VSE) Concepts and Facilities	3	48
DP013U	Introduction to COBOL Programming	4	60
DP049U	Introduction to Systems	3	36
DP042U	Program Testing	3	48
DP014U	COBOL II Programming	4	60
DP022U	Disk Operating Systems (DOS/VSE) Coding	4	60
DP048U	Financial Applications of Data Processing	3	36
DP091U	COBOL III Programming	4	60
DP044U	Data Management	4	60
DP084U	Manufacturing Applications of Data Processing	3	36
DP085U	Data Communications Concepts	3	36
DP083U	Data Base Management	4	60
DP026U	Operating Systems Survey	4	48
DP018U	Introduction to Programming Language I	4	60
DP036U	Application Programming Projects	5	108
DP092U	Data Communications Coding	4	60
DP011U	Introduction to Report Program Generator (RPG)	4	60
DP093U	Introduction to PASCAL	3	48

Related Courses

CM101T	Composition I	4	48
MA031T	Intermediate Algebra	5	60
CM117T	Composition II: Technical Writing	4	48
AC001T	Principles of Accounting I	4	48
AC002T	Principles of Accounting II	4	48

Computer Operations

The Computer Operations program trains students for employment in a variety of closely related occupations in data processing. A student completing the required 35 quarter credit hours will be awarded a certificate and could work as a data librarian, work scheduler, records auditor, documentation specialist, operations assistant, or computer and console operator. Students may enroll at the beginning of the fall, winter or spring quarters and also on a part-time basis.

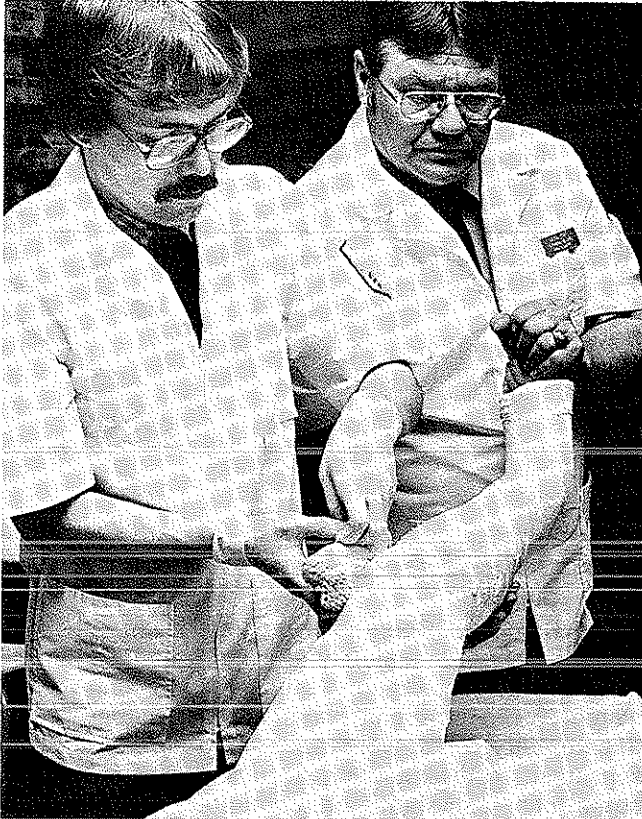
Students must select, with the consent of an advisor, courses from the following list:

Technical Courses		Credits	Hrs.
DP006T	Computer and Data Processing Concepts	3	36
DP001U	Self Service Aids	1	24
DP009U	Assigned Operations Projects	3	60
DP009U	(to be repeated)	3	60
DP005U	Introduction to System 370	3	36
DP011U	Introduction to Report Program Generator (RPG)	4	60
DP021U	Disk Operating System (DOS/VSE) Concepts and Facilities	3	48
DP027U	Systems Utilities	2	36
DP003U	Computer Operating Techniques	3	36
DP090U	Computer Operation Support Activities	3	48
DP089U	Business Applications of Data Processing	3	36

Related Course

CM101T	Composition I	4	48
--------	---------------	---	----

HEALTH TECHNOLOGIES



Allied Health Department

Dental Assisting Technology

The Dental Assisting curriculum is designed to prepare students to assist the dentist in the treatment of patients, take x-rays, manage a business office and perform laboratory procedures in a dental office. Dental assistant students are prepared for successful employment in private dental offices, group practices, dental services, clinics and hospitals, and public health agencies.

The Dental Assisting program offers associate degree and diploma options. Students who complete the diploma program are eligible to take the national certification examination. The associate degree option

is designed for those who wish to advance into specialized areas of dental assisting. The curriculum provides for flexibility and diverse career interests.

The Dental Assisting program is accredited by the American Dental Association, Commission on Dental Accreditation. Students with prior experience and/or education must see the program coordinator for advanced placement.

Upon completion of the required 109 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree. Students who complete the required 85 quarter credit hours will receive a diploma.

Technical Courses

		Credits	Hrs.
*MS004T	CPR	1	12
*DN102U	Dental Materials	3.5	48
*DN103U	Dental Assisting	5	72
*DN101U	Dental Orientation	2	24
*DN115U	Dental Lab. Assisting I	4.5	84
*BY110U	Dental Anatomy	3	36
*BY111U	Head and Neck Anatomy	3	36
*DN113U	Dental Radiography I	2.5	36
*DN109U	Laboratory Practicum I	4.5	90
*BY109U	Oral Microbiology	2.5	36
*DN120U	Dental Therapeutics	2.5	36
*DN141U	Dental Specialties	5.5	72
*DN114U	Dental Radiography II	1.5	24
*AM033U	Dental Office Management I	3	36
*DN110U	Lab. Practicum II	7.5	168
*DN121U	Disease and Prevention	3.5	48
*AC007U	Dental Bookkeeping	3	36
*AM034U	Dental Office Management II	3	36
*DN111U	DA Clinic I	3.5	114
*DN112U	DA Clinic II	3.5	114
*DN143U	Advanced Practicum I	3	54
*MS067U	Health Occupations Leadership	2	24
MS056U	Educational Techniques	3	36
MS036U	Studies in Health Science	4	48
DN168U	Advanced Practicum II	5	108

Related Courses

*CM101T	Composition I	4	48
*CM204T	Speech Communications	4	48
*PY002T	General Psychology	4	48
CM102T	Composition II: Technical Writing	4	48
	Electives	8	96

*The Dental Assisting Diploma curriculum is composed of the technical and related Associate degree courses marked with an asterisk.

Dental Assisting Off-Campus Program

This state-wide program provides an opportunity for employed dental assistants to demonstrate competence and gain a recognized formal education. The program provides extension courses off campus for college credit and is designed specifically for employed dental assistants. Course content is the same as the on-campus program. Students are required to come to the campus for performance examinations.

Students who complete a minimum of 86 credit hours will be awarded a diploma in Dental Assisting. The program can be completed over a period of six months to three years. Students enrolling must submit proof of employment as a dental assistant and have access to a dental office facility.

Technical Courses

	Credits	Hrs.
DN142U Dental Assistant Seminar	1	12
DN133U Dental Assisting—Set A	8	14-20
DN134U Dental Assisting—Set B	8	14-20
DN135U Dental Assisting—Set C	5	14-20
DN136U Dental Assisting—Set D	4	14-20
DN137U Dental Assisting—Set E	5.5	12-18
DN138U Dental Assisting—Set F	8.5	15-20
DN139U Dental Assisting—Set G	9	12-20
DN140U Dental Assisting—Set H	24	25-35

Related Courses

CM101T Composition I	4	48
CM204T Speech Communications	4	48
PY002T General Psychology	4	48
MS004T CPR	1	12

Dental Laboratory Technology

The Dental Laboratory Technology curriculum is designed to prepare students to box, pour and articulate models; set up, wax up, invest and process full dentures; cast inlays, crowns, bridges, partials, porcelain jackets, porcelain on metal; and construct many other special dental appliances. Dental laboratory technicians are employed in commercial dental laboratories, universities, other institutions and private dental offices, or they may choose to operate their own dental laboratory.

This program is accredited by the American Dental Association, Commission on Dental Accreditation. Students with prior experience and/or education must see the program coordinator for advanced placement.

Upon completion of the required 136.5 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

	Credit	Hrs.
DN004U Dental Terminology (DLT)	2.5	36
DN001U Dental Materials (DLT)	4	72
DN005U Dental Equipment I	1	18
DN164U Dental Equipment II	1	18
DN165U Dental Equipment III	1	18
BY003U Oral Anatomy	2	24
BY002U Dental Anatomy I	3	48
BY001U Dental Anatomy II	2	36
PH004U Technical Chemistry and Physics I	3.5	60
PH005U Technical Chemistry and Physics II	4	84
PH006U Technical Physics III	2	36
DN006U DLT Clinic I	12	432
DN021U Dental Techniques I	6.5	120
DN023U Articulators and Articulation	2	36
DN024U Cast Inlay and Crown	5	96
DN025U Crown and Bridge	10	192
DN026U Partial Denture Techniques I	4.5	96
DN008U Metal Design, Color and Contour	3	60

DN027U Partial Denture Techniques II	5	96
DN022U Denture Techniques II	6	120
DN003U Orthodontics	3	60
DN009U Precision Attachment Partial	4	84
DN010U Cast Metal Base Dentures	2	42
DN028U Specialized Study: Orthodontics	6.5	156
DN029U Specialized Study: Fixed Bridges	6.5	156
DN030U Specialized Study: Ceramics	6.5	156
DN031U Specialized Study: Removable Bridges	6.5	156
DN032U Specialized Study: Full Dentures	6.5	156
DN007U DLT Clinic II	12	432
MS067U Health Occupations Leadership	3	36
DN169U Occlusion	2	36
DN002U Porcelain Techniques	4.5	96

Related Courses

CM002U Communication Skills I	3	36
DN020U Laboratory Management (DLT)	3	36
PY007U Sales Psychology and Human Relations	3	36
PY002U General Psychology	4	48

Electroencephalographic Technology

The Electroencephalographic Technology (EEG Tech) program is a cooperative program between Kirkwood Community College and the University of Iowa Department of Neurology. Related and general education courses are provided by Kirkwood, with the EEG core courses and clinical experience provided by the University of Iowa Department of Neurology.

The electroencephalographic technologist functions in a laboratory performing neurological tests on either hospitalized patients or out-patients. The electroencephalograph records the electrical activity of the brain. The recorded activity assists the physician in the diagnosis and treatment of patients having various types of brain dysfunction. EEG technologists may be employed in private or public hospitals, clinics, private neurologists' offices and research institutions.

This program is accredited by the Committee on Allied Health Education and Accreditation. Students with prior experience and/or education must see the program coordinator for advanced placement.

Upon completion of the required 104.5 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

	Credits	Hrs.
MS025U Introduction to Health Care	4	72
MS037U Clinical EEG Lecture I	1	12
MS038U Introduction to EEG Lab Tech/Seminar	8	168
MS003T First Aid	.5	6
MS004T CPR	1	12
MS040U Applied Electronics and Instrumentation	3	48
MS041U General Neurology I	2	24
MS042U Clinical Laboratory I	8.5	192
MS043U General Neurology II	2	24
MS044U Clinical Laboratory II	15	348
MS045U Special Instrumentation Tech I	3.5	66
MS046U Clinical Laboratory III	13	300

MS047U	Special Instrumentation Tech II	4	90
MS048U	Clinical EEG Lecture II	2	24
MS049U	Clinical Laboratory IV	9	204

Related Courses

MA012U	Technical Mathematics I	4	48
EL029U	Electrical Circuits I	8	132
CM101T	Composition I	4	48
BY006U	Basic Anatomy and Physiology	4	60
BY009U	Homeostatic Physiology	4	48
PY002T	General Psychology	4	48

Medical Assisting

This program prepares the student to work under the supervision of medical personnel as a medical assistant in a clinic, hospital, group practice or physician's private office. The assistant's duties are both administrative and clinical. Some of these duties include assisting the physician with examinations, arranging hospital admissions, assisting in medical emergencies, performing laboratory tests, ordering medical supplies, scheduling appointments, typing medical reports and completing insurance forms.

This program is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association, in collaboration with the American Association of Medical Assistants. Students with prior experience and/or education must see the program coordinator for advanced placement.

Upon completion of the required 78.5 quarter credit hours, the graduate will receive a diploma and will be eligible to take the basic certification examination offered by the American Association of Medical Assistants.

Technical Courses

		Credits	Hrs.
MS022V	Clinical Procedures I	3	48
MS023V	Clinical Procedures II	3	48
MS028V	Medical Office Procedures I	2	36
MS029V	Medical Office Procedures II	2	24
MS025V	Medical Office Procedures III	1.5	24
LW001V	Medical Law	2	24
MS061U	Medical Terminology I	3	36
MS062U	Medical Terminology II	3	36
MS008V	MA Clinic I	6	204
MS009V	MA Clinic II	13	444
MS033V	Psychiatric - Medical Assistant	2	24
MS063U	Pharmacology	2	24
MS025U	Introduction to Health Care	4	72
MS067U	Health Occupations Leadership	2	24
MS003T	First Aid	.5	6
MS004T	CPR	1	12
MS032V	MA Pharmacology	2	24
MS030V	Medical Laboratory I	4	78
MS031V	Medical Laboratory II	1.5	30

Related Courses

OE018U	Medical Typing	2	36
BY006U	Basic Anatomy and Physiology	4	72
AC006V	Medical Bookkeeping	3	48
S0004T	Introduction to Sociology	4	48
CM204T	Speech Communication	4	48
CM101T	Composition I	4	48
	or		
CM002U	Communication Skills I	3	36
DP010T	Introduction to Microcomputers and Data Processing	1	12

Occupational Therapy Assisting Technology

This program combines academic and clinical experiences to prepare graduates to work under the supervision of registered occupational therapists. Occupational therapy assistants help patients perform tasks critical to self-care, work and leisure activities, and restoration and treatment of physical and psychosocial disabilities. Occupational therapy assistants are employed in hospitals, nursing homes, area education agencies, mental health facilities, rehabilitation centers, extended care facilities and public school programs.

This program is accredited by the American Occupational Therapy Association. Students with prior experience and/or education must see the program coordinator for advanced placement.

Upon completion of the required 113 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree and is eligible to take the certification examination of the American Occupational Therapy Association. Passing this examination is required in order for the graduate to become a certified occupational therapy assistant and to obtain a license in Iowa. (Licensure is required to practice in Iowa.)

