

William ❖ Rainey ❖ Harper ❖ College

B U L L E T I N



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William Rainey Harper College
1988-89 Bulletin
Volume 22
January, 1988

Accreditation

North Central Association of Colleges
and Secondary Schools
International Association of
Counseling Services
Commission on Dental Education
of the American Dental Association
Community/Junior College Member of the
National Association of Schools of Music
American Bar Association
Certificate of Real Estate School,
Department of Registration and Education
School Approval #46
Council on Medical Education of the
American Medical Association in
collaboration with the American
Association of Medical Assistants
National League for Nursing
American Dietetic Association Approval

Harper College reserves the right to change all
or part of this catalog without prior notice.

William Rainey Harper College
Algonquin and Roselle Roads
Palatine, Illinois 60067
312/397-3000

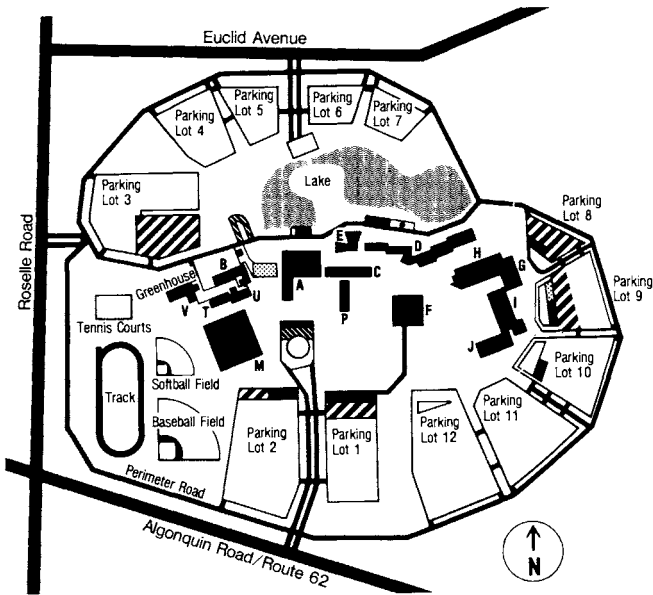









Table of Contents

Harper College Campus Map	2
College District N. 512—Map	3
Harper College Off-Campus Course Locations	4
Harper College Academic Calendar	6, 7
The College: General Information	9
Program Offerings, Admission Information, Tuition and Fees	18
Academic Information	23
Student Services	27
Continuing Education and Community Services	33
Instructional Programs and Requirements	39
Associate Degree Curricula	51
Certificate Programs	93
Course Descriptions	109
Board of Trustees, Officers of the College and Full-Time Faculty	181
Index	196

Campus Map

- A College Center
- B Physical Plant, Public Safety
- C Admissions, Art
- D Mathematics and Science
- E Lecture-Demonstration Center
- F Learning Resources Center
- G Vocational Technology Shops and Laboratories
- H Vocational Technology Shops and Laboratories, CAD/CAM Center
- I Business, Social Science and Vocational Education
- J Business, Social Science and Vocational Education
- M Recreation, Athletics and Physical Education
- P Music, Women's Center
- T Roads and Grounds Shop, Park Management
- U Art Studio
- V Park Management, Greenhouses



- | | | | |
|--|--------------------------|---|---|
|  | Parking Student |  | Buildings, Roads and Athletic Structures |
|  | Medical Permit | | |
|  | Visitors | | |
|  | Administrators | | |
|  | Faculty and Staff | | |
|  | Dental Hygiene | | |

Communities served by Harper College District No. 512

- 1 Arlington Heights
- 2 Barrington
- 3 Barrington Hills
- 4 Inverness
- 5 Buffalo Grove*
- 6 Carpentersville*
- 7 Deer Park*
- 8 Des Plaines*
- 9 Elk Grove Village
- 10 Fox River Grove*
- 11 Hanover Park*
- 12 Hoffman Estates
- 13 Lake Barrington
- 14 Mount Prospect
- 15 North Barrington
- 16 Palatine
- 17 Prospect Heights
- 18 Rolling Meadows
- 19 Roselle*
- 20 Schaumburg
- 21 South Barrington
- 22 Tower Lake
- 23 Wheeling

*Portions of these communities are included in the district.



Harper College Off-Campus Course Locations

Arlington Heights Memorial Library

500 North Dunton Avenue
Arlington Heights

Barrington High School

616 West Main Street
Barrington

Clearbrook Center

3201 Campbell
Rolling Meadows

Dempster Development Center

420 West Dempster Street
Mt. Prospect

Friendship Village of Schaumburg

350 West Schaumburg Road
Schaumburg

Grant Wood Senior Citizens Center

225 East Elk Grove Boulevard
Elk Grove Village

Highland Woods Golf Course

2775 North Ela Road
Palatine

Hoffman Bowling Lanes

Higgins and Roselle Roads
Hoffman Estates

Humana Hospital

1555 North Barrington Road
Hoffman Estates

Mt. Prospect Senior Citizens Center

50 South Emerson
Mt. Prospect

Northeast Center

1375 South Wolf Road
Prospect Heights

North Suburban Library System

200 West Dundee Road
Wheeling

Palatine Public Library

500 North Benton Street
Palatine

Rand Grove Village Apartments

773 East Rand Grove Road
Palatine

Schaumburg High School

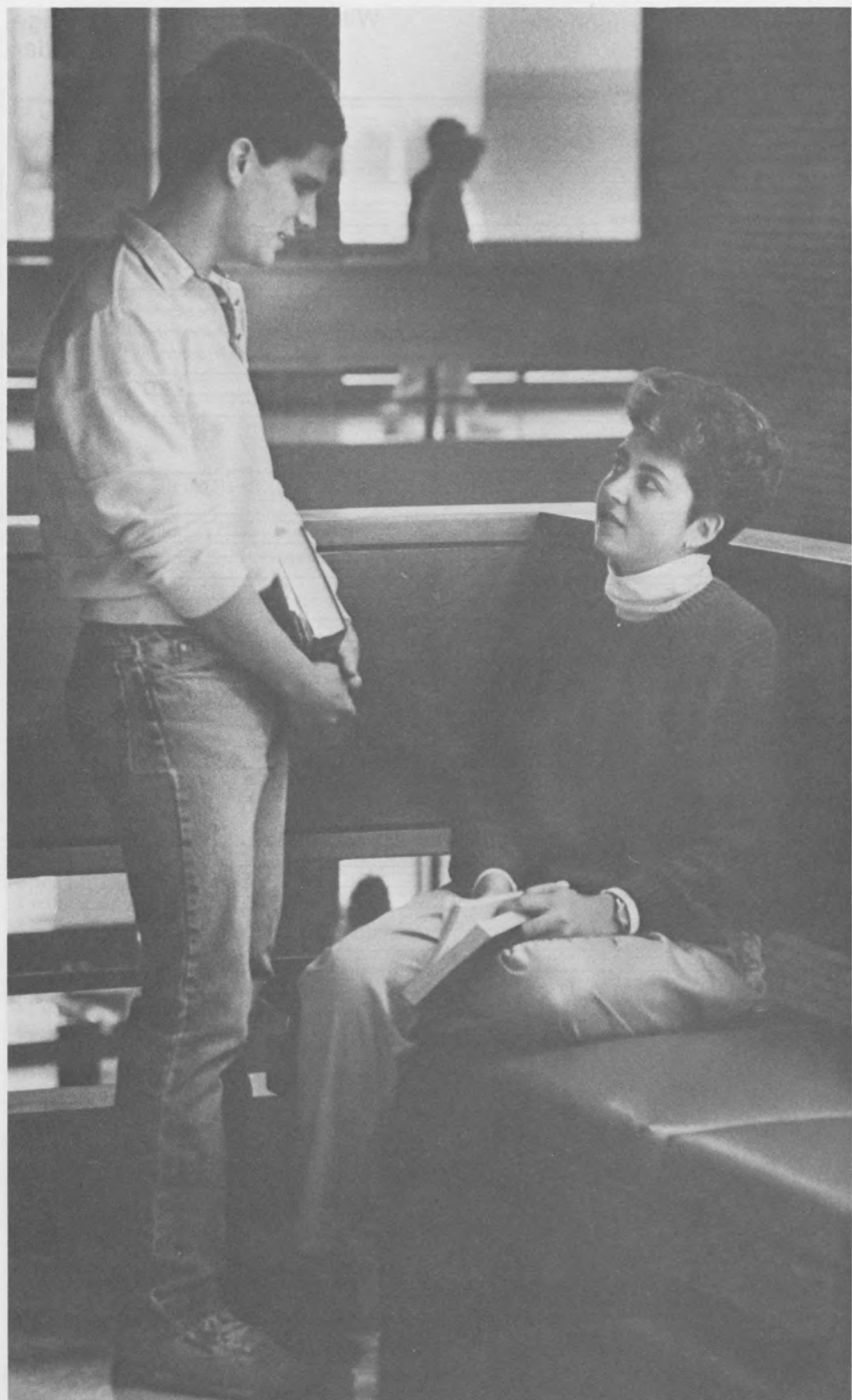
1100 West Schaumburg Road
Schaumburg

Schaumburg Township Building

25 Illinois Boulevard
Hoffman Estates

St. John United Church of Christ

308 North Evergreen Avenue
Arlington Heights



1987-88

William Rainey Harper College
Academic Calendar

First Semester — Fall, 1987

Registration as scheduled _____ April through August 17
Faculty Report _____ August 18
Open Registration _____ August 19, 20, 22
Classes Begin _____ August 24
Last Day for Late Registration _____ August 28
Last Day for Adding Classes _____ August 28
Last Day for Refunds* _____ September 5
Labor Day (Classes Not in Session) _____ September 7
Midterm _____ October 17
Veterans' Day (Classes Not in Session) _____ November 11
Last Day for Withdrawals _____ November 14
Thanksgiving Vacation (Classes Not in Session) _____ November 26-29
Classes Resume _____ November 30
Final Exam Week _____ December 14-19
Semester Break Begins _____ December 20

Second Semester — Spring, 1988

Registration as scheduled _____ November through January 12
Faculty Report _____ January 13
Open Registration _____ January 13, 14, 16
Martin Luther King's Birthday (Classes Not in Session) _____ January 18
Classes Begin _____ January 19
Last Day for Late Registration _____ January 22
Last Day for Adding Classes _____ January 22
Last Day for Refunds* _____ January 29
Lincoln's Birthday (Classes Not in Session) _____ February 12
Midterm _____ March 11
Spring Vacation _____ April 1-10
Classes Resume _____ April 11
Last Day for Withdrawals _____ April 16
Final Exam Week _____ May 16-20
Graduation _____ May 22

Summer Session, 1988

Open Registration _____ June 2, 3
Classes Begin _____ June 6
Last Day for Late Registration _____ June 7
Last Day for Adding Classes _____ June 7
Last Day for Refunds* _____ June 9
Midterm _____ July 1
Independence Day (Classes Not in Session) _____ July 4
Last Day for Withdrawals _____ July 14
Final Exams _____ July 27-28

*See refund policy on page 21 of Bulletin

First Semester — Fall, 1988

Registration as scheduled	April through August 17
Faculty Report	August 16
Open Registration	August 17, 18, 20
Classes Begin	August 22
Last Day for Late Registration	August 26
Last Day for Adding Classes	August 26
Last Day for Refunds*	September 3
Labor Day (Classes Not in Session)	September 5
Midterm	October 15
Veterans' Day (Classes Not in Session)	November 11
Last Day for Withdrawals	November 12
Thanksgiving Vacation (Classes Not in Session)	November 24-27
Classes Resume	November 28
Final Exam Week	December 12-17
Semester Break Begins	December 18

Second Semester — Spring, 1989

Registration as scheduled	November through January 10
Faculty Report	January 11
Open Registration	January 11, 12, 14
Martin Luther King's Birthday (Classes Not in Session)	January 16
Classes Begin	January 17
Last Day for Late Registration	January 20
Last Day for Adding Classes	January 20
Last Day for Refunds*	January 27
Lincoln's Birthday Observed (Classes Not in Session)	February 10
Midterm	March 10
Spring Vacation	March 19-27
Classes Resume	March 28
Last Day for Withdrawals	April 14
Final Exam Week	May 15-19
Graduation	May 21

Summer Session, 1989

Open Registration	June 1, 2
Classes Begin	June 5
Last Day for Late Registration	June 6
Last Day for Adding Classes	June 6
Last Day for Refunds*	June 8
Midterm	July 3
Independence Day (Classes Not in Session)	July 4
Last Day for Withdrawals	July 13
Final Exams	July 26-27

*See refund policy on page 21 of Bulletin



The College: General Information

William Rainey Harper

The President's Message

The College

Board of Trustees

Compliance Actions

Accreditation

History

Community Orientation and Involvement

College/Community Programs

Philosophy

Mission

General Education

Objectives

Degrees

The Harper Year

College Hours

Campus Facilities

College Accessibility

Parking

Bookstore

Learning Resources Center

William Rainey Harper

Father of the Community College

The spirit of Harper College is reflected in its name. William Rainey Harper was a scholar, teacher, writer and administrator who devoted his life to the pursuit of excellence in education. He accomplished so much in his lifetime that he is counted among the intellectual giants of his day.

A man of vision and an innovator, Dr. Harper was handpicked by John D. Rockefeller to become the first president of the University of Chicago before the turn of the century. During his 15-year presidency, that university emerged as one of the leaders in a movement to reform higher education.

Dr. Harper is recognized as the father of the two-year college, which he initiated at the University of Chicago in 1896. At that time the university was divided into two divisions — the academic college for freshmen and sophomores and the university college for juniors and seniors. Full-fledged emergence of this concept came almost 70 years later with the community college as we know it today.

In Illinois alone there are 39 public two-year community college districts serving more than 760,000 citizens each year through a full range of transfer, career-vocational and continuing education programs on both a daytime and an evening basis.



The President's Message

Academic excellence — it is a goal, an ongoing activity and an accomplished fact at Harper College.

As an ongoing activity, academic excellence at Harper is fostered through the College's emphasis on employing highly qualified faculty members and encouraging them to pursue opportunities for further professional development. In addition, excellence is promoted through a fine system of student support ser-

vices beginning with admission counseling and course selection. Resources available to the matriculating student include a superior library, tutoring, special classes on study techniques and audiovisual study materials. Academic standards are updated yearly, and there is continuing evaluation of courses and curricula. Transfer options and available career programs are continually expanded through articulation with senior institutions and other community colleges.

Academic excellence is also an accomplished fact in terms of the fine educators on the faculty, 97 percent of whom hold advanced degrees. At Harper, these faculty members provide the actual classroom instruction and are available to students seeking additional help outside of class hours.



Among all the advantages of attending Harper College, academic excellence is the most valuable. Its value is in the quality of the education the student receives today, and in the relevance and ready acceptance of that education as a foundation for career growth or further education. Surveys of former Harper students who have transferred have shown that their grades at the senior institution are as good as or better than those of students who entered the four-year college as freshmen. Career program graduates have an excellent rate of employment in their chosen fields, and are often recruited before graduation by area business and industrial firms.

Whatever your educational goal may be, we hope you will take full advantage of the Harper College resources designed to help you take a first step toward collegiate excellence.

A handwritten signature in dark ink that reads "James J. McGrath". The signature is written in a cursive, flowing style.

James J. McGrath
President, Harper College

The College

William Rainey Harper College in Palatine, Illinois is a public community college, an integral part of the Illinois system of higher education. The College, established in 1965 by voter referendum, is governed by an elected board of trustees. Harper serves high school districts 211 (Palatine and Schaumburg Townships), 214 (Elk Grove and Wheeling Townships), as well as Barrington Unit School District 220.

The Harper College district (512) covers an area of about 200 square miles. Communities within the College district are Arlington Heights, Barrington, Barrington Hills, Elk Grove Village, Hoffman Estates, Inverness, Lake Barrington, Mount Prospect, North Barrington, Palatine, Prospect Heights, Rolling Meadows, Schaumburg, South Barrington, Tower Lake and Wheeling. Also included are portions of Buffalo Grove, Carpentersville, Deer Park, Des Plaines, Fox River Grove, Hanover Park and Roselle.

Board of Trustees

The board of trustees is composed of seven elected individuals who represent the voters of the district and one student representative, who has an advisory vote, elected by the student body for a one-year term.

Meetings of the board of trustees, which are open to the public, are held on the fourth Thursday of each month at 8:00 pm in the Board Room of the administrative wing of the College Center (Building A) on the Harper campus at Algonquin and Roselle Roads in Palatine.

Compliance Actions

Harper College does not discriminate on the basis of race, color, religion, sex, age, national origin, veteran's status, marital status or physical or mental handicap. This policy governs the recruitment and admission of students, the recruitment and employment of faculty and staff and the operation of any of the College's programs and activities as specified by federal laws and regulations. It is also the policy of Harper College that no student, faculty or staff member shall be subjected to sexual harassment, which is regarded as a form of discrimination.