Technical Courses

		Credits	Hrs.
TH005U	Therapeutic Techniques I	4	48
MS025U	Introduction to Health Care	4	72
TH004U	Developmental Processes	6	84
TH006U	Therapeutic Techniques II	4	60
TH002U	Health-Illness-Health	10	168
TH003U	Therapeutic Crafts I	4	96
CM007U	Medical Communications	4	48
MS003T	First Aid	.5	6
MS004T	CPR	1	12
MS061U	Medical Terminology I	2	24
TH007U	OT Evaluation	5	84
TH010U	OTA Clinic A	8	288
TH009U	OTA Clinic B	8	288
TH001U	Occupational Therapy Management Skills	2	24
MS036U	Studies in Health Science	4	48
TH008U	OTA Clinic C	8	288
MS067U	Health Occupations Leadership	2.5	30
TH013U	OT Planning	5	96
TH012U	OT Theory and Techniques	5	96
TH014U	Therapeutic Crafts II	4	96

Related Courses

BY006U	Basic Anatomy & Physiology	4	60
PY002T	General Psychology	4	48
BY011U	Functional Anatomy	4	48
CM201T	Public Communications	4	48
CM101T	Composition I	4	48

Orthopaedic Physician's Assisting Technology

The Orthopaedic Physician's Assisting curriculum prepares students to assist in the care of patients with musculoskeletal disorders and diseases under the supervision of an orthopaedic surgeon. Although specific duties may vary according to employer needs, the OPA functions primarily as a surgical assistant, cast and traction technician, patient data collector and patient instructor.

Theory and practice are integrated and concurrent during the program. Classroom and laboratory activities are provided at Kirkwood, while practical experience is obtained in selected hospitals and private physicians' offices. Students with prior experience and/or education must see the program coordinator for advanced placement.

Upon completion of the required 105.5 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

	Credits	Hrs.
MS007U	4	72
NS002U	1	12
MS056U	3	36
MS008U	4	96
MS065U	1	12
MS006U	3	48
MS025U	4	72
MS004U	4	48
MS009U	4	96
MS005U	4	48
MS015U	3	36
OE007U	2	24
MS013U	3.5	60
MS067U	.5	12
MS010U	7	240
MS011U	7	240
MS012U	13	480
MS003T	.5	6
MS004T	1	12
MS066U	3	60

Related Courses

BY006U	Basic Anatomy and Physiology	4	60
BY042T	Microbiology	5	72
CM101T	Composition I	4	48
BY011U	Functional Anatomy	4	48
CM117T	Composition II: Technical Writing	4	48
BY112U	Intro. to Pathology	4	48
CM204T	Speech Communications	4	48
BY009U	Homeostatic Physiology	4	48

Respiratory Therapy Technology

This curriculum is designed to prepare students to work as allied health specialists in the field of respiratory therapy. The role of the respiratory therapist is primarily, but not limited to, cardio-respiratory care in the form of oxygen administration, ventilatory support, blood gas analysis, chest physiotherapy and pulmonary rehabilitation. The therapist's role also often encompasses other related therapeutic and diagnostic functions such as pulmonary function testing.

This program is accredited by the Committee on Allied Health Education and Accreditation. Students with prior experience and/or education must see the program coordinator for advanced placement.

Upon completion of the required 150 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree and a certificate of completion that makes him/her eligible for the Entry Level Examination given by the National Board for Respiratory Care. After passing the Entry Level Examination, graduates may apply for the Registry Examination System.

Technical Courses

	Credits	Hrs.
MS025U	4	72
MS014U	5	84
MS023U	4	60
MS019U	4	96
MS017U	5	72
MS054U	2	24
MS052U	3	36
MS020U	8	192
MS050U	4	60
MS053U	3	36
MS051U	8	192
MS032U	4	60
MS055U	2	24
MS021U	5	126
MS059U	3	36
MS060U	4	60
MS022U	8	192
AM023U	3	36
MS033U	8	192
MS058U	2	36
MS056U	3	36
MS057U	12	288

Related Courses

MA031T	Intermediate Algebra	5	60
PH011T	Medical Physics	4	60
BY006U	Basic Anatomy and Physiology	4	60
BY042T	Microbiology	5	72
BY009U	Homeostatic Physiology	4	48
PY002T	General Psychology	4	48
CM101T	Composition I	4	48
CM117T	Composition II: Technical Writing	4	48
CM201T	Public Communications	4	48
CH001T	Principles of Chemistry	4	60
BY013U	Respiratory Physiology	4	48



Nursing Department

Nursing Technology

The Nursing program offers Licensed Practical Nursing (LPN) and Associate Degree Nursing (ADN) options in a cored curriculum. Successful completion of qualifying examinations and Nursing Education orientation is required before one can apply for Nursing Education admission. Students must be 17 years of age and have a high school diploma or equivalent before applying.

The first four quarters of the LPN and ADN programs are identical and provide a core of skills, knowledge, ability and concepts common to the practical and registered technical nursing roles.

Nursing courses and clinical experiences are offered concurrently on the Kirkwood campus and in cooperating health facilities in the area. The curriculum consists of major phases of medical, surgical, maternal, pediatric and psychiatric nursing, and is designed to prepare graduates to work in hospitals, extended or long-term care health facilities, doctors' offices, clinics and agencies providing nursing care. LPN students learn specific procedures and patient care skills pertinent to the performance expected by employers of these graduates.

Upon completion of the required 74.5 quarter credit hours, the graduate will receive a diploma and will be eligible for the state examination for LPN licensure.

ADN students receive additional instruction in nurs-

ing and science courses, and more extensive clinical patient care skills. ADN students learn to plan, implement and evaluate a plan of nursing care for patients, assume specific leadership skills, and make responsible decisions regarding nursing care.

Upon completion of the required 150.5 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree and will be eligible for the state examination for RN licensure.

ADN Advanced Placement

Kirkwood offers an Advanced Placement program for LPNs with at least one year work experience prior to applying for advanced placement. Two options are available. The first is to enter the day program offered at Kirkwood's main campus, either spring or fall quarter. The second option is to enroll fall quarter through the program at Kirkwood's Iowa City Community Education Center, with all preliminary admission and enrollment decisions established at the main campus.

Associate Degree Nursing

Technical Courses

		Credits	Hrs.
*MS003T	First Aid	.5	6
*MS004T	CPR	1	12
*NS002U	Metrology	1	12
*NS013U	Nutrition	2	24
*NS003U	Nursing I (Fundamentals of Nursing)	9	156
*NS004U	Nursing II (Introduction to Medical-Surgical Nursing)	10	180
*NS005U	Nursing III (Maternal & Child Nursing)	12	228
*NS006U	Nursing IV ADN (Medical-Surgical Nursing)	13	252
NS007U	Nursing V (Medical-Surgical Nursing)	12	240
NS008U	Nursing VI (Psychiatric Nursing)	10	180
NS009U	Nursing VII (Advanced Maternal-Child Nursing)	12	240
NS001U	Changing Patterns in Health Care	2	24
NS010U	Nursing VIII (High Priority Care and Management Principles)	16	336
NS011U	Nursing IX Seminar	2	24
NS012U	Advanced Placement Seminar ADN	1	12
*NS017V	PN Nursing Seminar (LPN)	2	24

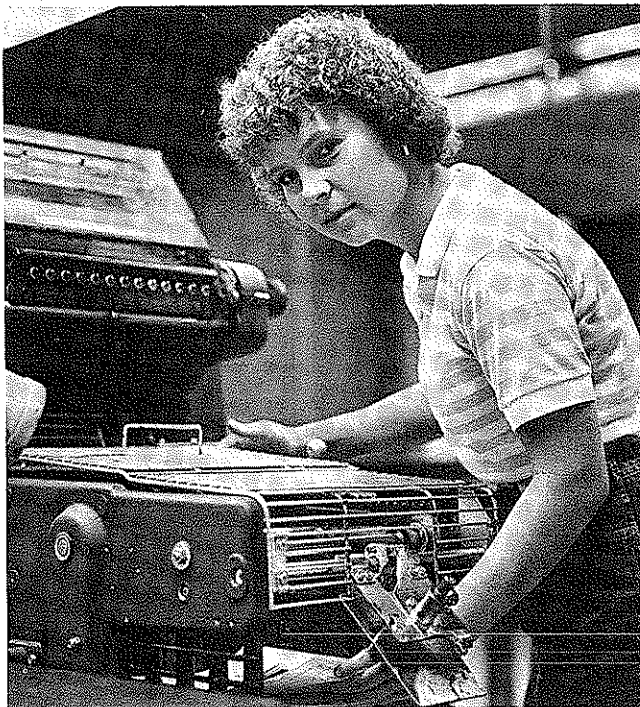
Related Courses

*BY006U	Basic Anatomy and Physiology	4	60
*PY002T	General Psychology	4	48
*CM204T	Speech Communication	4	48
*BY042T	Microbiology	4	84
*PY020T	Psychology of Growth & Development	4	48
CM101T	Composition I	4	48
CM117T	Composition II: Technical Writing	4	48
SO004T	Introduction to Sociology	4	48
SO006T	Social Problems	4	48
BY009U	Homeostatic Physiology	4	48
*	Electives	4	48

Licensed Practical Nursing

*The LPN curriculum is composed of the technical and related ADN courses marked with an asterisk.

INDUSTRIAL TECHNOLOGIES



Drafting and Design Department

Architectural Drafting

The Architectural Drafting program is designed to prepare individuals for entry employment in architects' offices. Normally, this involves the drawing or redrawing of plans, elevations, details, plumbing, and electrical and mechanical layouts. Attention is given to accuracy, neatness and proper drawing procedure. The type of drawing is primarily of commercial construction rather than of residential.

Upon completion of the required 74 quarter credit hours, the graduate will receive a diploma.

Technical Courses		Credits	Hrs.
GR032U	Architectural Drafting I	13	288
GR033U	Architectural Drafting II	13	288
GR034U	Architectural Drafting III	11	240
GR035U	Architectural Drafting IV	14	438
GR036U	Basic Mechanical/Electrical	2	24
CS033U	Estimating	3	36

CS034U	Presentations	2	24
CS035U	Construction Materials	3	36
CS036U	Construction Methods	3	36

Related Courses

MA011U	Mathematics I	3	36
MA003U	Mathematics II	3	36
CM002U	Communication Skills I	3	36
PY003U	The Profession	1	12

Graphic Arts

The Graphic Arts program introduces the student to the basic fundamentals of the graphic arts industry, beginning with the history of graphic arts, printing processes, functional typography, lithography, layout and design, mathematics and bindery operation.

Advancing through the program, the student will learn more about lithography, including camera and darkroom, photo-composition, paste-makeup, theory of color, image assembly and platemaking, and offset presswork. In the final stages the student will become familiar with management problems, estimating, production control, plant organization and layout, industrial relations and related technical data.

Upon completion of the required 69 quarter credit hours, the graduate will receive a diploma.

Technical Courses

		Credits	Hrs.
GR007U	Layout and Design	5	108
GR009U	Typography	3	60
GR011U	Copy Preparation I	9	192
GR012U	Copy Preparation II	4	90
GR030U	Copy Preparation III	3	72
GR046U	Copy Preparation IV	3	72
GR019U	Platemaking I	1	18
GR020U	Platemaking II	1	18
GR047U	Platemaking III	1	24
GR021U	Process Camera I	1	30
GR022U	Process Camera II	3	60
GR023U	Process Camera III	2	36
GR024U	Image Assembly I	1	30
GR025U	Image Assembly II	2	42
GR026U	Image Assembly III	3	60
GR027U	Offset Presswork I	4	72
GR028U	Offset Presswork II	4	84
GR029U	Offset Presswork III	4	84
GR043U	Phototypesetting I	3	66
GR044U	Phototypesetting II	2	48
GR045U	Phototypesetting III	1	24
GR031U	Bindery Operations	1	24
GR048U	Printing Estimating	2	36

Related Courses

CM002U	Communication Skills I and one of the below:	3	36
CM003U	Communication Skills II	3	36
PY004U	Human Relations	3	36
AM081T	Personal Finance	3	36
Typing:			
OE014T	Mod. 1 Alphabetic Keyboard	.5	
OE015T	Mod. 2 Numbers & Symbols	.5	

OE039T	Mod. 25 Individual Prescribed Instruction	.5
OE039T	Mod. 25 Individual Prescribed Instruction	.5

(Typing Modules should be completed prior to entry; they are a prerequisite for Phototypesetting I offered in the second quarter.)

Jewelry Making and Repair Technology

The Jewelry curriculum is designed to prepare the student for a career as a professional sales person, repair person, fabricator and/or designer.

Upon completion of the required 91 quarter credit hours the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

	Credits	Hrs.
AT012U Design I	3	36
AT016U Gem Identification Nat./Mfg.	3	36
LW004U Ethics & Legal Aspects	3	36
MF001U Jewelry Fabrication	4	72
MF002U Repair I	3	60
MM007U Cast Jewelry I	3	60
MF003U Repair II	4	72
MK800U Internship (Jewelry Sales)	5	180
or		
MF800U Internship (Jewelry Repair)	5	180
AT013U Design II	3	48
MK050U Precious Gem Appraisal	2	36
MM008U Cast Jewelry II	5	96
MK051U Advanced Study: Marketing Salesmanship	8	156
or		
MF004U Advanced Study: Repair	8	156
or		
MM010U Advanced Study: Casting and Plating	8	156
or		
MM009U Advanced Study: Fabrication and Plating	8	156
or		
AT014U Advanced Study: Design	8	156

Related Courses

MK003T Principles of Selling	4	48
Elective	7	84
CM101T Composition I	4	48
PD005T Human Potential	2	30
PD001U Personal Development	2	24
CM204T Speech Communication	4	48
MK016T Counselor Selling	4	48

Mechanical Design Technology

This curriculum includes practical experience in the drafting room as well as shops and laboratories, but emphasizes technical studies in the classroom.

The program stresses a high degree of ability in analytical problem solving, as well as the ability to

translate ideas and concepts into graphic representations. Students will gain a thorough knowledge of mechanical and manufacturing processes, enabling them to follow a design to its conclusion in the actual manufacture and ultimate production of a tool or product. The instruction in design provides the student possessing mechanical and mathematical aptitudes an opportunity to qualify for work in research and development in a wide range of industrial areas ranging from farm machinery to electronics.

Mechanical Design graduates may be employed as technicians in manufacturing companies, engineering firms, and county, state and city government agencies.

Upon completion of the required 119 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree. Student may enroll on a full-time or part-time basis.