Inquiries regarding Affirmative Action should be directed to the Personnel Specialist. Inquiries regarding College compliance with Section 504 of the 1973 Rehabilitation Act should be directed to the Dean of Special Programs and Services.

Accreditation

All courses and educational programs, including counseling services, are fully accredited by the North Central Association of Colleges and Secondary Schools. In addition, the Student Development Center at Harper is accredited by the International Association of Counseling Services; the Harper Dental Hygiene career program is accredited by the Commission on Dental Education of the American Dental Association; the Harper Music Department is accredited as a Community/Junior College Member of the National Association of Schools of Music; the Harper Legal Technology Program is accredited by the American Bar Association; the Harper Real Estate Program holds a Certificate of Real Estate School, Department of Registration and Education School Approval #46; the Medical Office Assistants Program at Harper is accredited by the Council on Medical Education of the American Medical Association in collaboration with the American Association of Medical Assistants; the Harper Nursing Program is accredited by the National League for Nursing and the Illinois Department of Registration and Education; and the Harper Dietetic Technician Program is approved by the American Dietetic Association.

History

The story of William Rainey Harper College parallels the history of the community college movement in Illinois, an educational phenomenon in the late 1960s.

Late in 1964, while legislators in Springfield were adding the final revisions to the Illinois Community College Act enabling citizens to form their own college districts, concerned citizens in Chicago's northwest suburban communities petitioned for a referendum to vote on the establishment of a college. Within a matter of days after the legislation passed, voters in the four-township area of Elk Grove, Palatine, Schaumburg and Wheeling approved a referendum establishing the Harper district — on March 27, 1965.

Groundwork for the referendum to establish a two-year college had been laid early in the 1960s with a survey of student needs and the establishment of a concerned Citizens' Committee. The success of the committee was exhibited in a 3-2 margin at the polls. Voters returned to the polls 34 days after approving the referendum to elect seven citizens, from among 48 candidates, as the first board of the new college.

Two years later, Barrington School District 224 (now Unit School District 220) annexed to the Harper district, and the boundaries of Harper's 200-square-mile-constituency were established to become Illinois Community College District 512.

Since its inception, Harper College has been most fortunate in having trustees possessing the capacity to work together in planning programs, solving problems and establishing goals unique in the annals of the northwest suburbs. The first board meeting was held in May, 1965. The College had no name, no staff and no facilities, but it did have seven dedicated individuals determined to establish a community college worthy of the area it serves.

During the first year, a president was hired, architects were selected to design and plan a campus, the campus site was chosen and a decision was made to adopt the name of William Rainey Harper College in honor of the "father" of the two-year-college concept.

Voters in the district approved a \$7,375,000 building referendum 4-1 to begin Harper's second year. By September, 1967, the College was staffed and operating with more than 1,700 students attending evening classes in Elk Grove High School, and ground had been broken for a new campus. Harper College was a reality, and the northwest suburbs had the first college in a 125-year history.

Harper serves as a cornerstone in Illinois educational history as the first two-year institution to complete Phase I of its building construction and the first to receive unqualified full accreditation — only six years after its founding — in the shortest possible time in 1971.

Throughout its brief history, Harper has had a record of monumental growth. The 1967 enrollment of 1,725 students jumped to 3,700 in one year, double the projections. When the doors opened on Harper's new campus in fall, 1969, 5,350 students were enrolled. Enrollment topped 20,000 for the first time in fall, 1975.

The College employed numerous off-campus locations, instituted a Weekend College program, and opened an extension campus at Willow Park Center in 1975 to provide additional classroom space for day and evening offerings. The Northeast Center subsequently moved to the Hawthorne School in Wheeling, and in the fall of 1982, to the Stevenson School in Prospect Heights.

A successful referendum held in September, 1975 provided funds for the College to proceed with completion of the present campus, purchase land for a second site, and construct the first phase of buildings on that site when required by enrollment increases.

Buildings G and H were completed and classes begun in the facilities in 1977. Building M, the physical education, athletics and recreation facility, and Buildings I and J opened to classes in the 1979-80 academic year. All plans were subject to approval by the Illinois Community College Board and the Illinois Board of Higher Education.

In 1982, the College established a training center in cooperation with high technology firms in the area. The center was designed to provide instruction and resource materials relating to computer aided design and manufacturing. The innovative educational program of the CAD/CAM Center was structured to assist high technology firms in training their employees, as well as to provide some instruction in this developing technology to students in Harper programs. In 1986, the CAD/CAM Center was relocated from a Schaumburg office to Building H at the campus.

In February 1985, residents of the college district approved a tax rate increase for operation of the College. This was the first increase in tax support for the educational programs, services and operating expenses of Harper College in the 20 years since the College was established.

Changes in population trends over the past ten years indicated that a second campus would not be needed to accommodate projected enrollments, and the decision was made to sell the property which had been purchased in 1975 at Palatine and Schoenbeck Roads in Arlington Heights. The sale was finalized in 1986.

Community Orientation and Involvement

From the beginning, College supporters have been committed to the concept of an institution oriented to its community. Harper has enjoyed a heartening involvement and interest by members of the community who continue to give countless hours to accomplish key phases of the College's programs.

Advisory committee members selected from the community for their expertise and knowledge give support to Harper on career programs, management training seminars for business and industry, women's programs, senior citizens' program, public relations, the College's long-range plan and fund raising.

Community leaders serve as directors of the Harper College Educational Foundation, which provides scholarships and supports special projects to enhance the educational programs of the College. In 1981, the Friends of Harper organization was formed as a support group for the College by citizens interested in promoting awareness of programs and services offered by Harper.

Harper continues to evaluate itself as it plans for the future. Will planned classroom space be adequate? Is Harper meeting community needs in the career/vocational fields? How well is the College serving its constituency in terms of preparing students to meet their future educational and career requirements? Is Harper College, in

fact, continuing to provide an outstanding program of higher education?

As Harper plans for the future, answers to these questions will be sought constantly and reevaluated to enable the College to continue to be accountable to the community it serves.

College/Community Programs

A student-faculty Cultural Arts Committee provides the College and community with programs representative of the various arts —dance, drama, exhibits, film, music, and a lecture series for discussion of relevant issues. These programs are sponsored by the Student Activities Office and financed by student activity fees.

Philosophy

An outstanding program of higher education for the community it serves is the guiding philosophy of William Rainey Harper College.

Created by a community responsive to contemporary insistence on more education for more of its citizens, the College is determined to meet the educational and vocational requirements of each student and thus serve the community at large, for a true community college answers to the demands of the total community.

The demands of the community are clear. In addition to the specific needs for two years of high quality transferable collegiate credit, the College recognizes the more general, but no less important, requirement of educating all of its students for a meaningful role in a free and fluid society which promises increased leisure time.

Basic to responsible participation in society is the student's contribution in voting more intelligently, producing more efficiently through the acquisition of a salable skill, and adapting more readily to a complex society. In view of the realities of the complexity of a dynamic society and the knowledge explosion, the student must not only learn what is known but also how to acquire knowledge not yet extant.

With a commitment to the dignity and significance of each student, the College endeavors to bring the student to a realization of what place he or she can make for himself or herself in today's world and to provide the necessary training for his or her social and personal goals. To this end, the College must provide those cultural experiences which will open to the student the heritage of the educated man.

Mission

The mission of William Rainey Harper College, as part of the system of public community colleges in Illinois, is to provide to District No. 512 residents a comprehensive postsecondary education which includes transfer, career and continuing education programs. In addition to fulfilling this primary mission, Harper College also offers specialized programs and services in cooperation with local school districts, area business and industry and other community colleges. The educational and cultural opportunities offered to students and community residents are developed and enhanced within the Harper College philosophy of academic excellence, service to the community and innovative educational leadership.

Programs developed to meet the needs of the community are offered at reasonable cost to students, district taxpayers and the State of Illinois. The ultimate goal of Harper College is to provide an educational environment that allows the individual the maximum opportunity to develop through successful learning experiences.

General Education

Harper College is committed to a program of general education which acquaints the student with a broad area of knowledge. This knowledge not only provides information in particular subject fields but contributes toward an enlightened and integrated view of life. General education serves to complement specialized training designed to prepare the student for an occupation, whether a trade skill, a technical proficiency or a professional vocation.

Essential to transfer and career-oriented programs, the aim of general education is to equip the student with important understandings and insights — and the power to communicate them. Thus, efforts to assume the role of a citizen and to earn a livelihood are set in a value perspective that gives a proper order to life's activities.

The general education philosophy of Harper College is intended to permeate the entire College program, enabling all members of the College community to work together to develop and strengthen constructive attitudes, knowledge and understandings.

Degree graduation requirements have been developed to combine adequate specialization with general education.

Objectives

Specific objectives of the College are:

1. To provide the first two years of baccalaureate education which will offer students opportunities to pursue liberal arts, sciences and preprofessional curricula designed to prepare those students to transfer to four-year colleges and universities and/or to satisfy individual educational goals;
2. To provide educational opportunities in occupational, vocational, technical and semi-technical fields which will enable students to acquire the skills and knowledge necessary to enter a specific career;
3. To offer appropriate general education opportunities to assist individuals in participating more effectively in a free society as well as providing those individuals with personal and cultural enrichment;
4. To provide opportunities for training, retraining and upgrading of skills in order to facilitate adjustments in a work environment that is undergoing rapid technological change;
5. To provide adult education and remedial instruction;
6. To provide community education, including continuing education designed to meet various individual goals;
7. To provide services designed to support the programs and direction of the institution, including, but not limited to, admissions, counseling, testing, tutoring, placement, financial aid and special assistance for the disadvantaged student;
8. To provide educational resources for the use of students and community residents through learning resources and library services;
9. To provide selected public services which employ the available resources of the College and utilize the talents of faculty and staff in such a manner as to make significant and substantive contributions to the community; and
10. Whenever available, to provide and encourage the use of the College's facilities and services for educational and cultural purposes by community members, under certain provisions and controls established by the College.

Degrees

Harper College offers three degrees: The Associate in Arts, the Associate in Science, and the Associate in Applied Science. The A.A. and A.S. degrees are primarily for students desiring to transfer to four-year institutions. The A.A.S. is primarily for those in two-year career programs.

In addition, the College provides certificate programs designed to meet specific needs of the community. These programs are normally one year in length, and upon completion of the prescribed courses, the student receives a certificate of completion.

The Harper Year

The College follows the semester plan and also offers a summer session. Day and evening classes are conducted throughout the College year. The College also offers a limited number of courses during the weekends of the fall and spring semesters.

College Hours

Business Hours: Offices will be open for business Monday through Thursday from 8:00 am to 9:00 pm and on Friday from 8:00 am to 4:30 pm. The Bursar's Office is open Monday through Friday from 8:00 am to 4:30 am. The Registrar's Office is open Monday through Thursday from 8:00 am to 9:00 pm, Friday from 8:00 am to 4:30 pm and Saturday from 9:00 am to 12:00 noon.

Class hours are scheduled Monday through Friday from 7:00 am until 11:00 pm and on Saturday from 7:00 am until 12:00 noon. The campus is closed on Saturday afternoon and Sunday.

Summer hours may differ from those listed above.

Campus Facilities

With the completion of the initial buildings, the Harper campus was opened to 5,400 students in September, 1969. Additional facilities were needed in order to keep up with the increasing enrollment which eventually led to a complex of 15 informal contemporary buildings totaling 733,990 square feet nestled in the rolling terrain of 200 rural acres. On-time delivery of the buildings marked Harper as the first Illinois public community college to complete its entire Phase I project, which was formally dedicated on May 3, 1970.

Campus structures include a comprehensive library and Learning Resources Center; a science and technology laboratory and classroom complex; a lecture-demonstration center; a fine and applied arts complex; a vocational-technical center; a park management and greenhouse facility; a College Center for student-related activities; an administrative wing including admissions, business offices and data processing center; and a central utility facility serving the entire campus.

Since the first phase of the campus was completed, additions to the science complex, fine arts wing, and central utility facility have been made. Buildings G and H were completed in 1977, and the physical education building plus two other classroom-specialized career program buildings (I and J) were opened in 1980.

The hub of the campus, the College Center, provides a natural meeting place for students and faculty — and includes a lounge, food service facilities, bookstore, various student activity offices, student development center, community meeting rooms and provisions for almost any activity the multi-purpose design might embrace.

The informal layout of the campus was designed to have a "village street" atmosphere. The architectural concept uses scale and placement of buildings, multi-level plazas, picturesque pedestrian streets, "earthtone" building materials (brick, wood and concrete), and glass window walls to give a variety of interior and exterior views, producing a stimulating and pleasing environment for learning and working.

The structures are built into the natural contours of the land, with entrances on several levels. Panoramic vistas from several buildings embrace a small scenic lake to the north of the buildings, with a foot bridge connecting the campus to the parking lot on a hill across the lake.

The Harper campus is an exciting environment for learning, complete with the latest educational tools. Students, alumni and community residents find pride in a local campus which provides educational and cultural opportunities as well as a conference center for clubs and civic organizations.

College Accessibility

Harper College programs and facilities are accessible to handicapped persons.

Complete College services may not be available at all off-campus or extension locations.

Parking

All members of the College community, including students, faculty and staff, are required to display their Harper parking permit decal, and park in the area designated for them. The speed limit in all parking lots is 15 miles per hour, and Illinois Motor Vehicle Laws will be enforced on the campus.

The Public Safety Office in Building B issues parking permits.

Persons with disabilities may apply for special permits in Health Services, A362.

Bookstore

The Bookstore, located on the second floor of the College Center, offers a full range of new and used textbooks, current paperbacks, magazines, newspapers, student supplies, educational aids and sundries.

Current textbooks which will be used in the next semester will be purchased from students each semester during the week of final examinations. Certain study materials are not eligible for buyback.

Full refunds for Bookstore purchase will be given on presentation of receipt. Returns are accepted during the first two weeks of classes in the fall and spring semesters and the first week of classes in the summer session.

Convenient store hours are posted near the entrance to the Bookstore.

Learning Resources Center

The function of the Learning Resources Center is to support the instructional program of the College by providing appropriate services to faculty and students. The staff is ready to help in the development, acquisition and use of a variety of print and media materials. The LRC collection contains about 100,000 volumes, more than 900 magazines, and extensive back issues of the *Chicago Tribune* and *New York Times* on microfilm, as well as tapes, records, slides, films, videotapes and film strips.

LRC Library Services

Library Services oversees all circulation of the LRC materials in the collection. Reference service, including arrangements for bibliographic instruction and online searching, College archives, reserve materials and copy machines are available on the second floor. The technical services area oversees the acquisition and cataloging by Library of Congress classification of all material added to the LRC collection.

LRC Media Services

The TV, photographic, printing and graphics areas design and develop institutional graphics, publications and instructional media productions aimed at making instruction more effective. Located in the middle and south side of the first floor, the television studio is available for staff and student productions. Also adjacent to this area is media equipment distribution and repair service.

Flexible Facilities for Instruction

Nine lecture/demonstration facilities provide the teachers and students with flexible resources for instructional use. These lecture/demonstration facilities are designed for large group instruction and are equipped with audio systems, remote media projection, and television linked directly to the Learning Resources Center.

Other self-instructional spaces and the LRC independent study area, each equipped with a variety of media, are used to support individualized instruction.

Harper College cable TV channels reach 12 communities, enabling students to view telecourses and other programs in their homes. Teleconferences and a variety of national and international programs are available via a satellite antenna system located on the Harper campus.



Admission Information, Tuition and Fees

Program Offerings

Admission

Readmission

Residency

Assessment and Placement

Tuition and Fees

Chargeback Tuition

Tuition Refund Policy

Withdrawals

Enrollment Status Verification

Program Offerings

Students may select one of the following options and should follow the procedures identified:

Transfer Program

This option is available to students interested in selecting courses transferable to institutions offering baccalaureate degrees.

Career Programs

These sequences of courses are designed for individuals who desire to pursue a specific curriculum to prepare them for a particular career.

Other Offerings

Courses are available for students who do not wish to pursue a degree or certificate.

Remedial classes in English or mathematics skills and/or study skills are offered for students who need to improve these skills in order to succeed in college studies. Students are admitted to these classes based on placement test scores.

In addition, the Adult Educational Development (AED) Department offers instruction in reading, writing and mathematics, as well as preparation for GED citizenship.

English as a Second Language (ESL) classes are offered for persons who are native speakers of other languages. Students are admitted to these two latter programs by the AED or ESL Department.

Continuing Education (Non-Credit Program)

Continuing Education courses have been established to provide an educational service to the public and are not a part of college credit programs. Students need not apply for admission and should register according to registration procedures as outlined in the current course schedule.