Technical Courses

	Credits	Hrs.
GR002U Mechanical Drafting I	6	120
GR003U Mechanical Drafting II	6	120
GR004U Mechanical Drafting III	6	120
GR005U Design Problems I	3	60
GR006U Design Problems II	6	144
EG001U Statics	7	120
EG002U Kinematics of Mechanisms	6	120
EG003U Dynamics	7	120
EG004U Machine Design	7	120
EG005U Materials Analysis & Testing	2	48
EG006U Strength of Materials I	4	60
EG007U Strength of Materials II	4	60
MA007U Technical Problems	2	48
MH002U Hydraulics	4	60

Related Courses

DP012U Introduction to Basic Programming	3	48
PH003U Heating & Air Conditioning	4	60
EL026U Electricity	3	60
MA012U Technical Mathematics I	5	60
MA013U Technical Mathematics II	5	60
MA015U Technical Mathematics III	5	60
MM001U Manufacturing Processes I	3	72
MM002U Manufacturing Processes II	3	72
CM002U Communication Skills I	3	36
CM003U Communication Skills II	3	36
CM004U Technical Reporting	3	36
PY004U Human Relations	3	36
EC003U Economics for Technicians	3	36
SO001U Industrial Organization	3	36

Welding

The welding program consists of 64 quarter credit hours and three main phases. The first is metallic arc welding, commonly referred to as stick welding. A student satisfactorily completing this section of the program should have the skill required to pass the American Welding Society's Guide Bend Test in three positions with 3/8-inch steel plate using low-hydrogen electrodes. Also included in this section are oxy-acetylene cutting, Mathematics I and blueprint reading.

The second phase is referred to as combination welding. This covers semi-automatic, oxy-acetylene, heliarc, sheet metal cast iron and non-ferrous welding. It is recommended that students take the first two phases as a minimum.

The third phase involves the study of the technical aspects of welding, plus drawing, shop math and communication skills. The set-up and use of production machinery, welding inspection methods, and a student project also are included. This provides the students with the background needed to obtain work in industry as a supervisor, methods person, inspector or specialist welder, or in a field of welding sales.

The first two phases of the program are set up on a modular basis; that is, students progress at their own pace within the time allotted. The lessons are self-instructional and all necessary demonstrations are provided on videotape. Instructors provide individual help as necessary. Students can enroll at any time if space is available.

Upon completion of the first phase and the second phase, the graduate will receive a certificate. Upon completion of the third phase the graduate will receive a diploma.

Technical Courses

	Credits	Hrs.
MM011V	1	26
MM025V	.5	12
MM028V	1	18
MM026V	1	28
MM027V	1	28
MM029V	1	30
MM030V	1	24
MM031V	1	26
MM032V	.5	18
MA011U	3	36
MM034V	3	36
MM033V	3.5	78
MM017V	3	60
MM035V	1	20
MM036V	1	20
MM037V	1	20
MM038V	1	20
MM039V	1	20
MM019V	5	104
MM020V	3	60
MA003U	3	36
MM032U	2	56
MM022V	2	56
MM023V	2	56
MM024V	4	60

Related Courses

GR001V	2	36
MA004U	2	36
CM002U	2	36
PY001V	1	24

Special Courses

MM010V	2	48
MM012V	2	48
MM065V	8	160

Environmental Science Department

Analytical Laboratory

The Analytical Laboratory program is designed to develop the foundation for work in agricultural, chemical and environmental laboratories. The program stresses the basic laboratory techniques, skills and safety required for successful employment.

The Analytical Laboratory program features a combination of general education, basic science education and laboratory experience. The program provides hands-on experience in working with a variety of environmental and agricultural samples.

Upon completion of the required 53 quarter credit hours, the graduate will receive a diploma.

Technical Courses

	Credits	Hrs.
EV053U	2	36
EV045U	2	48
EV043U	3	48
EV049U	2	48
EV032U	3	60
EV039U	2	48
EV034U	2	48
EV035U	2	48
EV033U	2	24
EV031U	2	48

Related Courses

CH001T	4	60
EV056U	3	48
EL064U	2	24
CH002T	4	60
PH001U	2	36
MA012U	3	36
CM002U	3	36
CH003T	4	60
Math Elective	4-5	48-60
Elective	2	24

Water and Wastewater Technology

This program prepares students for employment in the areas of wastewater collection and treatment, water treatment and distribution, and laboratory analysis in water and wastewater facilities. Job opportunities are available with municipal and private laboratories, regulatory agencies and engineering firms.

The curriculum consists of classroom, laboratory and practical field learning experiences. A pilot scale water and wastewater treatment facility is located on campus and provides students with training experience in a functioning treatment plant.

Four career options are offered through the Water and Wastewater program. Two certificate options, one

in water treatment and the other in wastewater treatment, are designed for the part-time student with a day and evening format. Students may enter the certificate programs fall, winter or spring quarters. Upon completion of the required 27 quarter credit hours, the graduate will receive a certificate.

The water and wastewater treatment diploma option is comprised of day classes with entry each fall and winter. Upon completion of the required 68 quarter credit hours, the graduate will receive a diploma, and will be eligible to take the Iowa Grade I water and wastewater certification exams.

Students may enter the associate degree program in the fall, winter or spring and attend classes during the day. Upon completion of 105 quarter credit hours, the graduate will be awarded an Associate of Applied Science degree# and will be eligible to take the Iowa Grade I water and wastewater certification exams.

Associate in Water and Wastewater Technology#

Technical Courses

	Credits	Hrs.
*EV054U Introduction to Water & Wastewater Treatment	2	24
*EV053U Basic Laboratory Skills	2	36
*EV052U Water and Wastewater Plant Administration	2	24
*EV051U Pumps	2	36
*EV050U Wastewater Treatment	4	72
*EV049U Wastewater Analysis	2	48
*EV048U Lagoons	2	24
*EV047U Wastewater Collection	2	36
*EV046U Water Treatment	4	60
*EV045U Water Analysis	2	48
*EV044U Water Supply & Distribution	4	72
*EV043U Basic Environmental Science	3	48
*EV042U Water Resources	2	24
*EV041U Activated Sludge Treatment	2	36
*EV040U Sludge Treatment & Disposal	2	36
*EV039U Environmental Analysis	2	48
*EV038U Treatment Plant Operation	2	48
*EV035U Special Projects	2	48
*EV036U Wastewater Treatment Plant Troubleshooting	1	24
*EV037U Internship	12	480
or		
*EV055U Supervised Plant Operation	12	288

Related Courses

*MA012U Technical Mathematics I	4	48
*CM002U Communication Skills I	3	36
*CH001T Principles of Chemistry	3	36
*EL064U Basic Electricity	2	24
EV003U Laboratory Management & Safety	2	24
PS006T Iowa Government: Today and Tomorrow	4	48
BY030T Principles of Biology	4	60
BY032T Environmental Biology	4	60
CM004U Technical Reporting	3	36
PY004U Human Relations	4	48
EC015T Principles of Business Economics	4	48
CM003U Communication Skills II	3	36
Electives	8-10	120

Water and Wastewater Treatment Diploma

*The diploma curriculum is composed of the technical and related Associate degree courses marked with an asterisk.

Water Treatment Certificate

Technical Courses

	Credits	Hrs.
EV054U Introduction to Water & Wastewater Treatment	2	24
EV053U Basic Laboratory Skills	2	36
EV052U Water & Wastewater Plant Administration	2	24
EV051U Pumps	2	36
EV046U Water Treatment	4	60
EV045U Water Analysis	2	48
EV044U Water Supply & Distribution	4	72
EL064U Basic Electricity	2	24

Related Courses

MA012U Technical Mathematics I	4	48
CM002U Communication Skills I	3	36

Wastewater Treatment Certificate

Technical Courses

EV054U Introduction to Water & Wastewater Treatment	2	24
EV053U Basic Laboratory Skills	2	36
EV052U Water & Wastewater Plant Administration	2	24
EV051U Pumps	2	36
EV050U Wastewater Treatment	4	72
EV049U Wastewater Analysis	2	48
EV048U Lagoons	2	24
EV047U Wastewater Collection	2	36
EL064U Basic Electricity	2	24

Related Courses

MA012U Technical Mathematics I	4	48
CM002U Communication Skills I	3	36

#New program pending State Department of Public Instruction approval.

Industrial Processes and Services Department

Automotive Collision Repair

Automobile collision repair personnel are employed in body and fender shops, dealerships and garages that offer collision repair services. Other employers are trucking, taxi-cab and bus companies, as well as automotive manufacturers. Related areas of employment for which the Automotive Collision Repair program will prepare students are: sheet metal fabrication, instrumentation, component assembly, alignment and refinishing.

Use of the skills developed in this program need not

limit the individual to employment in the automotive field only. Nor will it restrict employment to the immediate area. The scope of job possibilities could easily expand to many areas of the manufacturing industry, local, national, or even international.

Students in the program receive training in the full range of shop processes used to restore damaged vehicles. Students learn to use hydraulic jacks, rams, air and electric grinders, sanders, buffers, drills, panel cutters, welders, torches, paint guns, damage dozers, alignment tools and specialized hand tools. This program seeks to develop in each student a degree of competency in the common skills of the trade. It provides students with an understanding of the basic technical knowledge in the field of auto collision repair. The Automotive Collision Repair program aims to prepare individuals for entrance into skilled jobs as advanced learners. When a student completes this program, he will not be a journeyman.

Upon completion of the required 78 quarter credit hours the graduate will be awarded a diploma. To aid students in tailoring the program to their needs, it should be designed with the assistance of an advisor.

Technical Courses

		Credits	Hrs.
MH019U	Equipment Reconditioning and Repair	3	60
MM030U	Fundamentals of Welding I	2	48
MH067U	Shop Practices and Safety	2	24
MH074U	Auto Body Construction and Materials	2	36
MH070U	Metal Working	6	108
MH071U	Leading, Filling and Shaping	6	108
MH072U	Welding of Body Sheet Metal/Frame	3	54
MH073U	Chassis Sheet Metal	5	90
MH069U	Body Shell	5	84
MH068U	Body Glass and Trim	5	84
MH075U	Interior Vinyl Plastic and Urethane	2	42
MH076U	Body/Frame Relationships	2	42
MH077U	Damage Estimate Analysis	1	18
MH078U	Accessories Installation and Repair	2	36
MH079U	Refinishing I	6	108
MH080U	Refinishing II	6	108
MH081U	Refinishing III	6	108

Related Courses

		Credits	Hrs.
CM002U	Communication Skills I	3	36
MA011U	Mathematics I - Industrial	3	36
PY004U	Human Relations	3	36
AM003U	Business Practices	3	36
PH011U	Mechanisms	2	24

Automotive Technology

The Automotive Mechanics programs are planned to provide students with entry level employment skills and more, including courses in automotive-related managerial areas. They are designed for those who would seek employment in any of the varied occupations connected with automotive mechanics.

Three programs in automotive mechanics are offered by the college: an associate degree program, a diploma

program and a certificate program. Depending upon a student's individual needs, he/she may elect to take any of these. The student's program of study is designed with the assistance of an advisor.

The Automotive Technology associate degree program involves completion of a basic core of instruction and features courses involving technical and related areas of instruction. During the first year of the program, students work on basic fundamentals in the areas of gasoline engines, tune-up, alignment, and a variety of other areas of the automobile. Upon completion of the required 119 quarter hour credits, the graduate will be awarded an Associate of Applied Science degree.

Automotive Mechanics

Automotive Mechanics is a diploma program, involving a basic core of technical studies in automobile maintenance and other related areas. The goal of the diploma program is to provide the student with enough training to become a generalist in the automotive field. This means, upon graduation, the student will have gained entry-level job skills. Upon completion of the required 83 quarter hour credits, the graduate will be awarded a diploma.

Automotive Specialist

The Automotive Specialist program offers courses for the general service technician and tune-up specialist. These courses are designed for students who wish to take less than a one-year program. The certificate program requires a minimum of 39 quarter credit hours for completion.

Automotive Technology

Technical Courses

		Credits	Hrs.
**MH067U	Shop Practices and Safety	6	108
**MH030U	Fundamentals of Automotive Mechanics	6	108
**MH019U	Equipment Reconditioning and Repair	3	60
**MM030U	Fundamentals of Welding I	2	48
*MH013U	Engines I	3	60
*MH059U	Engines II	5	96
*MH037U	Basic Tune-up	6	108
*MH064U	Front End Service	6	108
*MH016U	Power Transfer Systems I	2	36
*MH018U	Power Transfer Systems II	2	36
*MH031U	Brakes	6	120
*MH034U	Vehicle Inspection	2	24
*MH036U	Fuel Systems	6	108
*MH050U	Diesel Fuel Systems I	2	36
*MH032U	Electrical Systems I	3	48
*MH033U	Electrical Systems II	5	96
*MH066U	Cooling Systems	4	72

MH035U	Automotive Engine Overhaul	6	132
MH065U	Advanced Alignment	3	60
MH038U	Advanced Tune-Up	6	108
MM031U	Fundamentals of Welding II	3	66
MH040U	Power Trains	6	108
MH042U	Vehicular Air Conditioning	6	108

Related Courses

*CM002U	Communication Skills I	3	36
*MA011U	Mathematics I - Industrial	3	36
*PY004U	Human Relations	3	36
*AM003U	Business Practices	3	36
CM003U	Communication Skills II	3	36
AM081T	Personal Finance	3	36
*PH011U	Mechanisms	2	24

*Required for diploma

**Required for 1st quarter minimally

Marine and Small Engine Mechanics

This program leads to employment in the growing fields of lawn and garden equipment repair, marine and small engine repair, and turf and recreational vehicle repair. Students in the program study engine electrical systems, hydraulics, power transfer systems, gasoline engines, welding, fibreglassing and sheet metal work. Students spend approximately 60 percent of their class time in the laboratory learning the skills required for employment as a marine and small engine mechanic.

Interested students may enroll for any course any quarter except the spring quarter. To be eligible for entry in the spring quarter, a student must have had previous training (fall and winter quarters) or experience in the field. Students may elect to generalize or specialize in the spring quarter.

Upon completion of the required 61 quarter hour credits, the graduate will be awarded a diploma.

Technical Courses

		Credits	Hrs.
MH002U	Hydraulics I	3	60
MH032U	Electrical Systems I	3	60
MH033U	Electrical Systems II	5	96
MH013U	Engines I	3	60
MH059U	Engines II	5	96
MH016U	Power Transfer Systems I	3	48
MH018U	Power Transfer Systems II	3	60
MH050U	Diesel Fuel Systems I	4	72
MH021U	Unit Diagnosis and Overhaul I	8	156
MH051U	Unit Diagnosis and Overhaul II	8	156
MH067U	Shop Practices and Safety	1	12
MH055U	Tool Crib Operation	1	12
MH019U	Equipment Reconditioning and Repair	2	36
MM030U	Fundamentals of Welding I	2	48
MH063U	Technical Manual Interpretation	1	12

Related Courses

CM002U	Communication Skills I	3	36
PY004U	Human Relations	3	36
AM003U	Business Practices	3	36

Electro-Mechanical Technology

Option I: Communications Electronics Option II: Electrical Equipment Servicing

The Electro-Mechanical Technology program allows the student to choose between two majors, and each major has a one-year and a two-year course option. The choice depends upon the area of interest and the degree of technology desired.

The first year of the Communications Electronics option provides the individual with an electronics background in audio amplifiers and radio receivers, both AM and FM. An additional six-week summer quarter is offered for students desiring television receiver servicing training only. Upon completion of the required quarter credit hours a diploma will be awarded.

The second year provides training in transmitter circuits, television circuits, video and audio drives, broadcast studio operation, computer programming, and methods of troubleshooting systems consisting of medical electronics, fiber-optics, and robotics. Upon completion of the required quarter credit hours, the graduate will be awarded an Associate of Applied Science degree.#

The first year of the Electrical Equipment Servicing option provides the individual with an electrical and an electronic background. Included are residential wiring, electro-mechanical devices such as motors and generators, and basic electronics. An additional six-week fourth quarter is offered for students desiring air-conditioning and refrigeration training only. This qualifies the student for an entry-level job in the areas of residential wiring, general plant maintenance, and large appliance servicing. Upon completion of the required quarter credit hours a diploma will be awarded.

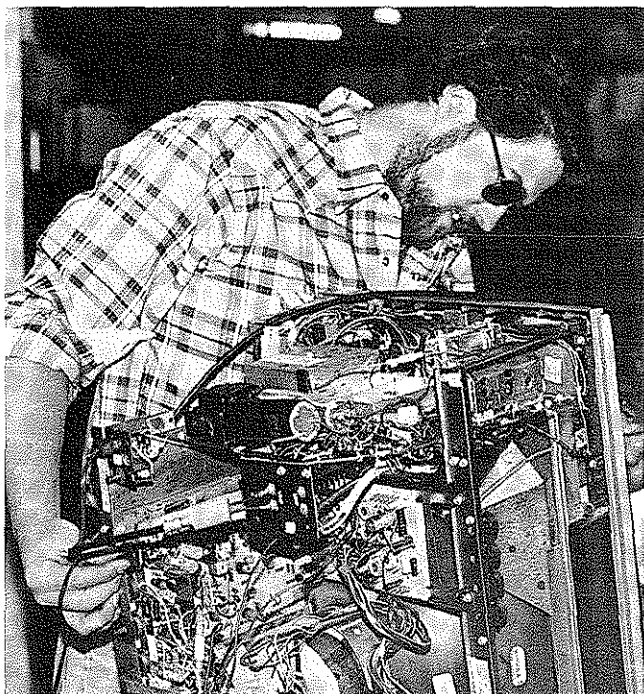
The second year curriculum, under development for the future, will provide the training needed in refrigeration and air-conditioning, pneumatic controls, and electronic environmental controls. Other related subjects will include computer operation and programming. Upon successful completion of the required quarter credit hours the graduate will be awarded an Associate of Applied Science degree. Career related areas are refrigeration and air-conditioning apprentice, environmental control technician, process control and instrumentation servicing, and electronic-electrical equipment servicing.

#New program pending State Department of Public Instruction approval.

Communications Electronics Option

Technical Courses

		Credits	Hrs.
EL029U	Electrical Circuits I	8	132
EL079U	Intro. to Electricity & Electronics	6	96
EL030U	Electrical Circuits II	8	132
EL076U	Solid State I	8	132



EL078U	Shop Methods	2	48
EL077U	Solid State II	7	120
EL007U	Communications Circuits I	6	96
EL073U	Digital Circuits I	3	48
EL008U	Communications Circuits II	6	96
EL074U	Digital Circuits II	3	48
EL084U	Television Servicing	8	144
EL072U	Communications Circuits III	6	96
EL075U	Digital Circuits III	3	48
EL080U	Mechanical Devices	10	180
EL081U	Intro. to Medical Electronics	4	60
EL082U	Fiber Optics	4	60
EL083U	Robotics	4	60
EL071U	Basic Programming for Technicians	4	60

Related Courses

CM002U	Communication Skills I	3	36
MA012U	Technical Mathematics I	4	48
PY004U	Human Relations	3	36
CM004U	Technical Reporting	3	36
EC003U	Economics for Technicians	3	36
MA013U	Technical Mathematics II	4	48

Electrical Equipment Servicing Option

Technical Courses

	Credits	Hrs.
EL029U	Electrical Circuits I	8 132
EL078U	Shop Methods	2 48
EL085U	National Electrical Code	3 48
EL086U	Residential Wiring	3 60
EL030U	Electrical Circuits II	8 132
EL076U	Solid State I	8 132
EL087U	Motors and Transformers	5 84
EL088U	Motor Control Circuits	4 60
EL089U	Air Conditioning & Refrigeration I	8 120
EL090U	Air Conditioning & Refrigeration II	7 108
EL079U	Introduction to Electricity and Electronics	6 96

Related Courses

CM002U	Communication Skills I	3	36
MA012U	Technical Mathematics I	4	48
PY004U	Human Relations	3	36
PH009U	Applied Physics I	4	60
EC003U	Economics for Technicians	3	36

Courses to be added in the near future

EL092U	Heating, Ventilation & Air Cond. Systems	3	48
DP010T	Intro. to Microcomputers & Data Processing	4	60
CM004U	Technical Reporting	3	36
PH010U	Applied Physics II	4	60
MA013U	Technical Mathematics II	4	48
EL093U	Applied Industrial Electronics	7	120
EL094U	Heating, Ventilating & Air-Cond. Controls I	5	84
EL095U	Heating, Ventilating & Air-Cond. Controls II	7	108
EL071U	Basic Programming for Technicians	4	60
EL091U	Fundamentals of Air Conditioning and Refrigeration	9	156
(6-week summer quarter option only)			

Electronics Engineering Technology

Option I: Computer Technology

Option II: Communications Technology

Electronics Engineering Technology is oriented toward research and development electronics. The major emphasis is on circuit analysis, basic design, modification and troubleshooting. Successful completion of the Electronics Technology program qualifies the student for an entry-level job as a research and development technician, an engineer associate, or as an instrumentation technician in certain industries. Other occupations include field engineer and technical sales representative.

Graduates of the Electronics Technology program are qualified to pursue any area of electronics as a career. However, during the last quarter of study the student is given the option of concentrating in either computer technology or communications technology.

Upon completion of the required 126 quarter hours the graduate will be awarded an Associate of Applied Science degree.

Technical Courses

		Credits	Hrs.
EL001U	Introduction to Electronics Laboratory	3	60
EL002U	Electric Circuits I	6	84
EL003U	Electric Circuits II	6	84
EL035U	Active Devices I	6	96
EL015U	Active Devices II	6	96
EL062U	Digital Principles	6	84
EL013U	Active Devices III	6	96
EL006U	Communications Electronics	5	60
EL033U	Tests and Measurements	3	60
EL061U	Microprocessor Fundamentals	4	60
EL034U	Transform Circuit Analysis	4	60
EL012U	Transmission Systems	6	84
EL058U	Design Projects I	2	36
EL060U	Microprocessor Interfacing	4	60

Computer Option

EL063U	Microprocessor Software	4	60
EL065U	Advanced Microprocessor Interfacing	4	60
EL066U	Introduction to Robotics	4	60
EL067U	Digital Diagnostic Techniques	4	60

Communications Option

EL068U	Electronic Technological Trends	3	36
EL059U	Design Projects II	4	84
EL069U	Practical Communications Systems	5	60
EL070U	Radio Frequency Design	4	60

Related Courses

MA012U	Technical Mathematics I	4	48
EL071U	Basic Programming for Technicians	4	60
CM002U	Communications Skill I	3	36
MA013U	Technical Mathematics II	4	48
CM003U	Communications Skill II	3	36
PY004U	Human Relations	3	36
PH001U	UTC Physics I	4	60
MA015U	Technical Mathematics III	4	48
EC003U	Economics for Technicians	3	36
PH002U	UTC Physics II	4	60
PH008U	UTC Physics III	4	60
CM004U	Technical Reporting	3	36

Machinist

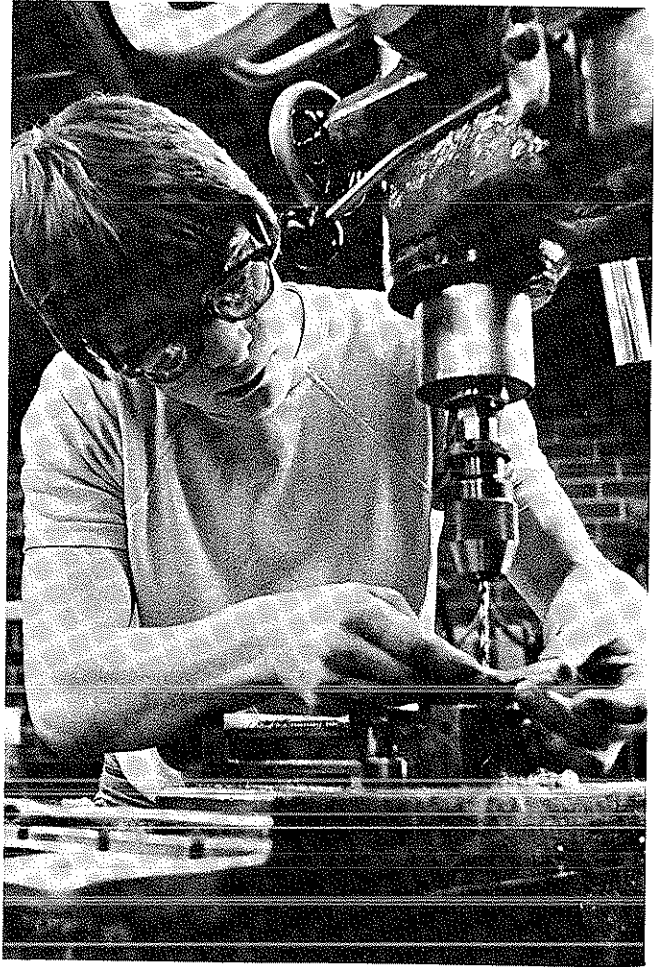
The machine shop curriculum is planned to prepare students to enter the machinist trade and to become skilled machinists or machine operators. A balance of practical shop work and related instruction provides a solid foundation for advancement in the trade. Related instruction includes shop math, blueprint reading and machine technology. The practical shop work is individualized so that students can progress at an accelerated pace.

Students learn the care and use of precision measuring and layout tools, and develop skills on basic machine tools and production machines. Basic metallurgy and heat treatment of steel also are covered.

The three machinist options are: the two daytime classes which meet approximately 30 hours per week, and the evening machinist offering which meets 20 hours per week. Each program has a total of 1032 clock hours and 53 credit hours.

Starting times are as follows: morning class, fall quarter; afternoon class, winter quarter; the part-time evening class offers open enrollment starting any quarter.

Upon completion of the required 53 quarter credit hours the graduate will receive a diploma.

**Technical Courses**

		Credits	Hrs.
MM021U	Machinist Theory & Practice I	5	96
MM022U	Machinist Theory & Practice II	5	96
MM023U	Machinist Theory & Practice III	5	96
MM024U	Machinist Theory & Practice IV	4	96
MM025U	Machinist Theory & Practice V	4	96
MM026U	Machinist Theory & Practice VI	4	96
MM027U	Machinist Theory & Practice VII	2	48
MM028U	Machinist Theory & Practice VIII	5	120
MM029U	Machinist Theory & Practice IX	5	120
MM012U	Machinist Math & Blueprint Reading I	2	24
MM013U	Machinist Math & Blueprint Reading II	2	24
MM014U	Machinist Math & Blueprint Reading III	2	24
MM015U	Machinist Math & Blueprint Reading IV	2	24

Related Courses

CM002U	Communication Skills I	3	36
PY004U	Human Relations	3	36
	or		
AM081T	Personal Finance	3	36



COMMUNITY EDUCATION

Community Education Courses

In keeping with its philosophy of lifelong learning, the Community Education Division of Kirkwood Community College has developed a wide variety of credit and non-credit courses for persons who want to continue their education. These are designed for personal growth, as well as for career preparation or skill upgrading. Many of these courses are offered for the recreational opportunities they provide and the personal enjoyment they bring, while others provide a chance to learn a skill with which to earn supplementary income.

Instructors for these classes are sought out from among civic, business, industrial and cultural leaders throughout Kirkwood's seven-county area, to make available their expertise to the entire community. All classes are conducted with the philosophy of Community Education in mind—that "learning is enjoyable and should be the means to individual growth for every citizen of this area." Sociability and sharing are integral parts of this facet of Kirkwood's educational offerings.

New classes are offered on a quarterly basis. Information regarding specific class offerings is available from the Community Education Office on Kirkwood's main campus or from any of the college's Community Education centers.

Community Education Centers

Kirkwood has Community Education centers at eight locations. The centers offer High School Completion classes, Adult Basic Education instruction, high school refresher courses, G.E.D. preparation, tutoring, vocational classes for high school students (secondary program), general interest/part-time supplemental courses, and in some cases, college credit courses. The eight centers are:

Iowa City Community Education Center
1816 Lower Muscatine Rd.
Iowa City, Ia.
Phone: 338-3658

Lincoln Community Education Center
9th St. and 18th Ave. S.W.
Cedar Rapids, Ia.
Phone: 366-0142

Marion Community Education Center
6th St. and 10th Ave.
Marion, Ia.
Phone: 377-2216

Monticello Community Education Center
Plastic Lane
Monticello, Ia.
Phone: 465-5669

Washington Community Education Center
322 S. Avenue D
Washington, Ia.
Phone: 653-4655

Williamsburg Community Education Center
200 West Street
Williamsburg, Ia.
Phone: 668-2461

Hartwick Learning Center
Hartwick, Ia.
Phone: (515) 525-2153

Vinton Community Education Center
1002 G Ave.
Vinton, Ia.
Phone: 472-4239

Programs to Meet the Varied Needs of People

Secondary Programs at Kirkwood

Secondary programs at Kirkwood is a cooperative arrangement with area high schools to supplement the high school curriculum in vocational preparatory programs. Students are transported from their local high school to the nearest Secondary program center for a portion of a school day.