Admission

Eligibility

All high school graduates or the equivalent (GED) are eligible for admission to the College. A non-graduate 16 or 17 years of age who has severed his or her connection with the high school system, as certified in writing by the chief executive officer (or designee) of the high school district in which the student has legal residence, or a non-graduate 18 years of age or older, may be admitted if he or she demonstrates the capacity to benefit from programs and courses offered by the College. High school students may be admitted to selected courses upon the written approval of their high school principal (or designee) and the designated College admissions official. To be placed in some programs in the College, the applicant may have to meet additional requirements as

specified by that program and/or the Illinois Public Community College Act.

General Admission Requirements

Upon application to the College, students are asked to indicate their enrollment plans and should note the following guidelines to assist them in making their decisions.

Full-time students enroll in at least 12 semester hours of credit courses. *Part-time students* enroll in less than 12 semester hours of credit courses. *Degree-seeking students* plan on pursuing a College degree or certificate.

Full-time applicants will be required to:

- A. Complete a Harper College application.
- B. Pay a \$15.00 nonrefundable application fee.
- C. Submit an official copy of their final high school transcript. Students who are enrolled in high school at the time of application must, in addition, submit a current high school transcript. Students who completed the GED must submit an official copy of GED results.
- D. Submit official transcripts from all colleges attended.
- E. Submit an official copy of ACT results. (This requirement will be waived for students who have completed 12 or more semester hours of college level credit at a C or above level.)

Degree seeking part-time applicants will be required to:

- A. Complete a Harper College application.
- B. Pay a \$15.00 nonrefundable application fee.
- C. Submit an official copy of their final high school transcript. Students who are enrolled in high school at the time of application must, in addition, submit a current high school transcript. Students who completed the GED must submit an official copy of GED results.
- D. Submit official transcripts from all colleges attended.

Non-degree-seeking part-time applicants will be required to:

- A. Complete a Harper College application.
- B. Pay a \$15.00 nonrefundable application fee.

Students who do not fulfill the appropriate admission requirements will be permitted to register for the semester for which they are applying, but will be prohibited from registering for subsequent semesters until all admission requirements have been fulfilled.

Additional Admission Information

Students Applying to Limited Enrollment Programs

The following career programs have been identified as limited enrollment programs: Dental Hygiene, Dietetic Technician, Emergency Medical Training, Nursing (RN and LPN) and Operating Room Technician. Each of these programs has special admission requirements.

Consult the curriculum section of this Bulletin to determine the specific admission requirements of a particular limited enrollment program.

Selection for these programs is determined by the following: Residents of the Harper College district who complete the application process by the program's application deadline will receive preferential consideration in the selection process. If, on that deadline date, more completed applications have been received than space available, those students with the highest qualifications will be selected.

The Interpreter Training and Legal Technology Programs are also limited enrollment programs and also have special admission requirements. Contact the Admissions Office for additional information.

International Students

Students from other countries attending Harper College are termed "international" students, according to the following definition: "A person who is a citizen of a country other than the United States who has a visa for educational purposes with an intent to return to his homeland upon completion of his educational program."

International students must carry a minimum of twelve (12) semester hours. Because no scholarships or grants are available to international students, it is essential that students from outside the United States have sufficient funds to cover their expenses while in this country. The international student tuition is \$123.60 per semester hour (subject to change without notice).

International students are not considered residents of the College district for purposes of admission to Limited Enrollment Programs.

International students will be required to submit the following with the Admissions Office at least three weeks prior to the beginning of the semester or summer session in which they intend to begin their studies:

1. A completed Harper application with a non-refundable \$15.00 application fee.
2. Official transcripts for at least the last four years of secondary school study and any university-level or postsecondary school work that has been completed or attempted. All these records must list all subjects taken, grades earned or examination results in each subject, minimum and maximum grades possible and all diplomas and certificates awarded. If these documents are not in English, they must be accompanied by authorized English translations.
3. An official Test of English as a Foreign Language (TOEFL) score report. To be considered for admission, students must receive a minimum converted score of 500.

4. An affidavit of support signed by the party who will be supporting the student. The affidavit must be accompanied by statements from the bank and employer of the party who will be supporting the student. (If students are able to document sufficient financial resources to support themselves, this will be considered adequate.)

5. A written statement regarding what the student plans to study at Harper.

6. A Harper College "Educational Background Information Sheet."

Early Admission Program

High school students age 16 and over may enroll concurrently at the College if they obtain written approval of their high school and of the designated College admissions official. These students should follow the appropriate general admission requirements as stated above.

Summer School Students

Students who apply for summer school only should submit an application form and an application fee. Students starting first with summer session and planning to continue should follow the guidelines for full-time or part-time students, as appropriate, as outlined in the General Admission Requirements section of this Bulletin.

Readmission

A student who has previously attended Harper College and who is returning after an absence of one semester or more does not need to complete an application for readmission. (An exception to this is a student who is applying for admission to a Limited Enrollment Program. Contact the Admissions Office for details.) If a student has attended any other educational institution since attending Harper, official transcripts from each college attended must be submitted to the Admissions Office. Students dismissed from Harper for disciplinary reasons must be reviewed by Harper's vice president of student affairs.

Assessment and Placement

Harper College welcomes all who can benefit from the courses and programs offered. The College expects all students either to possess at the time of admission or acquire through appropriate study the basic skills of reading, writing and mathematics. To this end Harper requires that all incoming, degree-seeking students be tested. Test results are used to identify students' strengths and weaknesses and to determine whether students possess the skill levels necessary for success in the courses or programs of study they choose. If students fail to meet the appropriate level of competence, they are required to take appropriate English, reading and mathematical courses, to restrict their enrollment to specific courses and to limit the number of credit hours in which they enroll.

Residency

Students enrolling at William Rainey Harper College shall be classified as Resident, Non-Resident, Out-of-State or International for tuition and fee purposes:

Resident

A student whose residence (legal domicile) has been determined to be within the William Rainey Harper College District (Illinois Community College District 512) at the start of the term. Final determination is made by the dean of admissions and registrar.

*Resident tuition is also available to persons who reside outside the district but are employed full time by companies within the Harper College district, through an agreement between the College and the company. Information is available from the Admissions Office.

Non-Resident

A student whose legal domicile is in Illinois but outside Community College District 512.

Out-of-State

A student whose legal domicile is outside the state of Illinois.

International

A student whose legal domicile is outside the U.S. and is attending Harper College on a student visa.

Tuition and Fees (subject to change without notice)

Tuition

Resident Tuition — *(includes employees of companies within Harper district)	
	\$27.00 per semester hour
Non-Resident Tuition (see Chargeback) —	
	\$107.64 per semester hour
Out-of-State Tuition —	
	\$140.54 per semester hour
International Student Tuition —	
	\$140.54 per semester hour
Senior Citizen Tuition (Resident) — (60-64)	\$5.40 per semester hour
Senior Citizen Tuition (Resident) — (65 and older)	Free

All tuition and fees are due and payable during registration unless arrangements are made at the Office of Financial Aid or the Office of the Registrar, A213. Failure to do so may result in being withdrawn from classes.

A one-time application fee of \$15.00 is charged to each new student applying for admission for credit courses. The fee, which is nonrefundable, covers the cost of processing the application.

Activity Fee

Students enrolled for 12 or more credit semester hours will pay a \$15.00 activity fee for each semester; students enrolled for less than 12 hours will pay a \$7.50 activity fee. Students enrolled for summer school credit hours will pay a \$7.50 activity fee. No activity fee is charged for students enrolled only in credit-free (Continuing Education) courses or Harper classes taught off-campus (extension courses). However, students enrolled only in credit-free and extension courses may pay the activity fee and obtain an activity card (see: Student Activities).

Special Music Fee

Students enrolled in minor applied music will pay \$68.00 per semester. This entitles the student to one private lesson per week. Major applied music students will pay \$136.00 per semester and will receive two private lessons per week.

Students may lease musical instruments for \$25.00 a semester, \$15.00 of which may be refunded depending upon the condition of the instrument when it is returned.

Graduation Fee

A graduation fee of \$15.00 includes the cost of the diploma (see: Graduation Requirements).

Laboratory and Music Fees

Laboratory and music fees will be indicated at time of registration.

Parking Fees

Parking fees will be assessed as follows:

\$3.00 for fall semester
\$3.00 for spring semester
\$1.50 for summer session

No parking fee is required for one- or two-day Continuing Education seminars or workshops.

Chargeback Tuition

Resident Students desiring to pursue a certificate or degree program not available through Harper College may apply for chargeback tuition if they attend another public community college in Illinois which offers that program. (See section on cooperative programs.)

Students approved for chargeback will pay the resident tuition of the receiving institution; the Harper College District will reimburse the college for the remainder of the non-district tuition cost.

Application for chargeback tuition is made in the Office of the Registrar 30 days prior to the beginning of the term for the college in which the student wishes to enroll.

Non-Resident Students approved for chargeback tuition from their resident district will pay Harper's resident tuition and their district will reimburse Harper for the balance of the non-resident tuition. Non-resident students attending Harper without chargeback will pay the non-resident fees (see: Tuition and Fees).

Tuition Refund Policy

Tuition refund requests shall be made to the Office of the Registrar. Refunds will be made according to the following schedule:

<u>Regular Credit Courses</u>	<u>Percent of Refund</u>
Prior to first day of semester or term	100%
During first week of class*	80%
During second week of class	50%
No refund after second week of class (Eight-week classes prorated, including summer session.)	

Any extraordinary circumstances involving tuition refund shall be brought to the attention of the dean of admissions and the registrar.

Withdrawals

If students wish to withdraw from a class after regular registration, they must withdraw officially by submitting the appropriate forms to the Office of the Registrar. A student who does not withdraw officially from a class is subject to an "F" grade.

Procedures for a medical withdrawal are available in the Health Services Office.

The following guidelines determine grades for an official withdrawal from a 16-week course; the timetable for withdrawing from other courses (8-week, 4-week, etc.) will be determined on a pro rata basis according to these guidelines:

1. Classes dropped prior to the third week will not become a part of the student's permanent record.
2. A "W" grade will be assigned to a class dropped after the beginning of the third week and prior to the thirteenth academic week.

*First week of class is defined as the first 6 calendar days of the term for 16-week classes and the first 3 calendar days of the term for 8-week classes. Other classes not following the regular schedule will be prorated based on the length of the course. First day of semester of term is defined as the day when "classes begin" according to the official College calendar at the beginning of this Bulletin.

3. A grade of "F" will be assigned to a class dropped after the twelfth week of a full semester course.

4. The deadline to withdraw from 16-week classes is printed in the official College calendar for the year in question.

Enrollment Status Verification

Students may have current or previous enrollment verified by the Registrar's Office, A213.

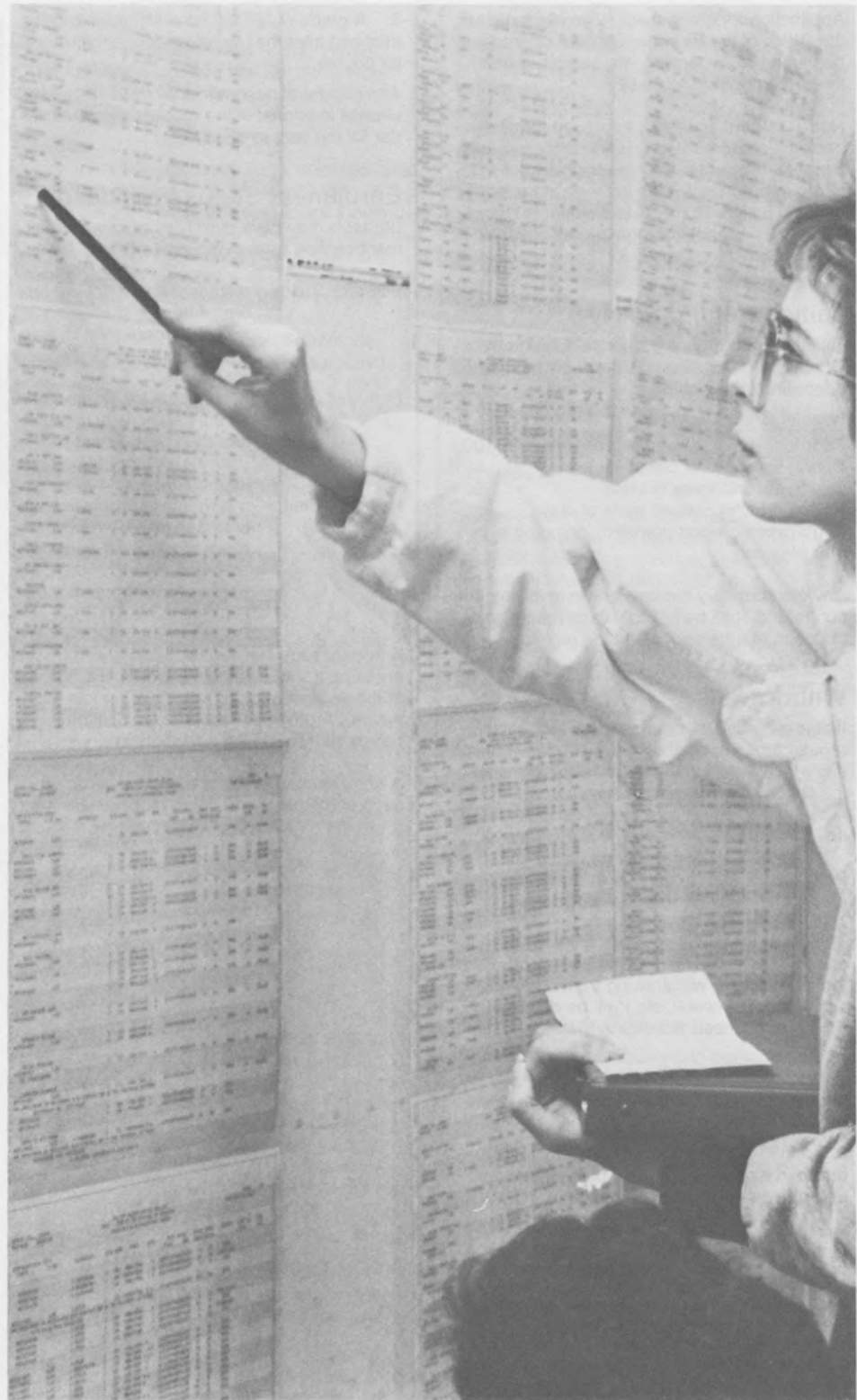
Full-time Status—a student is considered full-time if he/she is enrolled in twelve or more credit hours (six credit hours for the summer term).

Part-time Status—a student is considered part-time if he/she is enrolled in less than twelve credit hours (less than six credit hours for loan deferments).

Half-time Status—a student is considered half-time if he/she is enrolled in six or more credit hours but less than twelve credit hours (three credit hours for the summer term).

A current semester verification is based on the enrollment status of the student on the first day of the second week of classes (after late registration.) A previous semester verification is based on the actual dates of attendance.

A non-refundable fee of \$2.00 is charged for each enrollment verification requested.



Academic Information

Grading

Academic Honors

Standards for Academic Performance

Probation

Repeat Policy

Forgiveness Policy

Attendance Policy

Plagiarism and Cheating

Incomplete Grades

Auditing a Course

Transcripts

Transfer of Credit to Harper College

Student Records Policy

Student Grievance Policy

Grading

At the end of each semester, the student will receive a grade for each class in which he or she was enrolled at the beginning of the third week of the semester. The official grade point average is computed on the basis of final grades awarded at the end of each semester or term.

Grade Points

Grade points are numerical values which indicate the scholarship level of the letter grades. Grade points are assigned according to the following scale:

Grade	Significance	Grade Point
A	Superior	4.0
B	Good	3.0
C	Average	2.0
D	Poor	1.0
F	Failure	.0
H	Audit	.0
K	Unfilled audit	.0
P	Pass	.0
W	Withdrawal	.0
X	Incomplete	.0

The following classes are not computed in the cumulative grade point average:

Communication Skills — all courses
English as a Second Language — all courses
Math — below 100 level
Reading — below 100 level

Academic Honors*

Trustees' Honor List

Each semester, students achieving a grade point average of 3.75 to 4.00 are recognized as Trustees' Honor List students.

Dean's Honor List

Each semester, students achieving a grade point average of 3.50 to 3.74 are placed on the Dean's Honor List.

Honors List

Each semester, students with a grade point average of 3.25 to 3.49 are given recognition on the Honors List.

*Students must have accumulated 12 semester hours at Harper to be eligible for an academic honor.

Standards for Academic Performance

Students enrolled in an academic program must maintain minimum academic performance. In the following table are listed satisfactory and unsatisfactory standards for Harper students:

Attempted Cumulative Hours	Satisfactory	Unsatisfactory
7-18	1.00 or more	.99 and below
19-36	1.50 or more	1.49 and below
37-45	1.75 or more	1.74 and below
46 or more	2.00 or more	1.99 and below

Harper students who have accumulated seven semester hours or more and students who transfer from another institution must make satisfactory performance or be placed on probation.