Secondary programs at Kirkwood enable the student to acquire and demonstrate the skills necessary for entry-level vocational careers in welding, data processing, auto mechanics, health occupations, child care, building trades, horticulture, agriculture and vocational business.

For more information contact your local high school counselor or the nearest Kirkwood Community Education center.

General Interest and Recreational Classes

General interest and recreational classes are designed for adults who are not interested in earning academic credit, but who wish to further their education informally, enrich their cultural lives, improve their physical fitness or improve their personal efficiency.

These types of classes are self-supporting and offered as a community service in cooperation with local school districts. Classes are available in many areas. A few examples are:

AREAS	EXAMPLES
Arts and Crafts	Batik, Pottery, Macrame
Special Interest	Foreign Language, Astrology
Recreation	Aerobic Dance, Volleyball



Supplementary Vocational Classes

These classes are designed to help persons seeking job enrichment or upgrading. Classes are held at business and industrial sites as well as on the Kirkwood campus and in local high schools. The time and location of the classes vary. The subject areas include:

AREAS

Health Occupations
Trade and Industry
Business and Office
Home and Family
Personal Development
Agriculture
Business/Management

EXAMPLES

Nurse Aid, Anatomy and Physiology, EMTA
Woodworking, Auto Mechanics
Shorthand/Typing, Office Skills
Microwave Cooking, Family Dynamics
Assertiveness Training, Communication
Houseplants, Animal Nutrition, Gardening
Supervision, Delegation, Business Writing

In-Service, Seminars, Workshops

Kirkwood provides in-service, seminars and workshops to meet the varied needs of people, businesses, industries and communities. Many courses have been developed and are now available. Others tailored to individual needs are developed as requests are made. Current program areas include:

Trades and Industry
Business/Management
Recreation
Small Business Training
Health Occupations
Agriculture and Natural Resources
Home and Family
Re-licensing: Nursing, Real Estate, Cosmetology,
Insurance

Transfer and Vocational Credit (District Instructional Services)

The District Instructional Services Division, in cooperation with the credit programs of the college, offers credit extension courses in locations throughout Kirkwood's seven counties. Open to adults with a high school diploma, these courses include classes in English, mathematics, foreign language, fine arts, the humanities, social science and classes in vocational-technical areas.

Many of the courses are offered through the college's Telecommunications System at Kirkwood's various Community Education centers and local high schools. In addition, the college's Off-Campus College Credit Degree program makes it possible to complete an associate degree in several subject areas, including liberal arts and vocational-technical areas, through a combination of Telelink and television courses offered each quarter. College credit courses are also offered at Iowa City's West High School, Cedar Rapids Kennedy High School and Marion High School.

High School Completion

The Community Education Division provides the opportunity for adults to work toward the completion of their high school education. Kirkwood offers classes at various locations in the seven-county area and individualized programs are available at Kirkwood's Community Education centers. These programs are free to adults. A high school graduation ceremony takes place each spring.



Correspondence Studies

High school completion by correspondence is made possible by the Community Education Division of Kirkwood through a variety of courses. There is no limit on the number of courses a student may take. However, the transfer of such credit to institutions other than Kirkwood is an optional matter for the accepting institution.

Enrollment for students who are considered actively enrolled in their local high schools is subject to the consent and approval of those schools. Prospective correspondence students who are not enrolled elsewhere may enroll in this program at any time.

The following courses are available through the Kirkwood high school correspondence program:

Algebra I	Health for Young Adults I
Algebra II	Health for Young Adults II
American Government I	Individualized Reading I
American Government II	Literature I
Applied Business Law I	Modern Earth Science I
Applied Business Law II	Modern Earth Science II
Consumer Economics	Modern Life Science I
Consumer Math I	Modern Life Science II
Consumer Math II	Physics I
Essentials of English I	Physics II
Essentials of English II	Sociology I
General Business I	Sociology II
General Business II	Understanding the Newspaper
General Mathematics I	U.S. History I
Geometry I	U.S. History II
Geometry II	World History I
	World History II

Adult Basic Education/Right to Read

This area of learning is offered to help persons improve their basic academic skills up to the eighth-grade level.

The classes are located throughout Kirkwood's seven-county area and are scheduled at times convenient to students. Students may continue their work to prepare for the General Education Development test (GED) or earn credit toward a high school diploma. Community Education centers located in Cedar Rapids, Hartwick, Iowa City, Marion, Monticello, Vinton, Washington and Williamsburg provide flexible hours and individualized instruction for those who prefer this approach to learning.

The Right to Read program is unique, in that adults desiring to read better are assigned a tutor, who is a volunteer from the community. The participant and tutor are supplied the necessary learning materials and make their own arrangements and plans for achieving various reading goals. Participants receive approximately two hours of reading assistance per week. The program is operated through coordinators at Kirkwood's Community Education centers in Cedar Rapids and Iowa City.

Semi-Trailer Truck Driving

The Semi-Trailer Truck Driving program is designed to prepare men and women for entry employment in the trucking industry. The five-week curriculum includes classroom instruction, individualized student laboratory learning, driving range instruction and supervised practical experience driving on highways and interstates, and in towns and cities.

Graduates of the program are awarded a certificate, 15 college CEUs (Continuing Education Units), and the opportunity to take the state driving examination on campus.

Institutional Programs

Programs of learning which include all or a selection of the previously mentioned areas have been set up in such institutions as the Iowa State Men's Reformatory, Veteran's Hospital, county homes and halfway houses.

Instructional services, consultant services and curriculum guidance may be arranged for these types of programs through the Community Education Division.



STUDENT LIFE

STUDENT AFFAIRS



Counseling Services

The college provides professional counselors to assist students in vocational and educational planning and in solving problems of a personal or social nature.

The counselors help students make decisions and plan for their future. Students and potential students have an opportunity for an individual conference with a member of the counseling staff to consider their high school and work background, interests and goals. They are assisted in selecting an appropriate course of study.

A student who experiences difficulty or dissatisfaction with a particular curriculum is encouraged to use the counseling service for further discussion with a counselor and/or for exploration of alternative courses of action.

Assistance is also available to all students who desire help in acquiring better study habits, developing

satisfactory personal and social relationships, solving financial problems, selecting a transfer school, and learning about employment possibilities or help with job seeking skills.

Counselors are available in several locations on campus. Students in all programs have access to counseling services, including those students enrolled in evening classes. Counseling is available from 7:30 a.m. to 8:30 p.m. Monday through Thursday and 8 a.m. to 4 p.m. on Friday.

Personal Development Courses

Counselors teach several courses designed to help students deal with issues or develop skills that are needed in daily living. **Human Potential Labs** consist of small group structured experiences that help students discover and develop their strengths. **Career Decision Making** courses are designed to teach students the processes involved in career and life planning. A related course **Career Exploration/Independent Study** is broken into modules which a student proceeds through on an individual basis with a counselor. **Assertive Behavior Training** teaches students how to be less passive or aggressive and shows them how to deal more effectively with others. See the course description section of the catalog for more information about these courses.

Rehabilitation Services

Within the Counseling Department, specialized counseling services are provided by a full-time rehabilitation counselor to students who have met the eligibility requirements for assistance from the Iowa Rehabilitation Education and Services Branch (RESB). In addition, financial assistance may be arranged. Students who have physical, emotional or mental disabilities which prevent them from getting or keeping certain jobs may apply for these services, which also include diagnosis and treatment through community agencies and medical personnel. Further information can be obtained from the RESB counselor.

Personal Achievement Department

The purpose of the Personal Achievement Department is to provide an opportunity for all students to diagnose, develop and strengthen their skills in the areas of reading, writing, mathematics, spelling and study skills. In addition to this skill development, we hope also to help students develop a sense of self-confidence in their abilities to learn. The program is located in Benton Hall.

Types of Assistance

An individual may enroll in Personal Achievement courses for a variety of reasons, both personal and academic in nature. Some of these reasons may include the following:

1. High school graduates who did not gain the skills necessary to succeed in college-level work may wish to improve their basic skills before entering a college program.
2. Adults as learners who have been away from school for a while may wish to review their basic skills either before or along with taking other courses at Kirkwood. These students may lack confidence in themselves or their skills.
3. Currently employed individuals might need to improve themselves in any or all of these areas to remain competitive in their career areas.
4. Those individuals who have been recommended to Personal Achievement by the results of the Self Assessment tests or by an instructor or counselor, may decide to take any one or any combination of courses to assist them in succeeding in their academic pursuits at Kirkwood.

Courses Available

The Personal Achievement Department offers courses in reading, writing, spelling techniques, mathematics, pre-algebra and basic study skills. All courses are offered on either an individualized, one-to-one basis with an instructor, or on a small group basis. Upon enrollment, the student's current skill level is determined through diagnostic testing for the purpose of identifying his or her strengths and weaknesses in these academic areas. Then, based on the results of these tests, a plan of instruction is developed with each student.

Students may enroll in the reading, writing, math and spelling courses at any time during the quarter, provided space is available. These courses are offered for one to three hours of developmental credit, depending upon the recommendation of the instructor involved and his or her interpretation of the student's diagnostic test. Study skills is offered on a classroom basis.

A unique feature of Personal Achievement courses is that their curriculum and content is related to the specific subject matter or vocational interest of the student being served.

Other Developmental Services

For those students who want to find out what their current skill strengths and weaknesses are, the Self Assessment program is offered by the Personal Achievement Department Testing Center on a weekly basis.

The student-to-student tutorial program is coordinated by the counseling department. Tutors are students recommended and verified by instructors in the subject areas they tutor. Any student who identifies a need for extra help in a subject is eligible for tutoring. This service is supported in part by Student Activity funds.

Placement Services

The Placement Office fulfills the following functions:

1. Helps students to find part-time employment.
2. Assists graduates to secure full-time employment.
3. Helps to locate suitable work for students who leave school prior to graduation.
4. Assists former Kirkwood Community College students to find employment.
5. Conducts follow-up studies of former students.
6. Endeavors to maintain an accurate picture of employment needs and trends in the community.

In order to utilize the services of the Placement Office, students should complete the appropriate forms for either part-time or full-time employment. Registration forms are available in the Placement Office. The Placement Office should be notified promptly of job acceptances.

Skill Center

The primary objective of the Skill Center is the preparation of handicapped and disadvantaged persons for vocational training or placement in jobs. Personal and vocational goals are established through counseling between the student and the center's staff.

A trained staff of instructor/evaluators, student supervisors, vocational counselors and job placement personnel are available. Physicians, psychologists and psychiatrists are available on a referral basis, as well as services offered through the Linn County Mental Health Center, Residential Care Facility, Public Health Nursing and other social service agencies.

The Skill Center provides unique opportunities for career exploration, vocational assessment, work adjustment training, academic upgrading, job seeking skills, skill development and on-the-job training, with the objective of making appropriate recommendations for job placement or vocational training. Additional information and referral procedures can be obtained by calling 398-5455.

Financial Aid

The financial aid program at Kirkwood Community College exists to make possible a college education for qualified students. Each *student* and his or her *family* is expected to make a maximum effort to meet college expenses. However, if it is determined that a family cannot meet the full costs for a year, assistance will be provided to the greatest extent possible from the following sources.

Pell Grants: Grants to needy students.

Supplemental Educational Opportunity Grants: An additional aid program for those who demonstrate greater financial need.

National Direct Student Loans: Low-interest loans through the college; long-term repayments.

College Work-Study Program: Fifteen to twenty hours of work per week, built around the student's class schedule; minimum wage.

Iowa Guaranteed Student Loans: Borrowing from a bank or credit union. Students may borrow up to \$2,500 a year, but interest cannot be more than 9 per cent. Repayment and interest payments delayed until after graduation.

State of Iowa Scholarship Program: Upper 15 per cent of high school seniors. Application is made through local high school counselor.

Iowa Vocational-Technical Tuition Grants: Full-time Vocational-Technical students.

Veterans educational benefits: Provided under provisions of G.I. bill and war orphans legislation, etc.

Rehabilitation services: See Rehabilitation Counseling under Counseling Services.

Short-term loans and scholarships.

For specific information, contact the Financial Aids Office, Room 123, Linn Hall, 398-5488.

Kirkwood Scholarships

The following scholarships are awarded through Kirkwood Community College. Application dates vary; the forms and complete information may be obtained from the Financial Aids Office.

The Kirkwood Scholar: This scholarship is awarded to applicants who have demonstrated outstanding academic achievement in high school or other studies, and whose career aptitude, leadership and participation in community activities best exemplify the community college student.

The Departmental Scholar: Departmental Scholars are selected by certain programs from students who have been accepted for admission to Kirkwood. The awards are made to students who have demonstrated outstanding career potential in their field of interest, but do not qualify for other financial aid and would not be able to enroll without financial assistance. Kirkwood currently

has several scholarships available under this program. **The Community Scholar:** Sponsored by individual leaders, business or civic clubs in your community, the Community Scholarship Awards are based on the student's academic record, financial need, personal desire and leadership abilities. Applicants must be residents of the community making the award(s) and must have been accepted for admission by Kirkwood. A community selection committee is established with the scholarship sponsor(s). Kirkwood now has several Community Scholarships available.

Minority Student Scholarships: Established by General Mills in 1975, this scholarship program provides assistance to minority students who have a need but do not qualify for other types of financial aid. This program is being supported by area business, industry and organizations.

Activity Scholarships: Activity scholarships have been established to recognize special abilities and leadership potential by encouraging students to participate in extra-curricular activities. Activity scholarships are established in the following areas: Student Publications, Student Government, Athletics, Drama and Music.

Alumni Scholarship: The Kirkwood Alumni Association established this scholarship program to provide assistance to outstanding applicants whose financial needs could not be met through other sources. These scholarships are supported by individual contributions from alumni and fundraising projects sponsored by the Kirkwood Alumni Association.

Student Loans: Student loan accounts have been established to assist students in meeting emergency needs by providing small, short-term loans. These loans are administered by the counseling and placement center.

General Requirements

Any student seeking financial aid at Kirkwood must:

1. Be enrolled or accepted for enrollment in an approved program, (one that is at least six months in length and leading to a degree or other objective) and must maintain satisfactory progress toward their program objective.
2. Be a citizen or permanent resident of the United States.
3. Be pursuing at least six quarter hours of course work per quarter. (Some programs require full-time attendance, such as the Basic Educational Opportunity Pell Grant program, for the larger financial aid awards.)