Probation

Probationary students must raise their cumulative grade point average to the minimum required for the succeeding semester in which they are enrolled or they will be considered for dismissal. A probationary student may be required to carry a reduced number of semester hours, upon the recommendation of a student development faculty member, as an added incentive to increase academic performance.

A student placed on probation will automatically be removed from probation when his or her cumulative grade point average (GPA) meets the minimum standards for satisfactory performance. A student on probation whose cumulative GPA remains below satisfactory performance can continue on probation if his or her work in succeeding semesters gives hope that the student can achieve a 2.0 average by graduation.

Repeat Policy

Students will be allowed to repeat courses and attempt to earn a higher grade. When a course has been attempted more than once, only the highest grade received for that course will be used to compute the cumulative GPA. The lower grade(s) will remain on the transcript but will not be used to compute the Harper College cumulative GPA. A student transferring to another college should check that school's repeat policy; it may differ.

Forgiveness Policy

Under limited circumstances, a student may petition to have previously earned "F" grades removed from the cumulative grade point average but not from the student record. Eligibility guidelines and procedures are available in the Student Development Centers.

Attendance Policy

Each instructor or program has the responsibility to establish the attendance requirements which best suit the educational goals of that class or program.

Plagiarism and Cheating

Plagiarism, which is the illegitimate use of source materials in written work, and cheating are fundamental offenses against the integrity of an academic institution and are serious threats to the academic standards of the College and its student body. Disciplinary measures for a student guilty of plagiarism or cheating may be determined by the instructor or the vice president of student affairs according to the seriousness of the offense.

Incomplete Grades

A student may be assigned a grade of "X" for unfinished work in a course provided the work was incomplete because of circumstances deemed to be unavoidable or uncontrollable (to be determined by the instructor). The work to be completed will be assigned by the instructor. The unfinished work must be satisfactorily completed by the midterm of the following 16-week semester. Failure to do so will result in a grade of "F."

Auditing a Course

A student who wishes to audit a course will be required to pay full tuition and fees and must obtain approval from the instructor, department chair or dean prior to enrollment in the course. At that time, a mutual set of expectations will be determined.

Registration for audit status may be completed only during late registration (during the first week of the term) and must be the original enrollment in the class. Changes from credit to audit are not permitted. All students taking a course for credit are given priority in registration.

Upon completion of the course, the instructor will assign an "H" grade if the agreed upon expectations are met, and a "K" if they are not.

Transcripts

Official transcripts of a student's academic record will be issued and sent, upon written request, to other educational institutions and prospective employers. A fee of \$2.00 is charged for each copy. The College reserves the right to withhold transcripts of persons who have past due monetary obligations such as tuition, fees or materials.

Transfer of Credit to Harper College

A student who has attended any other college(s) must have an official transcript from each college attended sent to the Admissions office immediately upon making application. A student may transfer credit to William Rainey Harper College according to the following conditions:

1. The collegiate institution previously attended must be a regionally accredited institution awarding college credit.
2. Credit may be transferred to Harper College for courses earning credit and successfully completed with a grade of "D" or above if the student's cumulative grade point average (GPA) is 2.0 or above ("C" average) at the previously attended institution. If the student's cumulative GPA is less than 2.0 at a previously attended institution, credit may be transferred for courses earning credit and successfully completed with a grade of "C" or above. The student's work at each institution is evaluated independently if several institutions were attended. A student must petition for evaluation of transfer credit through the Registrar's Office.
3. Credit may be transferred, but the grades earned at other institutions are not transferred, nor are the grades included in computing the cumulative GPA at Harper College. Elective credit may be awarded for transfer course work with no direct equivalency at Harper College.
4. Courses which are a part of a department or program of study not offered by Harper College are considered nontransferable.
5. Evaluation of credentials from a foreign country may be requested through the Registrar's Office.

Student Records Policy

The Student Records policy at Harper College is governed by the Family Education Rights and Privacy Act of 1974. The law and the guidelines for its use at Harper College are available in the Office of the Registrar (See Student Handbook).

Student Grievance Policy

A Student Grievance policy and procedure is available for students who feel improper, unfair, arbitrary or discriminatory judgments or improper use of procedures have been applied to them directly by the college or a college representative. A copy of the procedure can be obtained in the Student Senate office, Student Activities office, or office of the vice president of student affairs.



Student Services

Student Development

Student Development Counseling Centers

Center for New Students

Career Planning Center and Placement Office

Health Services

Assessment and Testing Offices

Alternative Credit Programs

Open Test Center for GED

Disabled Student Services

Learning Assistance Center

Tutoring Center

Financial Aid

Veteran Services

Student Activities

Conduct

Athletics

Food Service

Student Senate

Child Learning Center

Student Development

Student Development Counseling Centers
Center for New Students
Career Planning Center and
Placement Office
Health Services
Assessment and Testing Offices
Alternative Credit Programs
Open Test Center for G.E.D.

This area of the College is designed to assist students in assessing, identifying and achieving their goals. A variety of professional services and programs are offered to maximize responsible student decisions relating to education, career, social and personal issues.

The offices and centers listed below are all a part of this division and together offer programs for the development of all students at Harper College.

Student Development Counseling Centers

Two centers, located in D142 and I117, are specifically designed to help students with their educational plans. This includes course scheduling and transfer information regarding four-year schools, as well as information on Harper's career programs.

The Student Development centers maintain a collection of information on college selection as well as college catalogs for personal use by students. Up-to-date transfer information on area colleges and universities is available, including specific information on program requirements for transfer to these institutions. In addition, the library maintains a subscription service with current copies of all U.S. college catalogs on microfiche.

Students having personal, social or emotional concerns which may impede their satisfactory progress and success as students at Harper College are encouraged to consult with Student Development faculty. These highly-trained professionals are available to help students or to make referrals as necessary.

In addition, these centers offer special counseling for adult students on campus. Student Development staff will provide counseling geared especially to meet the needs of adult students. Individual, as well as group counseling is available.

Center for New Students

Another Student Development Center, located in F132, is available to students entering the College for the first time. The purpose of the center is to assist all entering students in becoming familiar with the College and to provide preliminary information which will assist students in their transition to Harper College.

This center specializes in assisting the returning adult student as well as the traditional student. Individual and group counseling are available.

A major function of this Center is to organize New Student Orientation programs prior to the beginning of each semester. Orientation programs are designed to help the new student make a smooth transition into the college setting. It is an opportunity to meet other students as well as to become familiar with the campus. Students begin setting goals and are assisted in the selection and registration of courses.

Career Planning Center and Placement Office

This Student Development Center, located in A347, assists students in making career and life planning choices. Students wishing assistance in their career choice or in gaining skills which will aid them in the job hunting process may visit the Career Planning Center. A variety of career information is available, including DISCOVER, a computerized guidance program. Student Development faculty are available to assist in the decision-making process through individual counseling and testing as well as career planning courses and seminars.

The Harper Placement Office is located in this Center. The Placement Center helps students with their employment needs (full-and part-time). The Placement personnel serve as liaisons between Harper College students, faculty/staff and potential employers. This service is designed to help the Harper student acquire the skills necessary for successful job searching as well as connect the student with potential employer contacts.

Health Services

Academic achievement and a choice of educational goals are largely dependent upon the physical and emotional well-being of the student. The College's acceptance of this fact has meant the recognition of its responsibility to provide a health program equal to the health needs of the students.

The Health Services Office is located in Building A, Room 362 and is open from 8:00 am to 10:00 pm, Monday through Thursday; 8:00 am to 4:30 pm Friday; and 9:00 am to 1:00 pm on Saturday. All services are free and confidential.

The health service is directed by a registered nurse with experience in counseling. A part-time physician is available on selected days in the health service to diagnose, treat and refer students as necessary. There are also medications available for treating minor illnesses, as well as testing for strep throat, mononucleosis, pregnancy, tuberculosis and sexually-transmitted diseases. Students are encouraged to use health service facilities when ill or injured as well as for confidential counseling and care regarding personal health issues. A rest area is available to students, faculty and staff. Community health resources are utilized for referral when necessary.

Assessment and Testing Services

This Student Development office is located in Building A, Room 148 and is responsible for the coordination and administration of academic assessment and other testing programs available to Harper College students and community members. All new students are required to participate in an orientation program that includes academic assessment testing. New students assess their academic strengths in English, reading and mathematics through a battery of tests. Tests for telecourses, independent study programs, proficiency and CLEP testing and entrance examinations for limited enrollment programs are coordinated in this office. Harper College also participates in national testing programs, either as a test center or as a source of information.

A Student Development program consisting of vocational/interest tests and/or personality measures is available without charge to students enrolled in at least six (6) credit hours (three credit hours in an eight-week term). Students must first meet with a counselor to determine which tests are most appropriate. Test results will be interpreted later by counselors and can give students valuable information in making decisions about plans and courses.

Alternative Credit Programs

Students with wide varieties of educational experience may convert this experience into college credits on the basis of satisfactory performance on proficiency examinations. A person who has been officially accepted as a Harper student may apply for and receive college credit by meeting the course objectives for no more than one-half of the academic program required for graduation at Harper. This could include Advanced Placement (AP) credit, College Level Examination Program (CLEP) credit, Harper College Proficiency Examination credit, the American Council on Education recommendations for Defense Activity of Non-Traditional Educational Support (DANTES, previously USAFI) and the Program on Noncollegiate Sponsored Instruction (PONSI).

Guidelines, policies and procedures for these programs are available from the Office of Assessment and Testing Services.

Advanced Placement Program (Offered Only in High School) Credit and placement will be awarded to students with adequate Advanced Placement (AP) examination grades in areas comparable to the Harper curriculum. The granting of credit and/or advanced placement will be determined following the guidelines listed in the Assessment and Proficiency Examination bulletin available in the Office of Assessment and Testing Services.

College Level Examination Program Credit through the College Level Examination Program (CLEP) is available to all students who feel they have acquired the necessary proficiency level to meet the requirements in a variety of subjects not covered by Harper College proficiency tests. A student who has previously completed CLEP tests should request that the scores be sent to the Office of Assessment and Testing Services. Information regarding CLEP examination may be obtained by requesting a copy of the "Moving Ahead with CLEP" and Harper CLEP schedule from the Office of Assessment and Testing Services. Criteria for granting credit have been determined by each academic division. Granting of CLEP credit by Harper College is contingent upon completion of application procedures.

Harper College Proficiency Examination Program Departmental proficiency tests have been created by Harper College faculty for many courses not available through the CLEP program. Written permission to take a proficiency test must be received from the appropriate program coordinator or department chairman and brought to the Office of Assessment and Testing Services. Permission forms are available in the office of each academic division.

American Council on Education Credit Recommendations Credit will be granted for extra-institutional educational experience earned through formal military training and the Program on Noncollegiate Sponsored Instruction (PONSI) and recommended by the Office on Educational Credit and Credentials of the American Council on Education. Veterans must submit the DD Form 214, Armed Forces of the United States Report of Transfer or Discharge, a transcript of in-service training from the appropriate service, or an official report of educational achievement through Defense Activity for Non-Traditional Education Support (DANTES, previously USAFI) for credit evaluation. DANTES tests equivalent to College Level Examination Program (CLEP) tests will be evaluated using Harper College CLEP standards. Students with credits from the Program on Noncollegiate Sponsored Instruction (PONSI) must submit a transcript from the business corporation, government agency or professional association where the credit was completed. The American Council on Education recommendations for these extracurricular credits will be considered only if the courses are equivalent to the courses offered by the College.

Open Test Center for GED

Harper College is an approved test center for the General Educational Development test. Upon passing the GED test, a high school equivalency certificate will be issued by the Cook County Superintendent of Schools. Tests are offered monthly at Harper.

Disabled Student Services

An orientation program, academic advising, counseling and support services are available to students with disabilities. All new students will be interviewed and will take the college placement tests. These tests may be taken in a modified form (Braille, audio recorded) and can be given untimed. New students should apply for support services and furnish the D.S.S. office with information about their disability. This information will be kept confidential and will be used to plan for appropriate services and accommodations. Besides providing services, the D.S.S. office offers a wide variety of specialized equipment for disabled students (Kurzweil Reading Machine, Phonic Ear FM Transmission System, a talking computer equipped for Braille output, etc.). Some equipment may be borrowed for personal use. The Disabled Student Services office works closely with the faculty and staff of other departments at Harper to insure that the campus is physically and programmatically accessible to disabled students. Students are integrated into the mainstream of college life and resolve problems through the ordinary channels as much as possible.

Students interested in securing these services should contact the Coordinator of Disabled Student Services at the earliest possible date. The D.S.S. office will assist students in choosing their courses, setting career goals, maintaining good academic standing and planning for after college. The mission of D.S.S. is to enable students to reap the full educational and social benefits of college.

Learning Assistance Center

The Learning Assistance Center (LAC) offers students academic support by providing tutoring in most academic courses and providing courses in basic skills to those who need to prepare for college level work.

Tutoring Center

Academic assistance at no charge is provided to students in most subject areas. Students must be registered for the course for which they are seeking help. Tutoring is available on an appointment and a limited walk-in basis. Further information can be obtained from the Tutoring Center, F132, extension 2539.

LAC Courses

The LAC offers the following courses which are designed to increase each student's opportunity for success:

- CMN 097¹ Spelling Improvement
- CMN 098¹ Vocabulary Improvement
- ENG 098^{1,2} Composition
- RDG 098^{1,2} Fundamentals of Reading
- RDG 099^{1,2} Developmental Reading
- RDG 105³ College Reading
- PSY 106³ Practical Psychology (Learning Skills)

¹Non-degree credit. Does not transfer. Does not count toward graduation.

²Mandatory enrollment based on Harper assessment test.

³Transfer credit in some programs. Check with college to which you intend to transfer.

Financial Aid

Harper College offers a diversified and comprehensive financial aid program. Harper participates in the following:

Federal Programs

- College Work Study (on and off campus)
- Perkins Loan
- Armed Forces Tuition Assistance
- Supplement Educational Opportunity Grants
- Pell Grant

State-Sponsored Aid Programs

- Illinois State Scholarships and Monetary Awards
- Illinois Guaranteed Loans
- Illinois Military Scholarships
- Department of Rehabilitation Services
- Illinois National Guard Scholarships

Scholarships

Each year the Board of Trustees of Harper College offers to graduates of high schools within the Harper district a series of scholarships called Trustee Scholarships. The Trustee Scholarship will also be awarded to four students selected from the general College in-district population who are not recent graduates from one of the district high schools.

During the 1980-81 academic year, several scholarships for Harper students were established based primarily on academic achievement. The Harper College Educational Foundation "Award for Excellence" is the highest honor a Harper student can achieve. Application for this scholarship is open to students from all college degree programs who meet criteria of grade point average, service and faculty recommendation.

Students in the Technology, Mathematics and Physical Sciences Division may apply for scholarship awards from a fund established by the Division. Additional scholarships in this area of study have been provided by UOP, Square D Foundation, Northrop Corporation and Amersham Corporation. Academic achievement is a major qualification for these scholarships.

In addition, many private and public agencies are ready and able to assist the worthy college student. Funds are also available through local organizations such as women's clubs, Rotary and chambers of commerce.

There are many ways to put together needed college funds. Some students receive outright grants or scholarships for a portion of their expenses. Loans up to \$2,625 each academic year (interest free and no payments while the student is in college) can be obtained. Last but not least, jobs for students under work-study or other employment programs can be obtained to assist with College financing.

Many students utilize a package aid program combining funds from two or three sources to pay for their college education — in addition to what they can expect to receive from their parents. More than 1,600 Harper College students are receiving some form of assistance in programs administered by the Office of Financial Aid.

Students who plan to attend Harper College and have a need for financial assistance should take the following steps:

1. Submit an application for admission to Harper College.
2. Complete the following applications for financial assistance:

- A. Financial Aid Form
- B. Harper College Financial Aid Application

It is important to complete all these forms, as financial assistance can be received from several sources simultaneously.

State and federal financial aid programs have specific standards for academic progress which the student must meet in order to maintain eligibility. Contact the Office of Financial Aid for academic requirements.

Information on all scholarships, grants and loans may be obtained from the Office of Financial Aid.

Veteran Services

Harper College maintains a full-time Veterans' Affairs Office which has responsibility for veteran enrollment, certification, special education programs and tutorial programs.

Eligible veterans and servicepersons receive a monthly educational allowance to attend school. Development courses are designed to satisfy education needs or prepare the veteran for more advanced training. Pre-college courses are not charged toward the veteran's entitlement time although they will be paid by the VA. Full-time veteran students are also eligible for Veterans' Work-Study. Others who may be in doubt as to whether or not they are eligible

under the VA Widows' Compensation, Vocational Rehabilitation and other special programs should contact the College veterans' coordinator.

Illinois veterans who served on active duty for at least one year are eligible for the Illinois State Veterans Grant.

Additional benefits are available to the veteran who is experiencing difficulty in completing educational objectives. The VA will pay supplementary benefits (up to \$69 per month for a maximum of \$828) for individual tutoring.

Harper has been designated as a Serviceperson's Opportunity College by meeting or exceeding the following criteria:

Uncomplicated and non-restrictive admission policies; providing for servicemen or women to pursue educational programs through courses offered on weekends, evenings and other non-traditional times; and offering maximum credit for educational experiences obtained in the Armed Forces.

The Veterans' Outreach Division actively seeks out "returning" veterans in the College district and provides veterans with information concerning College programs and curricula. Veterans are also assisted in securing rights, benefits and services available to them.

Questions concerning veterans' affairs should be directed to the veterans' coordinator.

Student Activities

A comprehensive activities program is available which includes a college/community program series of lectures, concerts, films, art exhibits and theater productions sponsored by a student-faculty Cultural Arts Committee; social programs of concerts, films, special events and other programs of interest sponsored by the student College Center Program Board; student publications including the College newspaper, *Harbinger*, and a literary and visual arts publication, *Point of View*; a closed circuit student radio station, WHCM; speech activities; a student travel program; free legal and medical advice; student government; and a program for student leadership development. These programs are financed by student activity fees.

A number of clubs are active, and students are encouraged to begin other organizations within the established guidelines. Among the clubs recognized are: Association of Legal Students, Astronomy Club, Brothers and Sisters in Christ, Catholic Campus Ministry, Cheerleaders, Data Processing Club, Engineering Club, Future Secretaries Association, Geology Club, Harper's Bizarre (Fashion Design), Illinois Association of the Deaf, International Students Club, Junior American Dental Hygienists Association, Junior

Branch of the Food Service Executives Association, Operating Room Technicians Club, Phi Theta Kappa (Honorary Scholastic Society), Pi Theta Epsilon (Law Enforcement), Political Science Club, Pom Pon Squad, Program Board, Nursing Club, Spread Eagle Ski Club, Student Nurses Association of Illinois, Students Organized for Child Care and Word Processing Student Association.

Conduct

Harper College respects the civil rights and liberties of each member of the College community. A student conduct code has been established to insure these rights and responsibilities. All students are held to be informed of the rules pertaining to these rights and responsibilities which are printed in the *Student Handbook*.

Athletics

Harper College is a member of the North Central Community College Conference (N4C), which includes Triton, DuPage, Moraine Valley, Thornton, Illinois Valley, Rock Valley and Joliet Community College for the total membership of the conference.

In addition, Harper College is a member of the National Junior College Athletic Association (NJCAA), which has a membership of approximately 560 junior community colleges throughout the United States.

Harper College participates in football, cross-country, women's tennis, basketball, women's basketball, wrestling, track, tennis, baseball, women's volleyball, women's softball, men's and women's swimming, and women's track and field.

An extensive intramural program is also available for the Harper students. Activities are promoted both on and off campus. To name a few, activities include flag football, bowling, tennis, water polo, billiards, track, wrestling, weight lifting, softball and floor hockey.

Food Service

The Harper Food Service offers breakfast and lunch Monday through Friday and dinner Monday through Thursday in the College's cafeteria in Building A. Operating hours are as follows:

Monday through Thursday . . . 7:30 am-7:00 pm
Friday 7:30 am-3:00 pm

Food service also maintains food vending machines located in buildings throughout the campus. A vending machine which provides dinner entrees and a microwave are available next to the snack bar in Building A.

Food Service also does on-campus catering for breakfasts, luncheons, dinners and special events. This service is available to faculty, staff and students. Call 397-3000, extension 2250 or 2253.

Harper operates a mini-bakery in the College's cafeteria, where a variety of bakery products is available several days per week.

Student Senate

The Student Senate is the student government body through which students are represented to the Board of Trustees, administration and faculty. Members are responsible for budgeting the student activity fee to provide for a variety of social, cultural and recreational activities as well as special programs and services. They also act upon student concerns, appoint students to College committees, review and recommend changes in College policy, recognize student clubs and organizations, and in general promote student welfare.

Child Learning Center

The Child Development Program offers:

Child Care Room with flexible hours (7:15 am-4:45 pm) for a fee for parents who are on campus attending a class or workshop.

Preschool program for children of students, faculty and the community at large. The children are registered for set sessions which coincide with Harper's calendar.

Advance registration is required for both programs, and early registration is advised as the centers often reach capacity. For more information, call 397-3000, extension 2262.

The Northeast Center Campus offers a child care room with flexible hours daily when College is in session, if there is enough enrollment to maintain staffing, for parents attending a class or workshop. Morning preschool for the community is also available. For more information, call 537-8660.

Continuing Education and Community Services

Continuing Education

Northeast Center

Employer Based Program

University Extension Courses

Community Counseling Center — A Service for
Non-Harper Clients

General Studies Certificate Requirements

Statement of Completion

Vocational Skills Certificate

Continuing Education

Harper College believes that education must be a lifelong pursuit to keep abreast of the knowledge explosion and the pervasive influence of social and cultural changes. To meet the educational needs of adults, the College has developed a complete schedule of credit and credit-free offerings. In addition, graduate extension courses are offered on the Harper campus by Illinois colleges and universities.

The Continuing Education program provides adults with a variety of ways to continue their education in a formal or informal manner. Seminars, conferences and workshops are conducted which are designed to meet the special needs of community interest groups. The needs of business and industry are met through management training seminars. Special programs are offered relating to women's interests in today's changing world, along with many other seminars in community leadership training and senior citizen activities.

Harper seeks to extend its educational offerings to other community locations. Credit and credit-free extension offerings are offered at industrial plants, high schools, libraries, apartment buildings, shopping centers and local government offices.

Every effort is made to provide course offerings that respond to community needs and afford both enjoyment and practical benefits. Expansion of Harper's role in assisting community agencies and institutions to achieve their goals is an objective of the College.

Personal and Cultural Enrichment

Continuing Education courses are offered in the general areas of business management, personal finance, certified financial planning, life enrichment, real estate, insurance, secretarial science, microprocessors, personal computing, photography, fine arts, homemaking arts, law, airline services, foreign languages, dance and physical education.

About 300 community program class sections are offered each semester. Enrollment generally exceeds 6,000 students of all ages per semester. Program and course offerings are designed to provide immediate training, education and recreation for the Harper College communities.

Institute for Management Development

Harper College offers business and industrial personnel the opportunity to participate in management and supervisory training seminars scheduled during the course of the academic year. The management training program was created through the joint participation of the College and northwest suburban business and industrial representatives.

Every effort is made to provide training programs related to the needs of area business organizations. The seminars are led by nationally known experts in the fields of specialized management training and Harper faculty.

A list of seminars and workshops held at Harper during the past year includes such subjects as problem solving, fundamentals of successful management, finance, leadership, motivation, efficient communication, team building, managing time and business writing.

Northwest suburban business concerns can now arrange to have their employees attend the local management seminars and workshops at a fraction of what it would cost to attend these same offerings when they are sponsored by professional associations at locations in other parts of the country. As an additional service, management training seminars and workshops can be brought to local business as a component of in-plant training. A Continuing Education certificate of Management Development is available upon completion of specified seminars.

CAD/CAM Center

The Computer Aided Design and Computer Aided Manufacturing (CAD/CAM) Center was established to offer opportunities and resources for area industries to develop high technology skills and capabilities. The goals of the CAD/CAM Center are to provide management with awareness of the role of CAD/CAM technology in modern industry, to encourage and provide continuing professional training for engineers, designers and technicians in the applications of CAD/CAM systems, to provide a professional forum and resource center for the examination of trends and new concepts in the field of high technology, and to help provide a work force in high technology fields to fulfill the employment needs of existing industries and to attract new industries to the area.

The CAD/CAM Center's curriculum includes basic awareness seminars, management topics related to the selection and implementation of CAD/CAM systems, and technical system user courses for electrical/electronic, architectural, mechanical and manufacturing applications.

For more information, contact the CAD/CAM Center, 397-1640.

Organization and Community Development Services

Organization and Community Development Services include needs assessment, strategic planning and organization facilitator training. Needs assessment programs for organizations range from focus groups that provide feedback from clients of an organization to management to full-fledged scientifically-designed surveys that provide reliable quantitative data that can be used in the planning process. The strategic planning seminar is offered to organizations and com-

panies in the Harper district as a means of arriving at long term goals. The seminar is a participatory event which features three workshops: 1) Visions — future objectives for the next 3-5 years; 2) Contradiction — obstacles to achieving the vision; and 3) Direction — one-year strategies toward implementation of the plan. The needs assessment program and the strategic planning seminar work together to provide organizations and companies a complete planning package. However, each service also stands on its own. Organization facilitator training is a two-day seminar designed to train individuals in the public and private sector in strategic planning methods including consensus building, team building, and a variety of participatory group processes.

Banking and Savings and Loan Personnel Education

This center was established to train tellers and supervisors. There are seminars in teller training, customer relations, telemarketing and computerized accounting procedures. From time to time, current topics affecting the industry are presented in seminar format.

Material Management Education

The purpose of the center is to provide training and enriching educational experiences for business professionals in purchasing, inventory control, production control, material handling, physical distribution, receiving and shipping, warehousing and material requirements planning. Offerings within the center include non-credit seminars as well as college-credit courses.

Center for Real Estate Education

The purpose of the center is to provide a special, intensive all-day review workshop designed to prepare the student who has already completed required study to pass the Illinois test for real estate salesman's or broker's license. Each workshop is specially scheduled on the Saturday immediately preceding each state real estate licensing examination. In addition, the center offers seminars for the homeowner dealing with how to assess a prospective home, how to finance a new home purchase and how to sell a home.

Small Business Preparation and Development

This center was organized to develop a seminar series for the person interested in beginning a business or interested in developing a business. There are seminars and courses for those interested in how to start a business, how to manage a business, how to market and advertise a business, how to incorporate, as well as accounting procedures for the small business owner. Seminars are changed as the needs of the small business community change. Individual counseling is available by appointment.

Office and Administrative Services Education

This center was established for office administrators and secretaries who wish to update their skills in such practical areas as business correspondence. Other areas of significance are managing secretarial responsibilities and communication skills that are necessary to work well with peer groups and management. As the needs of the business community change, the courses and seminars offered also change to meet current needs.

Economic Development Services

The purpose of the Economic Development Center is to serve the northwest communities by facilitating and coordinating regional programs and information resources. NORTHWEST 2001 is a Regional Agenda designed to plan, guide and energize business and community development for the decades ahead. This is a continuing process with committees meeting to develop and implement proposals. The Golden Corridor Council is an affiliation of industry, community and academia located along I-90 from O'Hare through Elgin. It is committed to the enhancement of economic growth in Illinois through the identification, development and promotion of Illinois' Golden Corridor of Technology and Commerce. Labor market information is compiled and coordinated for the Harper District. Access to additional economic development data and resources is provided along with a Directory of Information Resources. Additional information is available by calling 537-5420.

Industry Services

Industry Services provides on-site degree-credit and continuing education short courses and seminars to area business and industry. Designed to meet current personnel development and training needs, these customized programs include training in office skills and equipment update, management development and material management and statistical process control, as well as training in highly technical fields such as computer-aided design. Instruction is provided by Harper College faculty members and professionals with extensive experience in the specific field being addressed. A needs assessment may be used to assist a company to customize Harper's educational program to its particular needs. Additional information is available by calling the Industry Services Specialist at 537-5420.

The Northwest Cardiac Rehabilitation Center

The Northwest Cardiac Rehabilitation Center (NCRC) on Harper's campus is designed to offer a comprehensive rehabilitation for individuals with heart disease and other cardiovascular limitations. The primary purpose of the center is to support the private physician in safely and effectively returning the cardiac patient to a productive and enjoyable lifestyle.

The program is designed for individuals recovering from a heart attack or bypass surgery, as well as individuals with diagnosed heart disease (but no evidence of a heart attack). Individuals exhibiting only multiple risk factors for heart disease will also be considered.

The NCRC program is comprehensive in its approach, combining exercise therapy with strong educational and nutritional components. The rehabilitative approach is divided into separate Supervised Therapeutic Exercise Programs (STEPs). All participants in the center will progress through the STEPs based upon their individual health status.

STEP I is an individualized health and fitness consultation which includes an analysis of the participant's medical and exercise histories, risk factors and dietary intake. An exercise prescription will be formulated and exercise guidelines will be established.

STEP II is a laboratory-based, highly-monitored exercise program. This includes direct physician and exercise physiologist supervision while exercising on bicycle ergometers, upper body ergometers, rowers and motorized treadmill. This phase includes continuous telemetry monitoring of the electrocardiogram and blood pressure evaluations both at rest and during exercise training. Educational seminars on risk factors, nutrition and stress reduction will be included. Upon recommendation of the Medical Director, individuals will be advanced to STEP III.

STEP III is a long-term phase designed to continue to improve and maintain each individual's cardiovascular fitness as well as promoting healthy lifestyle changes. The program offers flexible hours and a variety of fitness and recreational activities. All activities will be individualized to be consistent with each participant's exercise capacity. The sessions are supervised by professionally trained staff and monitoring equipment is available if needed.

The center is under the professional supervision of a cardiologist nurse, and several physiologists specializing in cardiovascular medicine. All program staff members are certified in cardiopulmonary resuscitation and trained in emergency procedures. Emergency life support equipment is on hand at all exercise sessions.

The fees for the above services are variable depending upon the phase of the program in which the individual is enrolled. Reimbursement for all laboratory evaluations and STEP II sessions is generally available through the participant's health insurance.

Interested individuals are encouraged to contact the NCRC office at 397-3000, extension 2281 or 2486 for further information. Enrollment into

the program must be made through the NCRC office located in Building M.

Senior Citizen Program

Objectives of the Senior Citizen Program are to make Harper's existing services and programs available to older persons and to conduct physical reawakening classes especially for them.

District residents ages 60-64 are eligible for reduced tuition rates for all courses and workshops offered by the College. District residents 65 and older may attend tuition-free when space is available. Senior citizens will be charged for material and lunch fees when applicable. Some programs are placed at locations in the community, including senior citizen centers, churches and nursing homes, so that transportation problems are minimized. The services of the College, including the Student Development Center, Dental Hygiene Clinic and Learning Resources Center are all open to senior citizens. Older persons are welcome and encouraged to attend cultural events sponsored by the Student Activities office.

For further information, please contact the Coordinator of Continuing Education, Life Science and Human Services Division, 397-3000, extension 2687.

Health Care Program

In an age of rapid medical advances and an ever-increasing expansion of careers, career advancement and responsibilities within the health care delivery system, the Health Care Program has been designed to play a vital role in assisting health care professionals and allied health care personnel to meet the challenges of today.

The program endeavors to meet the needs of individual health care workers and employers of health care personnel by offering courses, seminars and workshops that provide current knowledge of practice theory, develop additional skills, prepare for new career roles and provide an opportunity to share experiences and expertise in a learning environment.

The Health Care Program works cooperatively with individuals, agencies and professional organizations to identify and provide for the learning needs of those providing health care. It functions within the guidelines of each professional association. Offerings carry professional association education credit when indicated.

The program includes basic courses for beginning health workers in the continuing education mode and learning experiences beyond basic educational programs for professionals. In addition to courses, seminars and workshops, the following specific programs are available:

The Basic Nurse Assistant Training Program
Physical Rehabilitation Aide Training
Occupational Rehabilitation Aide Training
Coding for the Health Care Field

For further information, please contact the Coordinator of Continuing Education, Life Science and Human Services Division, 397-3000, extension 2687.

Landscape, Garden and Floral Program

The objective of the continuing education offerings in the Landscape, Garden and Floral Program is to present to the homeowner and hobbyist information about floral designing, caring for plants, gardening and landscaping. There is emphasis on the correct selection and use of tools, planting techniques, landscape preparation, foliage, plant care, pest control, fertilization and using live and artificial flowers for decoration. In an informal setting, topics are explored through discussion, questions and answers and hands-on experience.

For further information, please contact the Coordinator of Continuing Education, Life Science and Human Services Division, 397-3000, extension 2687.

Women's Program

At a time when questions of optional lifestyles are being raised, the Women's Program attempts to help women know themselves better, to understand their relationships within their society and to participate more effectively in their chosen roles. Workshops, continuing education offerings, credit program offerings and referral services are designed to provide women with information, skill development and personal guidance in the areas of individual growth and awareness, interaction and communication with others, career development, community awareness and involvement and women's studies. A special effort has been made to schedule programs at convenient times for women and to provide day-long child care facilities at the College at a minimal cost.

For further information, please contact the Coordinator of the Women's Program, 397-3000, extension 2560.