When to Apply

The dates for requesting financial aid at Kirkwood are **January 1 to June 1** for aid funds to be awarded for use in the next fiscal year (July 1 to June 30). Applications



received after June 1 will be processed if funds are available. Applications are processed in the order in which they are received, so students should apply as early as possible after January 1.

When Aid Is Awarded

Students who will receive aid will be notified by letter in June or earlier as funds become available. At that time the student also will learn the amount of aid to be awarded. Within 10 days after the award letter is received, a student must notify the Financial Aids Office that he or she has accepted the aid. This is necessary so that funds not accepted can be redistributed to other students. Dates for awarding of scholarships vary depending upon the scholarship involved.

How to Apply

The necessary forms and instructions may be obtained by writing or visiting the Kirkwood Financial Aids Office in Room 123 of Linn Hall. The address is:

Financial Aids Office
Kirkwood Community College
Box 2068
Cedar Rapids, IA 52406

Application forms are available after January 1 of each year. **It is considered the student's responsibility to make sure all the necessary documents have been submitted to be considered for financial aid.** Remember, grants are gifts, but loans must be repaid.

General Student Information

Student Housing

The college does not provide on-campus housing. Therefore, all student housing is located in private facilities off campus.

The college itself does not directly place students in off-campus housing. However, the Information Desk in Iowa Hall does maintain a listing of housing to assist students in locating rooms and apartments. A copy of the housing list can be obtained by writing or calling the Student Activities Office in Iowa Hall, 398-5578. If at all possible, housing arrangements should be made prior to the date of registration.

Student Accident and Health Insurance

Students may participate in an optional accident and health insurance plan. The plan is based on a group policy. Students may choose between comprehensive accident and health coverage or accident coverage only. Students may enroll in these plans at registration or by contacting Campus Health Services, Iowa Hall.

Health Services

Kirkwood's student health service, located in Iowa Hall, is staffed daily by a registered nurse under the direction of a consulting college physician. The service offers emergency treatment for injury and illness, and assistance in obtaining the services of local physicians if necessary. It will cooperate in every way possible to administer medical care or carry out instructions of the student's personal or family physician. Confidential counseling on a variety of health-related problems is available. Cost of hospitalization, doctor's appointments, prescription medicine, x-rays and laboratory fees must be covered by the student.

Infant/Child Care Center

Licensed, quality infant and child care is available at a minimal fee to all persons attending Kirkwood classes or activities. Kirkwood's infant/child care center is designed to provide care in a warm, nurturing environment. Kirkwood students are entitled to use the center on a full-time or part-time basis and are not limited to using the center only while attending classes. The center is open day and evening, depending upon the needs of the parents.

Professional staff workers qualified in early

childhood education operate the center. They are assisted by students in Kirkwood's preparatory programs in education, nursing and social services. The center is located at Kirkwood's Lincoln Community Education Center, Sixteenth Avenue and Ninth Street S.W. in Cedar Rapids.

Parking

All cars parked on the Kirkwood Community College campus are subject to regulations imposed by the College. These regulations are published each year in the student handbook and are available at the Iowa Hall Information desk.

Bus Service

Bus transportation around Cedar Rapids and to Kirkwood is provided by the city bus company. The bus stops in front of Linn Hall, Johnson Hall and also at the East Campus. Special rates are available to Kirkwood students and bus schedules may be obtained at the Information Desk in Iowa Hall.

Food Service

Cafeteria service is available in Iowa Hall from 10:30 a.m. to 1:30 p.m. weekdays. An array of a la carte, grill and deli-bar selections, as well as salads, desserts and beverages are available. Vending machines are available

in the Iowa Hall Coffeehouse, Linn Hall lobby and the East Campus lounge during all hours that the buildings are open.

Bookstore

The College Bookstore is located in Iowa Hall. It is owned and operated by Kirkwood Community College with all of its assets, obligations and policies under administrative control. All earnings are returned to student-related functions.

Besides maintaining a sufficient supply of textbooks needed for all courses at Kirkwood Community College, the bookstore carries a full complement of supplies, soft goods, gift items, greeting cards and paperback books.

To help reduce textbook costs, the bookstore operates a used book facility which allows a student to sell back a previously purchased book. This also affords other students the opportunity of purchasing these used copies at reduced prices. A representative of a reputable used-book company is on campus at the end of each quarter during final week for several days. He will buy back those books being dropped from course schedules, providing no new edition is pending and providing the book has a market value.

Bookstore hours are 9 a.m. to 4 p.m. Monday through Friday and 5:30 to 7:30 p.m. Tuesday and Wednesday evenings during the school year. Evening hours are subject to change during registration days and summer quarter.





Co-Curricular Activities

Student Association

The official representative of the students of Kirkwood Community College is the Executive Board of the Student Association. Five Executive Board members are elected in May and one in October. Additional input is also provided by the Council of Ombudsmen, the Interclub Council and the Finance Council. The purpose of the Student Association is to:

1. Provide a means of organized student expression in college.
2. Encourage and promote interest in college affairs and activities.
3. Provide a means whereby the administration of the college may be made aware of student needs, opinions and attitudes.
4. Develop and promote activities that will enrich the social, cultural and academic life of students at Kirkwood Community College.

The Student Association offices are located in the Student Activities office on the ground floor of Iowa Hall.

Publications

Student Newspaper: *Communique*, a bi-weekly community college newspaper is written and edited by a student staff with the consultation of a staff advisor. Any student interested in working on the staff, or in submitting material for publication, should contact the Student Activity Office in Iowa Hall.

Newspaper Supplement: *Prism* is published by a student staff with the consultation of a staff advisor. Any student interested in contributing or working on the staff should contact the Student Activity Office.

Clubs and Organizations

The Student Clubs and Organizations on campus sponsor the majority of activities held during the year. Approximately one-fifth of the students enrolled at Kirkwood are club members. Clubs are formed through academic programs and special interest groups, and given formal recognition by the Executive Board of the student government. Faculty or staff are designated as advisors to the student groups. Each club elects officers and has a representative on the Inter-Club Council.

cil, which has the authority to grant permission for clubs to carry out activities. Information about student clubs can be obtained at the Student Activities Office, Iowa Hall.

Social and Special Events

Special social activities are coordinated through the Student Activities Office on recommendations from the Inter-Club Council and the Student Programming Committee. Some of these events take place during noon activity hours while other events, such as dances and film festivals, take place in the evening. These events are open to all Kirkwood students and their guests. Information on upcoming activities may be obtained from the Student Activities Office, Iowa Hall.

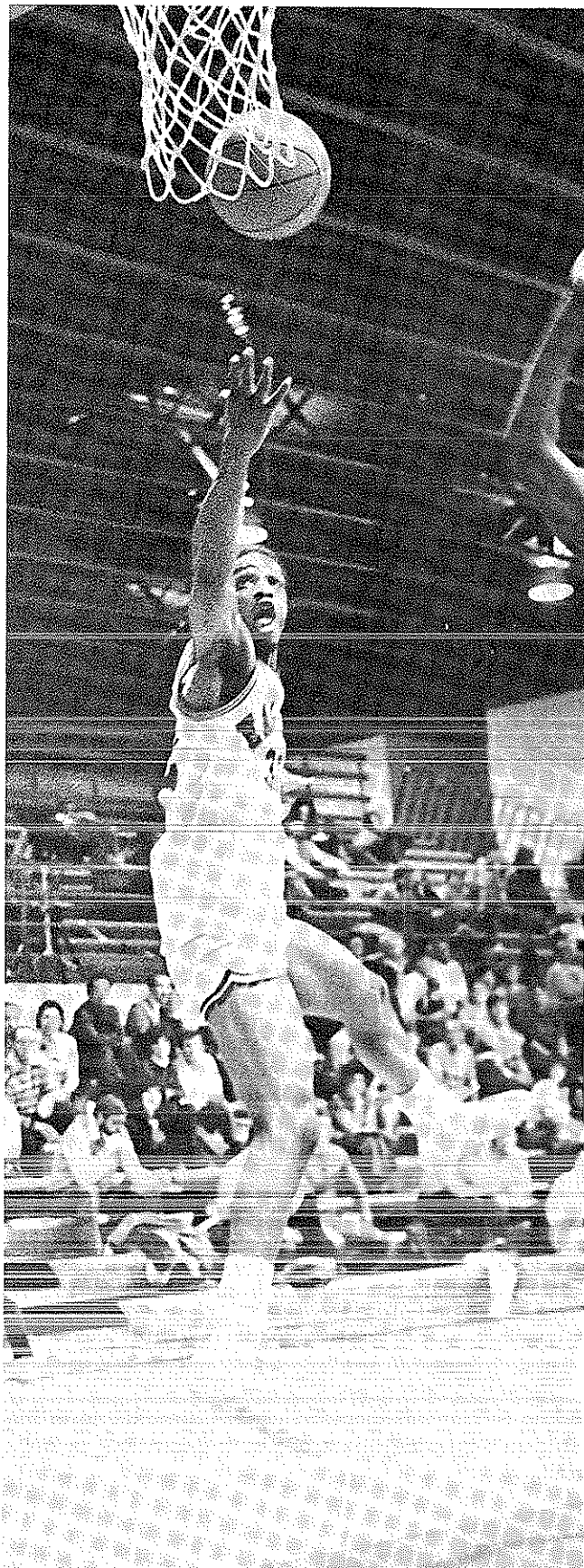
Intramurals

Kirkwood offers a wide variety of both team and individual activities as part of the intramural program. New activities are started at the beginning of each term. All students are invited to take advantage of the opportunity offered them by the intramural program. Stop in the Athletic Office in Johnson Hall or call 398-4909. We hope you will become involved with our intramural program.

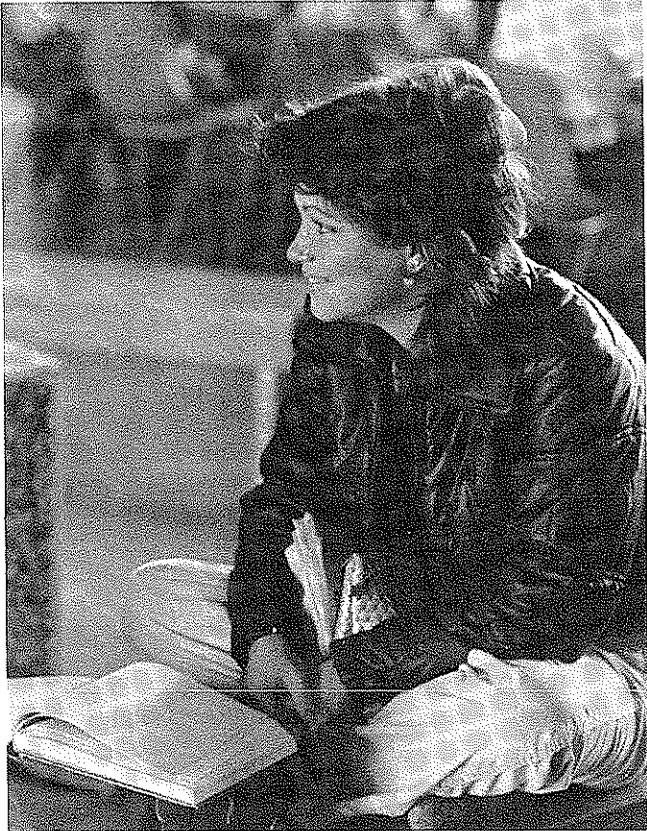
Intercollegiate Athletics

Kirkwood offers an intercollegiate athletic program for both men and women in a variety of sports. The college has women's teams in basketball, softball and golf. The men's teams include basketball, baseball and golf. In addition, there are several clubs on campus involving athletics, the most popular of which is wrestling. Kirkwood competes with teams from junior colleges in Iowa and bordering states.

Kirkwood belongs to the NJCAA and participates in tournaments sponsored by the association. All students at Kirkwood are admitted to all regularly scheduled athletic contests at no charge. The athletic offices are housed in Johnson Hall. If you have any questions regarding KCC athletics, please stop by the athletic office or call 398-4909.



POLICIES AND REGULATIONS



Admission

It is the policy of Kirkwood Community College to accept for admission into its Arts and Sciences and Vocational-Technical Divisions all individuals with either a high school diploma or its equivalent, as determined by the General Education Development testing program. Mature adults who have not completed high school may be admitted, on an individual basis, to various programs offered by the college.

Admission to the college does not, however, ensure admission to all programs offered. The college reserves the right to guide the placement of students on the basis of counseling, examination, pre-enrollment interviews, and past academic achievement.

Generally, admission to programs is granted on a continuous basis as applicants complete required admissions procedures. Applicants will, therefore, find it

to their advantage to apply as soon as they have decided to seek admission to a program. Prospective students may apply at any time after beginning their senior year in high school. Applications are accepted up to the day of registration in many college programs; however, if the college staff is to be of maximum assistance with pre-enrollment matters, applicants should complete their applications well in advance of the expected entrance quarter.

Equal Opportunity

It is the policy of Kirkwood Community College not to discriminate on the basis of race, color, creed, national origin, or religion, handicap, age, sex, or marital status in granting admission to and participation in its educational programs, college activities and services, or in its employment practices.

Inquiries regarding compliance with state and federal non-discrimination requirements may be directed to Dean of Student Affairs or Equal Employment Opportunity Office, Kirkwood Community College, P.O. Box 2068, Cedar Rapids, Iowa 52406.

Admissions Office

The Office of Admissions is located in Room 134, Linn Hall, 6301 Kirkwood Boulevard S.W. For admissions information, call the Office of Admissions, 398-5517.

Admission Requirements and Procedures

Materials and procedures required for admission are listed below. All admissions materials are to be submitted to the Enrollment Services Office, Room 123, Linn Hall, Kirkwood Community College, P.O. Box 2068, Cedar Rapids, Iowa 52406.

Arts and Sciences

Kirkwood has an "open door" policy. This permits high school graduates or equivalent to apply and be accepted regardless of past academic achievements. The procedure includes:

1. Application Form: May be obtained from the Admissions Office.
2. High School Transcript: Prospective students, after submitting an application, should request their high school counselor or principal to send their final high school transcript to the Enrollment Services Office.
3. College Transcripts: Transfer students who want to transfer credits to Kirkwood must submit an official transcript from each college or university attended previously.

4. **Student Health Form:** The completed student health form required in some programs, is not submitted until after students have been notified of acceptance. The form should be sent to the student health center. Applicants to programs that require a health form will be notified of the requirement.