Vocational and Technical Skills

Harper College recognizes the need to provide short-term intensive job training to meet local labor market needs. Courses will be offered on campus and at off-campus sites. Instruction will be provided by professionals in their field and will focus on actual work application and hands-on technical experience. These courses are designed for those who are looking for a new career or a second career or for those who wish to enhance their job skills.

Northeast Center

Harper College offers classes at the Northeast Center, 1375 South Wolf Road, Prospect Heights, Illinois 60070, formerly Stevenson School.

Residents of the surrounding area enjoy the convenience of college credit, continuing education and vocational and technical classes, as well as seminars, offered near their homes. The office hours are from 8:30 am to 8:00 pm Monday through Thursday, and from 8:30 am to 4:00 pm on Friday, when classes are in session. For information, please call the Northeast Center at 537-8660.

Employer Based Program

Harper will provide credit and non-credit offerings to employees of industry, business agencies and public institutions. Need assessment and other program development services are available to help these organizations determine training needs and the resources available through the College. Credit courses as well as non-credit seminars and workshops can be delivered through these special contractual arrangements. For further information contact the Industry Services Specialist at 537-5420.

University Extension Courses

University undergraduate and graduate level instruction is offered at Harper College through extension courses from various four-year colleges and universities. With proper planning and counseling, it is possible for a person to earn most or all of the requirements for a bachelor's or master's degree in business administration or a master's degree in education on the Harper campus or in various Harper district locations.

A Bachelor of General Studies (B.G.S.) degree with an area of study in Administrative Studies is offered at Harper College by Northern Illinois University's College of Liberal Arts and Sciences as an academic option which allows a student to construct an individualized program of study which does not require a formal major. The degree program appeals primarily to adult learners whose educational objectives include personal development rather than preparation for graduate study or a specific professional career.

The degree is intended as a capstone to build upon the Harper or other community college associate degree programs which include 60 semester hours (or the equivalent quarter hours) of transferable course work.

For more information, contact the Program Services Specialist, 537-8660.

Community Counseling Center

Harper's Community Counseling Center makes psychological and career counseling services available to non-student residents of the community, on a fee basis.

Clients are assisted in making intelligent occupational choices through the use of psychological and vocational counseling. This service includes the administration and interpretation of intelligence and personality tests, as well as measurements of interests and preferences. Clients are aided in an exploration of the world of work, job interviewing and resume writing.

Another function of the center is to provide an evaluative, diagnostic and psychotherapeutic service for adults and adolescents with personal, social or emotional problems. The broad gamut of problems the staff works with includes marital discord, divorce adjustment, sexual problems, family relationships and drug-related problems.

The Community Counseling Center is located in Building I, Room 117. Further information may be obtained by calling the Community Counseling Center, at 397-3000.

General Studies Certificate Requirements

Students enrolled in Continuing Education offerings carrying General Studies credit can apply their course work to a General Studies certificate. Such a certificate is meant to recognize those who diligently pursue a sequence of Continuing Education offerings.

Requirements for the Certificate in General Studies are as follows:

1. Successful completion of nine General Studies credit hours.
2. A grade of "P" (Pass) indicates successful completion of a course for purpose of granting credit. A grade of "W" indicates that the class has not yet been satisfactorily completed.
3. Courses/seminars taken at other institutions are not applicable to a General Studies certificate.

A \$15.00 nonrefundable fee will be charged to those who wish a certificate upon completion of the Certificate in General Studies program. This fee is payable at the time when the certificate is applied for. Anyone who wishes to have past continuing education work included for the Certificate in General Studies may do so by applying to the Dean of Continuing Education and Program Services. Anyone who registers for a Continuing Education offering automatically enters the Certificate in General Studies program.

Check the current college course schedule for a list of those offerings available for General Studies credit.

Statement of Completion

Students enrolled in any Continuing Education offering may be awarded a Statement of Completion for successfully completing the offering. For Continuing Education courses, satisfactory completion is evidenced by a grade of "P" (Pass). The Statement of Completion must be applied for in the office of the division in which the offering is scheduled.

Vocational Skills Certificate

Students enrolled in offerings carrying vocational skills credit can apply their course work to a Vocational Skills Program Certificate in the following categories:

Agricultural Occupations
Marketing and Distribution Occupations
Health Occupations
Home Economics Occupations
Business Occupations
Technical Occupations
Trade and Industrial Occupations

Vocational skills students are those who enroll primarily in vocational skills courses to review or upgrade present vocational skills on a full- or part-time basis or to learn a specific, short-term occupational skills.

Requirements for the Vocational Skills Program Certificate are as follows:

1. Successful completion of thirty (30) vocational skills credit hours.
2. A grade of "P" (Pass) indicates successful completion of a course for the purpose of granting credit. A grade of "W" indicates that the course has not yet been satisfactorily completed.
3. Courses/seminars taken at other institutions are not applicable to a Vocational Skills Program Certificate.

A \$15.00 nonrefundable fee will be charged to those who desire a certificate upon completion of a Vocational Skills Certificate Program.

Anyone registering for a vocational skills offering automatically enters the Vocational Skills Certificate Program. Past vocational work may be included for the Vocational Skills Program Certificate by applying to the Dean of Continuing Education and Program Services.

Check the current college course schedule for a list of those offerings available for vocational skills credit.

Instructional Programs and Requirements

Associate Degrees

Graduation Requirements

Transfer Programs

Compact Agreements

Transfer to a Senior Institution

Requirements, A.A. and A.S. Degrees

Approved Elective Courses

Career Programs

Requirements, A.A.S. Degree

Cooperative Programs

English as a Second Language

Adult Educational Development

Telecourses

International Studies Program

Honors Program

Associate Degrees

Harper College offers three associate degrees, two of which are designed for students who will transfer to a four-year college or university to complete a bachelor's degree. These are the Associate in Arts (A.A.) and the Associate in Science (A.S.) degrees, which comprise the first two years of study toward degrees in a broad range of arts-related or science-related disciplines.

The third, the Associate in Applied Science (A.A.S.) degree, is awarded upon completion of a two-year career program, designed to prepare the graduate for immediate entry into a specific career field.

In addition to the graduation requirements listed below, each degree has its own requirements for credit hours to be completed in various groups of courses. These requirements are shown on three separate charts in this section of the Bulletin.

Graduation Requirements

1. Attainment of a minimum of 60 semester hours of credit, at least 30 of which must be earned in attendance at Harper College. Waiver of the latter requirement by the vice president of academic affairs may be made where exceptional circumstances warrant. Up to two hours credit in physical education activity courses (100 level) may be included as free electives in the minimum 60 required hours for an associate degree. A maximum of four semester hours of Independent Study credit may be included as free electives in the minimum 60 required hours for an associate degree.
2. Attainment of a minimum grade point average of 2.0 for all work required for the associate in arts and the associate in science degrees. Attainment of a minimum grade point average of 2.0 for any applicable 60 semester hours work for the associate in applied science degree and certificates.
3. Meet the constitution requirement of the Illinois State School Code. This can be met by (1) submitting an official Illinois high school transcript stating the requirement has been met, or (2) successfully completing PSC 101, or (3) passing a college administered test of the U.S. Constitution, Illinois Constitution, the proper use and display of the American flag and the principles of American democratic government.

4. Requirement of 60 hours must be in courses numbered 100 or above for the degrees of associate in arts or associate in science. (Courses below 100 level may be used only where A.A.S. program requires.)

5. Fulfillment of appropriate associate degree requirements in effect when student matriculated.

6. In addition to the above requirements, students enrolled in a specific career program will fulfill the requirements outlined in that program. Any changes in program requirements necessitated by licensing and/or accrediting agencies must be observed by students who are already admitted and in process in their programs.

7. A student must petition for graduation and pay the graduation fee of \$15.00. Notification of the student's intent to graduate will be accepted in the Registrar's Office no later than one week after the midterm of the semester in which the student intends to graduate. Students are encouraged to participate in the formal graduation ceremony in May. Students are encouraged to complete their petition for graduation when registering for the semester in which their graduation requirements will be fulfilled.

Transfer Programs

An important role of a community college is to provide programs of study allowing students to complete requirements for the first two years of a baccalaureate degree. Harper defines these programs as transfer programs.

As a guide for the student, the following programs of study leading to the associate in arts or associate in science degrees are recommended.

The programs are "recommended" in the sense that they are planned to provide students with the specific requirements of Harper's transfer degrees and the general requirements of the freshman and sophomore years of most colleges and universities.

Transfer students are responsible to know the specific requirements of the institutions they are considering for transfer. Catalogs may be obtained from those schools. Resource materials and counseling assistance are available in Harper's Student Development Centers.

Recommended programs of study are provided for the following areas:

Art
Biological Sciences
Business Administration
Communications
Computer Science
Education
Engineering
Foreign Languages
Health Education
Liberal Arts
Music
Physical Education
Recreation
Science or Mathematics
Social Science

For other areas of interest, please contact a Student Development Center for assistance.

Compact Agreements

Some schools accept the associate in arts or associate in science degrees as meeting all general education requirements and grant automatic junior standing upon transfer. Students may have to meet additional requirements for some majors at these schools. Contact a Student Development Center for more information. Schools with which Harper has a compact agreement are:

Eastern Illinois University
Governors State University
Illinois State University
Northern Illinois University
Sangamon State University
Southern Illinois University
Western Illinois University

Harper College and Governors State University have developed cooperative programs in business and secretarial science areas.

Transfer to a Senior Institution

Baccalaureate-oriented credits earned at Harper College are transferable to other institutions of higher learning. Students intending to transfer to other institutions should consult with that institution as well as their student development faculty member to assure efficient transfer.

Requirements for Associate in Arts Degree (A.A.)

	Semester Hours	Courses in This Group											
Group 1 Communications	9	ENG 101	SPE 101										
Group 2 Mathematics and Natural Sciences A minimum of 3 hrs. must be from mathematics and a minimum of 4 hrs. from the sciences.	10	Mathematics					Science						
		MGT 225	MTH 102	165	AST 101	BIO 101	CHM 100	GEO 101	PHS 101	PHY 101	121	122	122
			103	200			110	102	105	105	122	201	201
			104	201			110	121	201	111	201		
			120	202			120	122		112	202		
			124	203			122	131					
			134	212			140	132					
				265			150						
Group 3 Humanities Courses in this group must be selected from at least two departments.	9	ART 105	FNA 111	FRN 101	GER 101	HST 111	HUM 101	LIT 105	MUS 217	PHI 101	SGN 101	SPA 101	SPE 107
		110	112	102	102	112	102	110	219	103	110	102	102
		111	113	201	201	141	110	112	221	104	115	201	212
		121	114	202	202	142	115	115	222	120	120	202	111
		122		205	205	151	120	206	224	223	150	205	205
				210	210	152		207	231	224	180	210	210
						153		210	232		205	220	220
						210		216	241		210	231	232
						214					220	231	232
						218					220	231	232
						243					220	231	232
Group 4 Social Sciences Courses in this group must be selected from at least two departments.	9	ANT 101	ECO 200	EDU 211	GEG 101	PSC 101	PSY 101	217	101	120	150	220	150
		202	201			220	145	218	120	150	220	150	205
		203	202			250	210	225	205	210	225	205	210
		204	225			270	216	230	210	215	215	220	220
Group 5 Contemporary Studies and Life Skills	6	ART 201	CRJ 101	JNM 234	MUS 130	PED*** 100	PHI 115	PSC 101	RDG 105				
		206			136	160	120	210					
		225	DIT 101	MGT 111	140	162	150	220	SOC 120				
		236			145	165	180	250	120				
		261	DPR 101	MTH 108	150	167	205	260	205				
		270			165	201	210	270	270				
		291	130	208	166	203							SPE 115
		296	142	209	167	205							205
			BIO 150	210	169	207	PHS 105	PSY 106					
		103	160	211	180-199			107					
		122		215	280-299			108					
		136	ECO 115										
Total General Education	43												
Group 6 Electives	17	Courses must be selected from approved list.											
Total Hours Required	60												

***Up to two (2) hours of PED activity courses (100 level courses) may be included as either Group 5 or Group 6 electives.

Requirements for Associate in Science Degree (A.S.)

	Semester Hours	Courses in This Group												
Group 1 Communications	9	ENG	SPE											
		101	101											
		102												
Group 2 Mathematics and Natural Sciences	20	Mathematics						Science						
		MGT	MTH	AST		BIO	CHM	GEO	PHS	PHY				
		225	103 201	101		101 140	100	101	101	121				
A minimum of 3 hrs. must be from mathematics and a minimum of 7 hrs. from the sciences.			104 202			103 150	110	102	105	122				
			124 203			110 160	121	201	111	201				
			134 212			120 161	122	202	112	202				
			165 265			122 210	131				203			
			200			130 220	132							
						135 240	201							
						136	204							
							205							
							210							
Group 3 Humanities	6	ART	FNA	FRN	GER	HST	HUM	LIT	MUS	PHI	SGN	SPA	SPE	
		105	111	101	101	111	101	105 217	101	105	101	101	107	
		110	112	102	102	112	102	110 219	103	110	102	102	111	
		111	113	201	201	141	110	112 221	104	115	201	201	212	
		121	114	202	202	142	115	115 222	120	120		202		
		122		205	205	151	120	206 224	223	150		205		
				210	210	152		207 231	224	180		210		
						153		210 232		205				
						210		216 241		210				
						214				220				
						218				231				
						243				232				
Group 4 Social Sciences	6	ANT	ECO	EDU	GEQ	PSC	PSY	SOC						
		101	200	211	101	101	101 217	101						
		202	201			220	145 218	120						
		203	202			250	150 220	150						
		204	225			270	210 225	205						
							216 230	210						
								215						
Group 5 Contemporary Studies and Life Skills	3	ART	CRJ	JNM	MUS	PED***	PHI	PSC	RDG					
		201	101	234	130	100	115	101	105					
		206			136	160	120	210						
		225	DIT	MGT	140	162	150	220	SOC					
		236	101	111	145	165	180	250	120					
		261	DPR	MTH	150	167	205	260	205					
		270	101	108	165	201	210	270	SPE					
		291	130	208	166	203			115					
		296	142	209	167	205	PHS	PSY	205					
			BIO	150	210	169	105	106	106					
			103	160	211	180-199		107	108					
			122	ECO	215	280-299								
			136	115										
Total General Education	44													
Group 6 Electives	16	Courses must be selected from approved list.												
Total Hours Required	60													

***Up to two (2) hours of PED activity courses (100 level courses) may be included as either Group 5 or Group 6 electives.

Associate in Arts (A.A.) and Associate in Science (A.S.) Degree Programs Approved Elective Courses

Any course listed as satisfying the Group 1 through Group 5 requirements for either the A.A. or A.S. degree may be used as an elective course for either the A.A. or A.S. degree as long as the course is not being used to satisfy a Group 1-5 requirement.

The following courses may be used to satisfy the Group 6 elective requirements for the A.A. or A.S. degrees:

ACC	ANT	CCA	CRJ	DIT	ECO	EGR	ENG	HPI	JNM	MGT	MKT
101	250	102	201	110	210	100	103	102	130	218	245
102	255	218	202			120	130		131	225	
201		219	205	DPR	EDU	121	201	IDS		226	MTH
202	ART		210	100	201	122	220	290	LNG	275	107
203	100		220	200	202	150			105		206
211						211					216
212						212					217
213						260					
						262					
						270					

MUS		PED***		PKM	REC
111	211	All 100 level		110	200
112	212	courses			202
115	215	200	228	RDG	204
116	216	204	230	106	206
161	265	206	240		208
162	266	208	241		210
163	271	209	242		214
168	272	210	243		
		220	244	SPE	
		222	246		102
		224	270		115
		226			

Also, up to ten (10) hours of any associate degree credit courses, not referred to above, may be used as electives for the A.A. or A.S. degree.

***Up to two (2) hours of PED activity courses (100 level courses) may be included as either Group 5 or Group 6 electives.

Harper College Career Programs

Harper College offers the following career/vocational programs. Both associate in applied degree and certificate programs are offered except where indicated. Each program of study is a required one, intended to prepare students for a specific type of employment immediately. Additional programs available through agreements with other colleges are listed under Cooperative Programs.

Accounting Aide
Accounting Clerk¹
Accounting - Payroll¹
Administrative Assistant¹
Alternate Living Resident Supervisor¹
Architectural Technology
Banking, Finance and Credit¹
Banking and Savings Association
Management²
Bread and Pastry Arts¹
Building Codes and Enforcement¹
CAD Technician¹
Cardiac Exercise Technology²
Certified Professional Secretary¹
Child Development
CNC Technician¹
Commercial Credit Management²
Criminal Justice
Culinary Arts¹
Data Processing - Computer Operator¹
Data Processing - Microcomputers in
Business¹
Data Processing Technology
*Dental Hygiene²
*Dietetic Technician²
Digital Electronics and
Microprocessor Technology
Electronics Technology
Executive Secretarial Development
*Fashion Design
*Fashion Merchandising²
Financial Management²
Fire Science Technology
Food Service Management
General Office Assistant¹
Habilitation Aide¹
Heating Service¹
Horticulture
Industrial and Retail Security¹
Industrial Sales Management
and Development¹
*Interior Design²
*Interpreter Training*¹
Journalism²
Legal Secretary
*Legal Technology²
Machinist¹
Marketing/Management²
Material Management
Mechanical Drafting¹

Mechanical Engineering Technology:
Automated Manufacturing Option²
Mechanical Engineering Option²
Medical Office Assistant
Medical Secretary
Medical Transcriptionist¹
*Nursing
*Operating Room Technician¹
Park and Grounds Operation
Management
Personal Banking¹
*Pharmacy Technician¹
Production Engineering Technician¹
Production Welding¹
Real Estate
Refrigeration and Air Conditioning
Refrigeration Service¹
Residential Comfort Systems¹
Retail Merchandising¹
Secretarial
Supervisory and Administrative
Management
Word Processing Operator¹

*Enrollment in program is limited. See Admissions
Options section of this Bulletin for guidelines.
¹Certificate program only.
²Associate degree program only.

Requirements for Associate in Applied Science Degree (A.A.S.) _____

	Semester Hours	Courses in This Group											
Group 1	6	ENG	JNM	SPE									
Communications		100	130	101									
ENG 101 or 130 and a second course, as approved for your curriculum.		101	131										
		102	133										
		103											
		130											
Group 2	3	MGT	MTH										
Mathematics		150	060	103	134								
The mathematics require- ment may be satisfied by demonstrated competency on an exam given by the College.*			061	104	165								
			062	105	200								
			063	106	201								
			100	107	202								
			102	124	206								
9 hrs. must be taken from a minimum of two of Groups 3, 4 and 5.													
Group 3		AST	BIO	CHM	DIT	GEO	PHS	PHY					
Natural Sciences		101	101 140	100 131	101	101 101	101 101	101					
			103 150	110 132		102 105	102	102					
			110 160	121 201		201 111	201	111					
			120 161	122 204		202 112	202	112					
			122 210	125 210									
			130 220										
			135 240										
			136										
Group 4		ART	FNA	FRN	GER	HST	HUM	LIT	MUS	PHI	SGN	SPA	SPE
Humanities		105	111	101	101	111	101	105	101	105	101	101	107
		110	112	102	102	112	102	110	103	110	102	102	111
		111	113	201	201	141	110	112	104	115	201	201	212
		121	114	202	202	142	115	115	120	120			202
		122		205	205	151	120	206	130	150			205
		201		210	210	152		207	136	180			210
		206				153		210	140	205			
		225				210		216	145	210			
		236				214		217	150	220			
		261				218		219	165	231			
		270						221	166	232			
		291						222	167				
		296						224	169				
								231	180				
								232	199				
								241					
Group 5		ANT	ECO	EDU	GEG	PSC	PSY	SOC					
Social Sciences		101	115	211	101	101	101 216	101					
		202	200			220	107 217	120					
		203	201			250	108 218	205					
		204	202			270	145 220	210					
			225				150 225	215					
							210 230	220					
Total General Education	*15-18												
Group 6	42-45												
Technical Requirements and Electives													
Total Hours Minimum	60**												

**In addition to the above requirements, students enrolled in a specific career program must fulfill the requirements outlined in that program. Any changes in program requirements necessitated by licensing and/or accrediting agencies must be observed by students who are already admitted and in process in programs.

Cooperative Programs

Harper College has Joint Educational Agreements with various area colleges. Under these agreements, Harper district residents who are admitted to the programs listed below will usually be allowed to attend at the sponsoring college's in-district tuition rate.

The cooperating college will issue all degrees or certificates for successful completion of the program. Program and admission information may be obtained by calling the Director of Admissions at the college offering the program, as listed below.

College of DuPage 858-2800
Lambert Road and 22nd Street
Glen Ellyn, Illinois 60137

Automotive Technology
Behavioral Medical Assistant
Commercial Art
Graphic Arts
Hotel/Motel Management
Human Services
Library Technical Assistant
Media
Medical Records Technology
Nuclear Medicine
Photography
Plastics Technology
Radiologic Technology
Respiratory Therapy Technician
Supermarket Management
Travel and Transportation

College of Lake County 223-6601
19351 West Washington Street
Grayslake, Illinois 60030

Auto Body Repair and Painting
Automotive Technology
Building Construction Technology
 Construction Layout
 Construction Management
Chemical Technology
 Materials Testing and Inspections
Chemical Technology
 Bio-Tech Option
 Chem-Tech Option
 Chemical Technology
Civil Technology
 Materials Testing and Inspections
 Project Inspector
Dental Assisting
Human Services Technology
Industrial Skilled Craft Training
 Industrial Building Construction
 Industrial Electrician
 Industrial Welder
 Moldmaker
 Tool and Die
 Welder — Industrial
Industrial Supervision

Library Technology
Mechanical Maintenance/Repair
Medical Laboratory Technology
Medical Records Technology
Radiography
Technical Communications
Water — Wastewater
Welding — Advanced

Elgin Community College 697-1000
1700 Spartan
Elgin, Illinois 60120

Automotive Service Excellence
Automotive Technology
Dental Assisting
Food Manufacturing Technology
Gerontology
Graphic Design
Machine Tool, Career Advanced Program
Machine Tool Operation
Machine Tool Technology
Plastics Processing and Fabricating
Plastics Technology

McHenry County College (815) 455-3700
Route 14 and Lucas Road
Crystal Lake, Illinois 60014

Agricultural Business Technology
Agricultural Production Management
 Technology
Automotive Technology
Floral Design
Industrial Supervision
 Technology
Industrial Work Measurement
Machine Apprenticeship
Photography¹

Oakton Community College 635-1600
1600 East Golf Road
Des Plaines, Illinois 60016

Automotive Service Excellence
Automotive Technology
Biomedical Electronics Technology
Business Machine Repair
Commodity Futures
Electronic Servicing
Hotel/Motel Management
Machine Technology Apprenticeship
Medical Laboratory Technology
Medical Records Technology
Photography¹
Physical Therapy Assistant
Plant Maintenance/Engineering
Radiologic Technology
Transportation and Traffic

¹courses only

Rock Valley College (815) 226-2600
 3301 North Mulford Road
 Rockford, Illinois 61101

Aviation Maintenance Technology

Triton College 456-0300
 2000 Fifth Avenue
 River Grove, Illinois 60171

Dental Laboratory Technology
 Respiratory Care

Waubensee Community College ... 466-4811
 Illinois Route 47 at
 Harter Road
 Sugar Grove, Illinois 60554

Interpreter Training

Harper College programs available to residents of other college districts under cooperative agreement are as follows:

Baking Lake County,
 McHenry County and
 Oakton districts.

Banking, Finance DuPage, Lake and
 and Credit McHenry County
 districts.

Banking and Savings DuPage, Lake County
 Association and McHenry County
 Management districts.

Building Codes and DuPage, Lake County,
 Enforcement McHenry County and
 Oakton districts.

Cardiac Exercise Lake County district.
 Technology

Certified Professional Lake County district.
 Secretary

Commercial Credit DuPage, Lake County
 Management and McHenry County
 districts.

Cooking Lake County,
 McHenry County and
 Oakton districts.

Dental Hygiene DuPage, Elgin, Lake
 Dietetic Technician County, McHenry
 County, Oakton and
 Triton districts.

Digital Electronics McHenry County
 and Microprocessor district.
 Technology

Fashion Design Elgin, Lake County,
 McHenry County
 and Oakton districts.

Fashion Lake County and
 Merchandising Oakton districts.

Financial Lake County
 Management district.

Fire Science McHenry County
 Technology district.

Food Service Lake County and
 Management McHenry County
 districts.

Horticulture Oakton district.

Industrial and DuPage, Lake County
 Retail Security and McHenry County
 districts.

Industrial Sales DuPage district.
 Management and
 Development

Interior Design Elgin, Lake County,
 McHenry County and
 Oakton districts.

Interpreter Training DuPage, Elgin, Lake
 County and McHenry
 County districts.

Journalism DuPage, Lake County
 and McHenry County
 districts.

Legal Secretary Lake County
 district.

Legal Technology DuPage, Elgin, Lake
 County, McHenry
 County, Oakton and
 Rock Valley districts.

Material DuPage, Elgin, Lake
 Management County and McHenry
 County districts.

Medical Office DuPage, Lake
 Assistant County, McHenry
 County and Oakton
 districts.

Medical Secretary DuPage district.

Medical DuPage and
 Transcriptionist McHenry County
 Numerical Control districts.
 Technician

Nursing McHenry County
 district.

Operating Room Elgin, Lake County,
 Technician Oakton and McHenry
 districts.

Park and Grounds DuPage, Elgin,
 Operation McHenry County and
 Management Oakton districts.

Pharmacy Technician Lake County,
 McHenry and Oakton
 districts.

Real Estate McHenry County

Supervisory and DuPage district.
 Administrative
 Management

English as a Second Language

English as a Second Language (ESL) courses are for individuals who are native speakers of another language and who need to improve their English language skills for academic or employment purposes. Courses are offered for credit at beginning, intermediate and advanced levels. Both full-time and part-time programs are offered.

The ESL Department serves students from any language background. Student educational backgrounds range from seven grades completed through completion of graduate/professional programs. Students with six years of education or less are referred to the Adult Educational Development Department for enrollment in the Nonnative Literacy Program.

Students are tested during registration and counseled for appropriate program and course placement. For more information, contact the English as a Second Language student advisor.

Intensive ESL Program

This is a full-time English language program for beginning, intermediate and advanced students who want to learn English or improve their English language skills as quickly as possible. Emphasis is on the language skills and cultural knowledge needed to enter college and university programs in the United States. The program is also beneficial for business and professional personnel. The program includes four levels. Students may complete one level per semester or summer session. The program includes instruction in grammar, vocabulary, listening, speaking, reading, composition and American culture.

Students must have completed a minimum of twelve grades of education in their native country or in the U.S. in order to enter the program. This program meets the INS requirements for students on student visas.

Part-Time Academic ESL Program

This program is for those students who wish to improve their English language skills for educational, professional or employment reasons. A core sequence of six levels of general courses is complemented by optional additional courses. Students who have completed Advanced Language Skills I (Level 6) or who place at Level 7 may take special advanced courses in grammar, conversation, reading, composition, vocabulary, American culture and TOEFL Test preparation.

Individualized ESL Program

Students with highly specialized needs are served through the individualized ESL Program by recommendation of department staff.

ESL Program for the Hearing Impaired

Special courses in ESL are offered at five levels for native hearing impaired students whose first language is sign language. Classes focus on English for academic purposes. For more information, contact the Office of Disabled Student Services.

Adult Educational Development

The Adult Educational Development (AED) Department provides instructional programs and services in the basic skills, Pre-GED, GED, nonnative literacy, citizenship and pre-employment skills areas. All programs are intended for adults sixteen years old and over who are not currently enrolled in a secondary school.

The literacy program is intended to teach adults who cannot read, write or perform basic arithmetic. The Pre-GED and GED programs are designed for those who have not completed a secondary education program in the United States and who have not passed the General Educational Development (GED) Test battery (high school equivalency). The citizenship training program focuses upon test preparation and procedures for U.S. citizenship. The pre-employment skills program is open to students concurrently enrolled in other AED programs or as a separate option.

Students are tested and advised during registration for placement in classes. Basic skills, non-native literacy and Pre-GED students are advised of their progress through achievement tests in classes, and GED students are given predictive tests to measure potential success in passing the GED Test battery. Advising services are available to meet students' personal, academic or career/vocational needs.

The on-site business-BASED (Basic Academic Skills for Employee Development) program offers work-related customized instruction in reading, writing, English speaking or mathematical skills.

Daytime and evening courses are offered at the Palatine campus, Northeast Center and other locations, including area businesses. Courses include Nonnative Literacy I, II, III and IV; Basic Reading Skills, Basic English Skills, Basic Mathematical Skills; Pre-GED Reading Skills, Pre-GED English Skills, Pre-GED Mathematical Skills; GED Social Studies and Science, GED Writing Skills and Literature, GED Mathematics; Adult Pre-employment Skills; and Citizenship Training.

Telecourses

Credit courses in different disciplines are offered as telecourses for students who are unable to attend classes on campus. These courses, which are generally transferable, are shown over regular or cable television. They are also available for viewing on campus and at certain local public libraries. Individual programs may also be checked out overnight for home use. Courses are presently being offered in areas such as business, gardening, history, psychology, sociology, political science and health. For specific course titles and broadcast channels, check the current semester course schedule.

International Studies Program

Harper College has joined in a consortium with 24 other community colleges and Illinois State University to provide a semester abroad program for students at these institutions. This joint effort makes it possible for the colleges to offer a sound, viable academic program at reasonable cost, and allows qualified students to take advantage of the unique educational experience afforded through study in another country.

The Harper College International Studies Program was first offered in the spring of 1987, and will be offered each fall, spring and summer. Information about the International Studies Program is available through the Student Outreach Office at Harper.

Honors Program

Harper College seeks to stimulate, encourage and recognize work of depth, scope and originality by its students. These demonstrated student abilities have led some departments to supplement regular programs with honors options. Students may elect honors options of four types:

1. Independent study
2. Courses specifically designed for honors candidates
3. Honors sections of existing courses
4. Honors enrichment topics or projects to augment regular courses

The College also offers several scholarships based primarily on academic achievement. (See Financial Aid section.)



Associate Degree Curricula

Curricula leading to the associate in applied science degree are for students planning to follow a career program to prepare for employment.

Programs leading to the associate in arts or associate in science degree are designed for students planning to transfer and pursue a four-year baccalaureate degree.

Accounting Aide

Accounting Aide is a two-year career program leading to an associate in applied science degree, with emphasis on data processing technology. The curriculum includes the study of accounting theory and practice, partnership, corporation accounting, cost accounting and data processing. The program is designed to prepare students for employment as junior accountants in business, industry and government.

First Year

First Semester

ACC 101 Principles of Accounting Theory I	3
DPR 101 Introduction to Data Processing	3
English ¹	3
MGT 111 Introduction to Business Organization	3
Mathematics elective ²	3
	<u>15</u>

Second Semester

ACC 102 Principles of Accounting Theory II	3
DPR 106 Computer Logic and Programming Technology	3
ECO 200 Introduction to Economics	3
ENG 130 Business Writing I ¹	3
Humanities elective	3
	<u>15</u>

Second Year

First Semester

Accounting or Data Processing elective ³	3
ACC 201 Intermediate Accounting I	3
ACC 211 Business Law I	3
Business elective ⁴	3
Social Science elective	3
	<u>15</u>

¹Students may elect ENG 100, ENG 101 or ENG 102, depending on their test scores and advice of a student development faculty member. ENG 130 may be taken as the second English course.

²Students may elect any mathematics course offered, depending on their test scores and advice of a student development faculty member; however, only MTH 100 or higher will satisfy this requirement. MGT 150 will not satisfy this requirement.

³Elective: ACC 155, ACC 250, DPR 203.

⁴Electives: ACC 212, ACC 213, BFC 215, MGT 218, MGT 270.

⁵Elective: DPR 122, DPR 123, DPR 125.

Second Semester

ACC 202 Intermediate Accounting II	3
ACC 203 Introductory Cost Accounting	3
Business electives ⁴	6
DPR 121 General Accounting Applications for Micros	2
Data Processing elective ⁵	1
	<u>15</u>

Air Conditioning

See: Refrigeration and Air Conditioning

Architectural Technology

Architectural Technology is a two-year technical career program leading to an associate in applied science degree. Curriculum emphasis is on architecture, including solar energy and conservation, but courses in communication skills, social sciences and humanities are also included. Graduates from this curriculum may be qualified for positions as architectural aides, engineering aides in building construction, building materials and equipment salesmen, specification writers and ancillary professional services.

First Year

First Semester

ATE 101 Introduction to Architectural Technology I	4
ATE 103 Building Materials Technology I	4
ATE 105 Computer Math for Architectural Technology I***	3
ENG 101 Composition	3
Social Science elective	3
	17

Second Semester

ATE 102 Introduction to Architectural Technology II	4
ATE 104 Building Materials Technology II	4
ENG 102 Composition ¹	3
Mathematics elective***	3
Social Science elective	3
	17

Second Year

First Semester

ATE 201 Comprehensive Building Project I	4
ATE 203 Construction Problems I	4
ATE 207 Behavior of Architectural Materials I	3
Humanities elective ²	3
	14

Second Semester

ATE 202 Comprehensive Building Project II	4
ATE 204 Construction Problems II	4
ATE 208 Behavior of Architectural Materials II	3
Technical elective ³	3
	14

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete a three (3) credit hour ATE elective.
¹ENG 100, ENG 103 or ENG 130 may be used, under certain conditions, to satisfy this requirement.