Vocational-Technical

Shortly after all admissions materials are received, an applicant will be notified regarding admission. The procedure includes:

1. **Application Form:** May be obtained from the Admissions Office.
2. **High School Transcript:** Prospective students should request their high school counselor or principal to send their final high school transcript to the Enrollment Services Office.
3. **College Transcripts:** Transfer students expecting to transfer credits to Kirkwood must submit an official transcript from each college or university attended previously.
4. **Health Certificates:** A health exam is required in some programs but not until after students have been notified of acceptance. The health certificate should be sent to the student health center. Applicants will be notified about this requirement.
5. **Personal Interview and/or Qualifying Examination:** A personal interview and/or qualifying examination may be required before a student can apply or be admitted to some programs.

International Students (Non-immigrant aliens)

Students from foreign countries who wish to be admitted into regular credit programs and courses must submit:

1. Secondary school and college transcripts
2. Evidence of adequate financial resources
3. Health Certificate
4. Information showing the degree of mastery of the English language; A minimum total score of 500 on the Test of English as a Second Language (TOEFL)
5. A \$100 admissions processing fee

Students from foreign countries or refugees in the United States who wish to be admitted to the credit program in English as a Second Language must be 18 years or older and must submit the following:

1. Application form
2. Secondary school and college transcripts
3. Evidence of adequate financial resources

Refugees in the United States who wish to be admitted to the English as a Second Language program on a non-credit basis should enroll under the procedures that apply to Adult Basic Education. Interested persons should contact the Community Education Division.

Community Education

Admission to adult education programs is varied and flexible. Individuals interested in admission to General Studies, general adult education, and adult part-time vocational programs are advised to contact the Community Education Division at 398-5668 for information regarding admission and course offerings. See the Community Education section of this catalog for information on Kirkwood's Community Education programs.

Tuition and Fees:

Credit Programs

The following are tuition and fees for credit programs. They are subject to change at any time.

Residents of Iowa (See "Residence Qualifications")

Part-time study: \$20.00 per credit hour.

Full-time study: \$230.00 (12 credit hours).

13, 14, 15 credit hours each \$3 additional.

Students "auditing" or carrying courses for "no credit" are assessed tuition at the same rate as regular credit course work.

Non-Iowa Residents (See "Residence Qualifications")

Part-time study: \$40.00 per credit hour.

Full-time study: \$460.00 (12 credit hours).

13, 14, 15 credit hours each \$6 additional.

Students "auditing" or carrying courses for "no credit" are assessed tuition at the same rate as regular credit work.

International Students (Non-immigrant aliens)

Part-time study: \$40.00 per credit hour.

Full-time study: \$460.00 (12 credit hours).

13, 14, 15 credit hours each \$6 additional.

Students "auditing" or carrying courses for "no credit" are assessed tuition at the same rate as regular credit work.

Definitions of terms used above:

"Full-time study" 12 quarter hours credit or more in Arts and Sciences. Most regular Vocational-Technical Division programs are considered full-time except those less than 12 weeks in length. In these cases, tuition is pro-rated based on the length of the program.

"Part-time study" less than 12 quarter hours of credit

Residence Qualifications

Students enrolling at Kirkwood Community College shall be classified as residents or nonresidents of Iowa or as international students for admission, fee and tuition purposes by the Enrollment Services Office. The decision shall be based upon information furnished by the student and all other relevant information. The department is authorized to require such written documents, affidavits, verifications or other evidence

as are deemed necessary to establish the domicile of a student, including proof of emancipation, adoption, award of custody, or appointment of a guardian. The burden of establishing that a student is exempt from paying the nonresident tuition is with the student.

The decision of the Enrollment Services Office on the residence of a student for admission, fee and tuition purposes may be appealed to a review committee. The finding of the review committee shall be final.

For further information on residence classifications, contact the Enrollment Services Office.

Special Fees

Most courses in the Arts and Sciences Division and in the Vocational-Technical Division carry a **materials fee**. This fee is paid quarterly. The materials fee ranges from \$.50 per credit hour for predominantly lecture courses up to \$3.00 per credit hour for courses that are predominantly laboratory in nature.

All students pay a **student fee** each quarter according to the schedule below:

Seven or more enrolled hours \$10
Less than seven enrolled hours \$ 2

This fee covers a variety of items and services, e.g., activities, ID card, student newspaper, etc.

Registration Fee

All students are required to pay a registration fee each quarter as follows:

Full-time (12 or more hours) \$10
Part-time (less than 12 hours) \$ 5

This fee covers parking, changes in course registration, graduation, and a variety of other items usually charged separately at other colleges.

Other Fee Arrangements

Part-time Vocational: Tuition for part-time vocational programs depends upon the length and nature of the course. Normally, books and materials are not included in tuition.

Refund of Tuition

Students who withdraw from the college will receive a tuition refund according to the following schedule:

Time of Withdrawal	Percentage of Refund
— 1st through 5th class day of term:	75%
— 6th through 10th class day of term:	50%
— 11th through 15th class day of term:	25%
— 16th through last class day of term:	5%

Refunds will be made only when an "Exit Interview Form," signed by a Kirkwood counselor, is filed in the Registrar's Office. Refunds will be computed based on the date that the forms are received by the Registrar's Office.

During the first five class days of a term, a student who reduces his/her schedule below full-time will receive a 75 percent refund for the difference between the original tuition paid and the amount applicable to the reduced schedule.

Full refunds will be made only for students who: (a.) withdraw for reasons of personal health as certified by a licensed physician on a form provided by the Registrar's Office, (b.) are inducted, but not enlisted, into the nation's armed services, (c.) are forced to do so by college-initiated action, i.e. cancellation of a course. Fees other than tuition are non-refundable.

Academic Regulations and Policies

Unit of Credit

A unit of credit is a quarter hour. A quarter hour of credit is normally given for one hour in class each week for a period of twelve weeks.

Course Load

Arts and Sciences Division:

Individuals pursuing 12 quarter hours or more during any quarter will be considered full-time students. To earn a degree in six quarters, students should plan to enroll for an average of at least 15 hours per quarter.

Students may not carry more than 18 hours of credit in any quarter without approval of their advisor and the appropriate division dean.

Students may not take a course for more or less credit than that assigned in the college catalog or the schedule of courses.

Vocational-Technical Division:

Individuals pursuing 12 quarter hours or more during any quarter will be considered full-time students. To earn a degree in six quarters, students should plan to enroll for an average of at least 15 hours per quarter.

Part-time course work may be undertaken in many programs. Students with an interest in attending part-time in the Vocational-Technical Division are advised to contact the Office of Admissions for details.

Students may not take a course for more or less credit than that assigned in the college catalog or the schedule of courses.

Grading System

The Kirkwood grades or marks and their meanings are given below:

A Excellent	I Incomplete
B Above Average	X Course repeated
C Average	L **Credit for prior education
D Below Average	or experience
P Passing-Credit	(11/24/76)
T Credit by examination	F *Failing
E Excused without credit	FW **Failure to withdraw
N Audit	(3/1/71)
Q No credit	NI **Irresponsible Audit
W Withdrew from course	(3/1/71)

*The F grade was discontinued fall, 1972, and reinstated fall, 1981.

**Discontinued grades. Discontinuation date shown.

The grades A, B, C, D, F and FW are included in computing the grade point average.

Credit toward graduation is granted for A, B, C, D, P, T and L.

Requital of Failing Grades

Students who receive "F" ("failing") grades at Kirkwood may request that these grades be changed to "Q" ("no credit") when these conditions are satisfied:

1. The student has earned at least 24 quarter hours of credit since receiving the "F" grade(s) and
2. The cumulative grade-point average earned since receiving the "F" grade(s) is not less than 2.0.

Forms for filing requests for requital of failing grades available from Enrollment Services, Room 123, Linn Hall.

Grade Reports

Grade reports are mailed to students approximately two weeks after the close of a quarter. Grades will not be given out over the phone.

Repeating Courses

Students who achieve a personally unsatisfactory grade in a course may, according to procedures described below, repeat the course in an attempt for a better grade and have the original grade removed and replaced by "X."

Students wishing to take advantage of this policy must file a notification with the Enrollment Services. Forms for this purpose are available in that office.

Provisions of this policy are as follows:

1. Students may repeat a course as many times as they wish in an effort for a better grade.
2. Students must file notification of their repeat of a course for a better grade with Enrollment Services

for each course repetition.

3. The original grade will be changed automatically to an "X." (The "X" carries no credit nor does it affect a student's grade point average.) A student may not repeat a course and then choose the better of the two grades. The repeat grade is always the one that will be computed as part of the student's record.

4. Students who withdraw from a course which they are repeating for a better grade under this policy will have the original grade re-entered on their record.

Students who have questions regarding how this policy applies to their own situation should discuss it with a member of the counseling staff.

Incomplete Grades

A student who fails to complete the assigned work of a course during a quarter or session can be assigned the grade "I" ("incomplete"). The length of time a student will be permitted to complete the course work must be worked out with the instructor assigning the "I." The "I" may be changed to an "F" if the student hasn't, after a period of time deemed reasonable and sufficient, made up the incomplete work.

Auditing Courses

Audit enrollment in courses provides students the opportunity to attend a class as a non-credit participant, usually as a listener-observer. This kind of enrollment may have value for the student who wants an introduction to a subject outside his major field, a review or refresher in a subject, or other purposes where credit and grade either are not needed or would pose an unnecessary academic threat.

With the permission of the instructor and/or the assistant dean, a student may enroll in any course on an audit basis. It is required of audit enrollments that the student and instructor agree about what portion(s) of the course the student plans to audit and the requirements the instructor has about the student's class attendance and participation in class work. If the student fulfills the agreement for the audit, he or she will receive the grade of "N" ("audit") for the course and it will be entered on the student's academic transcript. If the student does not fulfill the audit agreement, the Registrar, upon request of the instructor, will delete the course from entry on the student's academic transcript.

Audit enrollments carry no credit nor grade point value. No inference is made, nor should conclusions be drawn, about the quality or quantity of a student's mastery of the course subject matter.

Standard tuition and lab charges apply to all audit enrollments regardless of the length or scope of the audit.

Credit Assignments in Emergency Situations

Upon completion of two-thirds of a quarter, a student may request a grade and, therefore, credit for all courses in progress at the time of:

1. Induction but not enlistment into the Armed Forces;
2. Serious personal or family illness requiring the student to drop out of school;
3. A death in the immediate family;
4. Other emergency circumstances that prevent a student from finishing the quarter.

No refund of tuition or fees will be made for a withdrawal handled under this policy.

Adds and Drops

Students may add a course at any time through the fifth class day of a quarter or session, subject to the course load conditions and tuition schedule listed earlier.

Students may drop individual courses from their schedule any time up to 8 p.m. three weeks prior to the last day of the quarter. After this time, students must remain in scheduled courses. Students who quit attending a class without officially dropping it will receive, at the discretion of the instructor, an "I" or an "F" grade.

A change in registration is not official until it is received in the Office of the Registrar, and all deadlines as stated herein apply to the day by which it must be received in that office. It is the responsibility of the student to see that all necessary forms reach that office and that they carry signatures as indicated on the forms.

Dates, as indicated herein, are listed on the college calendar.

"Change in Registration" forms are available from counselors and the Office of the Registrar.



Withdrawal Policy

Students may withdraw, that is, cancel their entire registration, at any time up to the final exam period. Students officially withdrawing through the Office of the Registrar will be assigned a "W" for all courses for which they are then registered. In all cases of withdrawal, except in cases of physical or circumstantial impossibility, a student must secure the "approval" of a counselor. In cases of tragedy (death, disability, etc.), the Office of the Registrar can initiate a withdrawal for the student, even retroactively when the situation becomes known.

Students failing to withdraw officially will receive the grade deemed appropriate by the instructor, not to include a "W."

Change of Majors

Vocational-Technical students who change their major or Arts and Sciences students who change to a major in the Vocational-Technical Division will be accountable in terms of graduation requirements only for work done in the new major. The course work and grade point average earned in the initial major will continue as part of their transcript and record, but will not affect them in meeting graduation requirements of the new major. If course work successfully completed in the initial major is applicable to the new major, a student may petition the dean or the assistant dean for permission to apply these credits toward graduation requirements of the new major. Where permission is granted, the courses and the earned grades for those courses would be credited toward the new major.

Students who contemplate a change of major under this policy are advised as an initial step to discuss their plans fully with a member of the counseling staff.

Academic Progress

In order to graduate from Kirkwood, students must satisfy all course requirements and achieve the cumulative grade-point-average established for the award sought.

Students in Arts and Science majors who achieve and maintain a cumulative 2.0 grade-point-average and students in Vocational-Technical majors who achieve and maintain a 1.8 grade-point-average and complete course requirements in the prescribed sequence are considered to be progressing satisfactorily.

The records of students who fail to meet these standards shall be reviewed each quarter. Failure to meet these standards for two consecutive quarters could result in academic suspension. In any case, such students' educational benefits from the V.A. and/or Financial Aid will be discontinued until satisfactory progress has been attained.

Disciplinary Probation and Suspension

Disciplinary probation and suspension from the college is managed under the procedures described in the Board Policy Manual of the college. In general, such matters are handled by the Student Activities Department, with procedures for due process and appeal made available as appropriate.

Re-admission

Students who have been suspended for academic reasons may petition the Enrollment Services Department for re-admission. There is a mandatory period of one quarter before petitions for re-admission will be considered.

Students who have withdrawn from the college in good standing, and who desire to be re-admitted, should apply to the Enrollment Services Department. If they have attended another college or university, they must file an official transcript from that institution if they want transfer credit. Students who are re-admitted after absence from the campus and who desire an associate degree will be required to fulfill the current graduation requirements.

Assignments and Examinations

Students are expected to complete all class assignments and examinations on time. It is the student's responsibility to contact his or her instructor to make up any work missed during absence from each class. In cases where a test is given during the absence of a student, it is sometimes possible for the instructor to substitute another test at a later date. There may be occasions, however, when substitution of a test may not be feasible. When a student anticipates missing a test, a telephone call in advance to the instructor may save a great deal of difficulty later and prevent a possible lowering of the grade for that course in cases when a test is of a type that is difficult to make up.

A student must be present as scheduled for the final examinations. In cases of illness or emergency during examination times, a student may be excused and re-scheduled by the instructor. In cases where such illness or emergency may extend more than a few days, the procedure for incomplete course work should be followed.

Student Record Retention Policy

Kirkwood Community College retains the official academic record (transcript) of enrollment and credit

Notice to Students Regarding Family Educational Rights and Privacy Act of 1974

In accordance with provisions of Public Law 93-380 as amended (P.L. 93-568), the Family Educational Rights and Privacy Act of 1974, commonly known as the "Buckley Amendment," notice is hereby given to Kirkwood Community College students and their parents as follows:

It is the intention of the college to comply with provisions of this law. The college rules and regulations to implement compliance procedures are available to interested parties, and may be reviewed during normal business hours in the following campus locations: Enrollment Services, Student Affairs Office, and the Learning Resources Center. Students who believe the college is not complying with this law are hereby informed of their right to file a complaint with the U.S. Office of Education.

The college maintains only those "Education Records," within the definition of this law, which are essential to the process and procedures required to develop and maintain an accurate academic record for each student and to support such student accounting needs and requirements as are imposed by law, state and federal regulations, and college operational pro-

cedures. These records may be found in some or all of the following offices: Enrollment Services, divisional, departmental, major program, Student Activities and advisors. Subject to provisions of the college rules, they may be reviewed by students upon request.

This law permits the college to make public certain "directory information" about students. It is the intention of the college to do so, within the scope of regular college policies and as may be appropriate to the normal course of college business and operations. The following information is regarded to be "directory" type information, and some or all of it may be made public: name, address, telephone listing, major field, class schedule, courses of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, age and/or date of birth, dates of attendance, degrees and awards received, and previous educational programs and institutions attended by the student. Any student objecting to his or her directory information being made public must file notice of such objections with the Enrollment Services Department.

*Dr. Bill F. Stewart
President*

earned in Kirkwood's credit programs in perpetuity. All other student record documents are destroyed three years after the student's last enrollment at Kirkwood.

Students who believe there is any inaccuracy in their official academic record (transcript) must notify the Enrollment Services Department immediately. Upon the destruction of the supporting student record documents three years after the students' last enrollment at Kirkwood, the official academic transcript is regarded to be the final accurate record of academic accomplishment.

Degree and Graduation Requirements

Arts and Sciences Division

Transfer of Credit From Other Institutions

The Arts and Sciences Division will accept the credits given to a student who has done successful work at any properly accredited college provided that the work was part of the curriculum of a two-year associate degree—equivalent to any of the associate degrees offered by the Arts and Sciences Division at Kirkwood, or a baccalaureate degree or was part of such a program. Courses in any of these degree programs will transfer even though the student may have been involved in non-degree work at that institution. In order to receive the associate degree granted by the Arts and Sciences Division, the student must also fulfill the requirements for those degrees as are listed in this catalog.

In the evaluation of transfer students' transcripts from institutions previously attended, Kirkwood applies the following general policies:

1. *Grades of "F" (or any other "failing" grades) of transfer students will be ignored in the computation of a cumulative transfer grade point average if any of the following conditions are met:
 - A. The courses involved were taken during or after the 1972 fall quarter and before the 1981-82 fall quarter; or
 - B. The student has not been enrolled in any program of higher education leading to an associate or baccalaureate degree for a period of at least three consecutive years; or
 - C. The student has served in the Armed Services of the United States for at least two years or any smaller portion thereof if discharged with a service-connected disability.
2. Grades corresponding to "D" or better will be accepted for transfer if from a properly accredited institution.
3. Decisions about the applicability of transfer courses toward Kirkwood requirements will be made by the Enrollment Services Department and reported to the

student. Any questions regarding this should be directed to that office.

When a transfer student's credits are accepted toward the associate degree of Kirkwood, the college cannot guarantee how other colleges will treat these same credits.

*This provision applies in equal measure to Kirkwood students.

Acceptance of Vocational-Technical Credit Toward AA or AS Degrees

Kirkwood Community College will accept for credit toward Associate of Arts or Associate of Science degrees, vocational-technical credits earned in courses which are part of two-year Associate of Applied Science degree technical programs at Kirkwood or other accredited Iowa Area Schools. (Such credits are hereinafter referred to as "technical" credits.) These technical credits are acceptable toward Associate of Arts or Associate of Science degrees subject to the following provisions and conditions:

1. A maximum of 24 quarter hours of technical credits earned in Kirkwood resident course work will be accepted toward Associate of Arts or Associate of Science degrees. They may not be used to satisfy core or general education requirements.
2. Kirkwood will accept for transfer (from another accredited Iowa Area School) a maximum of 24 quarter hours of earned vocational-technical credits toward Kirkwood Associate of Arts or Associate of Science degrees which the sending Area School has accepted toward their own Associate of Arts or Associate of Science degrees provided that:
 - A. A statement of that Area School's policy on internal articulation of vocational-technical credits towards their own Associate of Arts and Associate of Science degrees is on file with the Enrollment Services Department of Kirkwood;
 - B. The sending Area School's transcript clearly indicates which vocational-technical courses are acceptable toward their Associate of Arts or Associate of Science degrees.

After application of technical credits, a student must complete the following requirements to receive an Associate of Arts or Associate of Science degree:

1. Satisfactorily complete all general education requirements established for the degree being sought.
2. Earn a minimum of the last 24 quarter hours of degree applicable course work in residence.
3. Earn a minimum of 90 quarter hours of credit acceptable toward the Associate of Arts or Associate of Science degrees (as defined under this and any other applicable policies of Kirkwood).
4. Earn the required minimum cumulative grade point average on all course work applied toward the degree sought. This cumulative grade point average will be computed using as many of the best earned technical credits as required to bring the degree applicable credit total to 90 quarter hours.

General Requirements for the Associate of Arts, Associate of Science or Associate of Science/Career Option Degrees

1. Earn a minimum of 90 quarter hours of credit. Remaining hours after specific requirements for the degree are satisfied will be taken from Arts and Sciences electives designed for transfer, with the understanding that 24 quarter hours of vocational-technical courses could be included.
2. Earn the last 24 quarter hours in residence at Kirkwood in a degree program for which the degree is sought.
3. Maintain a minimum cumulative grade point average of 1.80 (for programs begun before fall, 1981 and completed by spring, 1984) and 2.0 (for programs begun fall, 1981 or completed after spring, 1984).
4. Satisfactorily complete eight quarter hours in composition and four quarter hours in speech.

Specific Requirements for the Associate of Arts Degree

1. Complete general requirements described earlier.
2. Complete group requirements as follows:¹

A. Humanities	8 quarter hours	12 quarter hours	*	**
B. Social Sciences	8 quarter hours	12 quarter hours		
C. Math and Science	8 quarter hours	12 quarter hours		
D. Distributed Requirements	—	12 quarter hours		***

¹For programs begun before fall, 1981 and completed by spring, 1984

**For programs begun fall, 1981 and after or completed after spring, 1984

***To be taken from Humanities, Social Sciences and Math-Science. Programs begun fall, 1983 and after must include 8 hours of History, Languages or Cultures in the distribution.

Specific Requirements for the Associate of Science Degree

1. Complete general requirements described earlier.
2. Complete group requirements as follows:¹

A. Humanities	8 quarter hours
B. Social Sciences	8 quarter hours
C. Math and Science	30 quarter hours

Specific Requirements for the Associate of Science/Career Option Degree

1. Complete general requirements described earlier.
2. Complete group requirements as follows:¹

A. Humanities	8 quarter hours
B. Social Sciences	8 quarter hours
C. Math and Science	8 quarter hours
D. Career Option Emphasis	30 quarter hours

¹For a complete definition of which courses fulfill which group requirements, see the Arts and Sciences course description section.

Vocational-Technical Division

Requirements for the Associate of Applied Science Degree

1. Earn a minimum of 90-111 quarter hours of credit for a 6 quarter program.
2. Earn the last 24 quarter hours in residence at Kirkwood in a program for which the degree is sought.
3. Maintain a minimum cumulative grade point average of 1.80.
4. Satisfactorily complete 20 quarter hours of applied general education courses.
5. Satisfactorily complete group requirements as follows:
 - A. Technology diploma, where applicable — 45-66 quarter hours
 - B. Additional general education support courses — 14 quarter hours
 - C. Additional technology courses — 0-21 quarter hours
 - D. Electives — 0-10 quarter hours

Requirements for the Technology Diploma

1. Earn a minimum 45-66 quarter hours of credit for a 3 quarter program.
2. Earn the last 12 quarter hours in residence at Kirkwood in a program for which the diploma is sought.
3. Maintain a minimum cumulative grade point average of 1.80.
4. Satisfactorily complete 6 quarter hours of applied general education courses.
5. Satisfactorily complete group requirements as follows:
 - A. Technology vocational certificate, where applicable — 28-42 quarter hours
 - B. Additional related technology courses — 15-24 quarter hours

Requirements for the Vocational Certificate

1. Earn a minimum 28-42 quarter hours of credit.
2. Earn the last 9 quarter hours in residence at Kirkwood in a program for which the certificate is sought.
3. Maintain a minimum cumulative grade point average of 1.80.
4. Satisfactorily complete 6 quarter hours of applied general education courses.
5. Satisfactorily complete group requirements as follows:
 - A. Selected technology core — 22-36 quarter hours
 - B. General education support courses — 6 quarter hours

For a complete definition of which courses fulfill which group requirements, see the Vocational-Technical Instructional Program section.

Other Graduation Information

Filing a Graduation Application

Each student who plans to earn an associate degree, diploma, or certificate of program completion, must file a graduation application with the Enrollment Services Department at the beginning of the quarter in which he or she plans to complete the necessary course work.

Graduation applications should be submitted at the time that students register for classes in the quarter that requirements for graduation will be completed. However, applications will be accepted if filed with the Enrollment Services Department (123, Linn Hall) within one week of the close of registration.

While students may complete their requirements for graduation during any quarter, commencement exercises will be held at the end of the spring and summer terms. Students completing requirements in the fall or winter terms are encouraged to participate in the spring commencement exercises.

Transcripts

Official transcripts are available through the Enrollment Services Department. Transcripts sent to other institutions and employers are free of charge. Each transcript given or mailed to the student costs \$1.00 and must be paid for at the time it is requested.

Requirements for the Adult High School Diploma

1. A Kirkwood high school diploma will be granted when the student meets the requirements toward graduation.
2. The high school completion program is operated on both a quarter system (12 weeks) and by individualized instruction at area Community Education centers.
3. Students may begin at any time.
4. A student must earn a minimum of 48 quarter hours of credit.
5. Six quarter hours of study in residence at Kirkwood are required in the High School Completion program regardless of the number of remaining credits needed.
6. A student doing normal work may earn one credit for 12 weeks' work with grades A, B, C, and D. Due to a great deal of individualized instruction, students may earn 1½ maximum quarter credits in this 12-week period if the instructor feels they have achieved much more than normally achieved in that length of time. Credit for courses taken through individualized instruction is granted when a student demonstrates competency in the subject matter. There are no time limitations. No one fails.
7. Credit awarded for military school, vocational training and work experience (includes home-maker) are

evaluated by the counselor before credit will be given. Any questions regarding credits or grades are considered by the counselor or area supervisor.

Requirements for the Iowa High School Equivalency Diploma

The Iowa High School Equivalency Diploma is granted on the basis of the attainment of an average standard score of 45 on the General Education Development (GED) Test. The test is offered at several locations including Iowa City Community Education Center, Anamosa Reformatory, Lincoln Community Education Center, Monticello, Washington, Vinton, Williamsburg, Marion, Hartwig, Tipton, Oakdale and the Kirkwood main campus.

A high school equivalency diploma issued by the Iowa Department of Public Instruction is awarded and a permanent transcript file is maintained by the college.

A high school equivalency diploma will not be given until an applicant has reached his or her eighteenth birthday and his or her high school class has graduated.

Further information is available through Kirkwood's Community Education Division.

Student Responsibility for Catalog Information

Each student is responsible for being familiar with the information appearing in this catalog. Failure to read the regulations will not be considered an excuse for non-compliance.

The college reserves the right to change policies or revise curricula as necessary due to unanticipated circumstances.

Waiver of Regulations

Rules and regulations in this catalog have been adopted by the faculty, administration and board of directors of the college. When a student finds that extenuating circumstances might justify the waiver of a particular college regulation, however, the student may file a petition with the dean of student affairs, according to established procedures.

COURSE DESCRIPTIONS

Guide to Areas of Study

The course descriptions in this section are listed according to the following prefixes assigned for each area of study:

AC — Accounting	HU — Humanities
AF — ROTC	HY — History
AG — Agriculture	IS — Interdisciplinary Studies
AM — Administration and Management	JO — Journalism
AT — Art	LE — Law Enforcement
BY — Biological Science	LS — Library Services
CE — Cooperative Education	LT — Literature
CH — Chemistry/ Nutrition	LW — Law
CM — Communication (including speech)	MA — Mathematics
CO — Corrections	MF — Manufacturing
CS — Construction	MH — Mechanics
DA — Dance	MK — Marketing
DN — Dental	MM — Metals and Manufacturing
DP — Data Processing	MS — Medical and Surgical
DR — Drama	MU — Music
EA — Earth Science	NS — Nursing
EC — Economics	OE — Office Education
EG — Engineering	PD — Personal Development
EL — Electricity and Electronics	PH — Physics/Astronomy
EV — Environmental Studies and Pollution Control	PR — Philosophy and Religion
FL — Foreign Languages	PS — Political Science
FS — Fire Safety	PY — Psychology/ Education
GE — Geography	RE — Recreation
GR — Graphics	SO — Sociology
GS — General Studies	SS — Social Science
HE — Home Economics	SW — Social Welfare
	TH — Therapy

A list of courses no longer taught at Kirkwood is available from the Registrar's Office.

Course Numbering System

Each course description in this section is preceded by a course number, such as **AC001T**. Below is described what the letters and figures mean in each number:

- 1) The two-letter prefix in the number denotes the area of study in which the course may be found in this section. The area of study is the academic discipline that most nearly describes the content of the courses. (For example, "BY" is the prefix for courses that have biology as their basic subject matter.) The various areas of study and their prefixes are listed on this page. Since this section is organized alphabetically by prefixes, it is best to know the number of the course for which you are looking.
- 2) The three numerals in the body of the course number are random, and are not intended to imply any sequence for taking courses.
- 3) The letter at the end of the course number represents the level of instruction, according to the following code:
 - D — Developmental
 - T* — Transfer
 - U — Voc. Tech. (Applies to AAS)
 - V — Voc. Tech. (Applies to Diploma)

*T — Courses asterisked are under review by the curriculum instruction committee for permanent approval.

The credit value of each course is indicated in quarter hours following the title of the course. Where possible, the description also indicates the number of lectures and lab sessions involved. Thus, (3/1) indicates three lecture hours and one lab hour per week.