²Recommended elective: ART 110, MUS 103, MUS 104, PHI 105 or any literature course.

³Technical elective: ATE 106, ATE 210 or ATE 211.

Art

The art curriculum is designed to provide the transfer student with a program equivalent to the first two years of most four-year college programs. Students following this curriculum can obtain an associate in arts degree and transfer into most four-year institutions without loss of time or credit.

In order to serve the differing interests and needs of the total student body, art courses with prerequisites may be taken without the prerequisites for humanities elective credit by non-art majors with permission of the instructor. Courses without prerequisites are open for enrollment to all students.

First Year

First Semester

ART 100 Art Seminar ¹	1
ART 105 Introduction to Arts	3
ART 110 Drawing I	3
ART 121 Design I	3
ENG 101 Composition	3
Mathematics elective	3
	16

Second Semester

ART 100 Art Seminar ¹	1
ART 111 Drawing II	3
ART 122 Design II	3
ENG 102 Composition	3
FNA 111 History of Art I	3
Science elective	4
Social Science elective	3
	20

Second Year

First Semester

Elective ²	3
FNA 112 History of Art II	3
Math or Science elective	3
Social Science elective	3
Studio electives	6-9
	18-21

Second Semester

FNA 113 History of Art III	3
Social Science elective	3
SPE 101 Fundamentals of Speech Communication	3
Studio electives	9-12
	18-21

¹ART 100 may be repeated to 2 credit hours.

²Elective: communication, mathematics or social science.

Banking and Savings Association Management

Banking and Savings Association Management is a two-year career program leading to an associate in applied science degree emphasizing the banking and the savings and loan industry. The program is designed for those currently employed in, or seeking employment in, banks or savings and loans associations. The curriculum emphasizes developing competencies necessary for middle management and lending positions within the financial industry.

First Year

First Semester

BFC 101 Principles of Financial Institution Operations	3
BFC 115 Personal Banking/Advanced Principles or	
BFC 118 Credit Administration in Financial Institutions	3
ENG 100 Composition or	
ENG 101 Composition	3
MGT 111 Introduction to Business Organization	3
MGT 150 Business Math	3
	<hr/> 15

Second Semester

ACC 101 Principles of Accounting Theory I	3
BFC 102 Commercial Law	3
Banking elective ¹	3
ECO 115 Consumer Economics or	
ECO 201 Principles of Economics I	3
SPE 101 Fundamentals of Speech Communication	3
SPE 115 Interviewing	1
	<hr/> 16

Second Year

First Semester

ACC 102 Principles of Accounting Theory II or	
BFC 211 Accounting for Financial Institutions	3
Banking elective ¹	3
ECO 200 Introduction to Economics or	
ECO 202 Principles of Economics II	3
ENG 130 Business Writing I	3
MGT 218 Introduction to Finance	3
	<hr/> 15

Second Semester

BFC 215 Financial Statements Interpretation and Analysis	3
BFC 219 Consumer and Commercial Credit in Financial Institutions	3
ECO 210 Money and Banking	3
Elective ¹	3
Humanities elective	3
	<hr/> 15

¹Electives are to be selected from the following list of courses, with approval of the coordinator: BFC 110, BFC 117, BFC 200, BFC 211, BFC 212, BFC 213, BFC 216, BFC 217, BFC 220, BFC 225, BFC 235, DPR 101, DPR 120, ECO 201, ECO 202, MGT 160, MGT 265, MGT 270, PSY 101, PSY 145, RES 122, RES 123, RES 124, RES 232.

Students with an interest in savings association management must take BFC 212 and RES 101 as their electives.

Biological Sciences*

The following suggested curriculum is recommended for students who plan to transfer and major in biology and related fields such as medicine, dentistry and physical therapy. Check with the school of your choice or a Student Development Center for specific transfer information.

First Year

First Semester

CHM 121 General Chemistry I (4) or	
CHM 131 College Chemistry I (5)**	4-5
ENG 101 Composition	3
Humanities elective	3
Mathematics elective	3-4
SPE 101 Fundamentals of Speech Communication	3
	16-18

Second Semester

BIO 210 Biological Principles	4
CHM 122 General Chemistry II (4) or	
CHM 132 College Chemistry II (5)**	4-5
ENG 102 Composition	3
Mathematics elective	3-4
Social Science elective	3
	17-19

Summer Semester

Contemporary Studies and Life Skills elective	3
--	---

Second Year

First Semester

BIO 220 Botanical Principles or	
BIO 240 Zoological Principles	4
CHM 204 Organic Chemistry	5
Mathematics elective or	
PHY 121 Introductory Physics I	4-5
Humanities elective	3
	16-17

Second Semester

BIO 220 Botanical Principles or	
BIO 240 Zoological Principles	4
CHM 205 Organic Chemistry	5
Mathematics elective or	
PHY 122 Introductory Physics II	4-5
Social Science elective	3
	16-17

*In most cases the credits earned in courses are transferable to all four-year institutions. Since each school has its special requirements, students should see a counselor on the transferability of specific courses to specific four-year institutions.

**U. of I. program requires the College Chemistry.

Business Administration

This recommended transfer program for business students will meet requirements for the associate in arts degree. Students will choose a major within the business field at the four-year school. Requirements for each school vary. Students should check the requirements before completing this curriculum as outlined.

First Year

First Semester

ENG 101 Composition	3
MGT 111 Introduction to Business Organization	3
Mathematics elective ¹	3
Science elective	4
SPE 101 Fundamentals of Speech Communication	3
	16

Second Semester

ACC 101 Principles of Accounting Theory I	3
DPR 101 Introduction to Data Processing (3) or DPR 200 Introduction to Business Computer Programming (4) ^{2,5}	3-4
ENG 102 Composition	3
Humanities elective	3
Mathematics elective ¹	3-4
	15-17

Second Year

First Semester

ACC 102 Principles of Accounting Theory II	3
ACC 211 Business Law I ²	3
ECO 201 Principles of Economics I	3
Humanities elective	3
Social Science elective	3
	15

Second Semester

ACC 203 Introductory Cost Accounting ³	3
ECO 202 Principles of Economics II	3
Humanities elective	3
MGT 225 Applied General Statistics	3
ACC 212 Business Law II ² or Social Science elective ⁴	3
	15

¹Elective: MTH 103, MTH 124 or MTH 134.

²Transfer students should check with the school they will be transferring to regarding the transferability of these courses.

³Specifically recommended for accounting majors. Other majors should see a student development faculty member or department chairman for alternatives.

⁴ACC 212 specifically recommended for accounting majors. Social Science electives should be selected from PSY 101, PSY 145 or SOC 101.

⁵Students selecting DPR 200 must complete a three (3) credit hour Contemporary Studies and Life Skills requirement.

Cardiac Exercise Technology*

Cardiac Exercise Technology is a two-year career program leading to an associate in applied science degree. The purpose of this program is to prepare competent exercise specialists to play a major role in cardiovascular fitness programs situated in hospital rehabilitation facilities, corporations, colleges, recreation centers and health spas.

Responsibilities of the exercise specialist include assisting in diagnostic testing, data analysis, patient consultation, exercise prescription and exercise supervision. Therefore, the curriculum emphasizes courses in the biological sciences, exercise physiology, exercise testing and medical procedures, but additional study in nutrition, psychology and communication skills is also considered vital.

Graduates are eligible to take a certification examination offered by the American College of Sports Medicine.

First Year _____	
First Semester	
BIO 160 Human Anatomy _____	4
ENG 101 Composition _____	3
HPI 100 Introduction to the Cardiac Exercise Technology Program _____	1
HPI 101 Fundamentals of Exercise Testing _____	3
Elective ¹ _____	1
PSY 101 Introduction to Psychology _____	3
	15

Second Semester	
BIO 161 Human Physiology _____	4
English ² _____	3
HPI 104 Data Analysis and Exercise Prescription _____	3
HPI 105 Electrocardiography _____	4
HPI 108 Practical Experience in Administering Adult Fitness _____	2
PED 201 First Aid _____	2
	18

Second Year _____	
First Semester	
DIT 101 Basic Nutrition _____	3
HPI 102 Exercise Physiology _____	3
HPI 103 Advanced First Aid Procedures _____	2
HSC 112 Medical Terminology _____	2
PHI 180 Biomedical Ethics _____	3
Elective ³ _____	3
	16

Second Semester	
Mathematics elective*** _____	3
Elective _____	1
HPI 106 Cardiovascular Physiology and Pathology _____	3
HPI 107 Internship _____	4
PSY 218 Psychology of Adulthood and Aging or	
PSY 230 Psychology of Human Adjustment and Abnormal Behavior _____	3
	14

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

¹PED 100 is recommended.

²Students should seek the advice of a student development faculty member to determine the appropriate English course.

³SPE 101 is recommended.

Child Development

Child Development is a two-year career program leading to an associate in applied science degree. The curriculum is designed to provide students with the requisite skills and theoretical knowledge to work in a variety of child care facilities: preschool and day care centers, public school classrooms (as aides), special education programs and related settings in the expanding area of child-related professions.

First Year

First Semester

CCA 101 Introduction to Child Development Careers _____	3
CCA 102 Child Development I _____	3
ENG 101 Composition _____	3
Humanities elective _____	3
PSY 101 Introduction to Psychology _____	3
	<hr/> 15

Second Semester

CCA 103 Child Development II _____	3
EDU 211 Educational Psychology _____	3
Elective _____	3
ENG 102 Composition _____	3
SOC 101 Introduction to Sociology _____	3
	<hr/> 15

Second Year

First Semester

CCA 209 Language Arts for the Young Child _____	3
CCA 214 Principles of Preschool Education ¹ or CCA 218 Principles of Special Education _____	6
CCA 225 Mental Health in Child Development _____	3
HSC 220 Health, Nutrition and Safety _____	3
Mathematics elective*** _____	3
	<hr/> 18

Second Semester

CCA 210 Creative Activities for Young Children _____	3
CCA 219 Psychology of Exceptional Children or CCA 221 Workshop in Early Childhood Education _____	3
CCA 220 Child Development Practicum Internship _____	6
CCA 252 Child-Family-Community _____	3
Elective _____	1
	<hr/> 16

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

¹Students interested in preschool teaching will take CCA 214 and CCA 221. Students interested in work with exceptional children will take CCA 218 and CCA 219.

Commercial Credit Management

Commercial Credit Management is a two-year career program leading to an associate in applied science degree. The program is designed for those currently employed in, or seeking employment in, entry level management positions in commercial credit (accounts receivable) management. Upon completion of this degree, students can also receive an Associate Award granted by the National Institute of Credit, a division of the National Association of Credit Management.

First Year

First Semester

ACC 101 Principles of Accounting Theory I	3
BFC 101 Principles of Financial Institution Operations	3
ENG 100 Composition or	
ENG 101 Composition	3
MGT 111 Introduction to Business Organization	3
MGT 150 Business Math	3
	15

Second Semester

ACC 102 Principles of Accounting Theory II	3
DPR 120 Introduction to Business Software Packages	3
ECO 201 Principles of Economics I	3
ENG 130 Business Writing I	3
MGT 218 Introduction to Finance	3
SEC 110 Basic Keyboarding	1
	16

Second Year

First Semester

BFC 102 Commercial Law	3
BFC 201 Commercial Credit & Collections Principles	3
BFC 215 Financial Statements Interpretation and Analysis	3
ECO 202 Principles of Economics II	3
SPE 101 Fundamentals of Speech Communication	3
	15

Second Semester

BFC 202 Advanced Commercial Credit and Collections	3
BFC 217 Uniform Commercial Code Elective ¹	3
Humanities elective	3
MKT 245 Principles of Marketing	3
	15

¹Elective: ACC 201, BFC 110, BFC 225, ECO 210, MGT 225, MGT 270, PSY 145, SEC 121.

Communications

The following first-year program is recommended for students who plan to transfer and major in such fields as English, literature, speech or theatre. Check with the school of your choice or a Student Development Center before planning your second year at Harper.

First Year

First Semester

ENG 101 Composition	3
Foreign Language	4
Mathematics or Science elective	3-4
Social Science elective	3
SPE 101 Fundamentals of Speech Communication	3
	16-17

Second Semester

ENG 102 Composition	3
Foreign Language	4
Speech or Literature elective	3
Mathematics or Science elective	3-4
Social Science elective	3
	16-17

Computer Science

The following first-year program is recommended for students who plan to transfer in Computer Science. Programs vary and students should check with the school of their choice before planning a second year at Harper.

First Year

Summer Semester

MTH 200 Calculus with Analytic Geometry I	5
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First Semester

ENG 101 Composition	3
Humanities elective	3
MTH 201 Calculus with Analytic Geometry II	5
Computer Science elective ¹	4
	15

Second Semester

ENG 102 Composition	3
Humanities elective	3
MTH 202 Calculus with Analytic Geometry III	4
MTH 211 Introduction to "C" Programming and UNIX (4) or	
MTH 215 Introduction to Computer Science (3)	3-4
Physical Science elective ²	4-5
	17-19

¹Elective: MTH 208, MTH 209, MTH 210.

²Elective: CHM 121, CHM 122, CHM 131, CHM 132, PHY 201, PHY 202.

Criminal Justice

Criminal Justice is a two-year career program leading to an associate in applied science degree. It is designed to serve the needs of men and women in criminal justice organizations at the local, state and federal levels, and to prepare others to enter this service. Opportunities include positions in crime prevention, probation, correction, court records, communications, and general police and security work. Options are available for those wishing to continue in any of these special areas or for those who plan to earn a baccalaureate degree at a four-year college or university.

Certificate options are available in Criminal Justice and in Industrial and Retail Security.

Students earning an associate in applied science degree in criminal justice are required to complete a minimum of 60 semester hours of work. Courses must satisfy both the College and the program's minimum requirements.

Required Core Courses:

CRJ 101 Introduction to Criminal Justice ¹	3
CRJ 104 Introduction to Corrections	3
CRJ 201 Criminal Law I ¹	3
CRJ 202 Criminal Law II	3
CRJ 205 Juvenile Delinquency	3

CRJ 210 Introduction to Criminology ¹	3
CRJ 213 Crime Prevention	3

Required General Education Courses:

Electives ²	9
English elective ³	6
Humanities elective	3
Mathematics electives***	3
PSC 101 American Politics and Government or	
PSC 220 Suburban, Urban and State Politics	3
PSY 101 Introduction to Psychology	3
PSY 217 Adolescent Psychology	3
SOC 101 Introduction to Sociology	3
SOC 205 Social Problems	3
SPE 101 Fundamentals of Speech Communication	3

Specialized Study Areas

Students should select electives from one or more of the following specialized areas of study depending on interest and career needs.

Basic Law Enforcement

CRJ 105 Criminal Courts of the U.S.	3
CRJ 116 Introduction to Forensics	3
CRJ 203 Law and Society	3
CRJ 216 Investigative Process	3
CRJ 235 Street Procedures	4
CRJ 238 Defensive Techniques	3
CRJ 299 Criminal Justice Practicum	3

Advanced Law Enforcement

CRJ 105 Criminal Courts of the U.S.	3
CRJ 209 Police — Public — Community Relations	3
CRJ 216 Investigative Process	3
CRJ 220 Police Administration	3
CRJ 222 Police Operations	3
CRJ 224 Police Supervision	3
CRJ 226 Case Management	3

Corrections

CRJ 105 Criminal Courts of the U.S.	3
CRJ 215 Alternatives to Confinement	3
CRJ 299 Criminal Justice Practicum	3

Industrial Security

CRJ 250 Industrial Security Administration	3
CRJ 252 Industrial Fire Protection, Disaster Control	
CRJ 253 Safety Management	3
CRJ 299 Criminal Justice Practicum	3

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete a three (3) credit hour elective.

¹Students may take CRJ 203 or CRJ 215, with approval of program coordinator.

²In determining electives, the student should consult with the coordinator.

³Students must take either ENG 101 or ENG 130 within the six (6) hour English requirement.

Data Processing Technology

Data Processing Technology is a career program leading to an associate in applied science degree. The technical curriculum trains students for various positions in the field of data processing. The student will take courses in mathematics, business, data processing and general education. Graduates of the program may find employment as computer programmers, systems analysts and computer operators.

First Year _____

First Semester

DPR 101 Introduction to Data Processing _____	3
DPR 106 Computer Logic and Programming Technology _____	3
ENG 101 Composition _____	3
MTH 102 Intermediate Algebra _____	4
Social Science elective _____	3
	<u>16</u>

Second Semester

ACC 101 Principles of Accounting Theory I _____	3
DPR 108 Computer Programming — COBOL _____	5
DPR 203 Systems Analysis and Design I _____	3
ENG 103 Technical and Report Writing _____	3
MGT 111 Introduction to Business Organization _____	3
	<u>17</u>

Second Year _____

First Semester

ACC 102 Principles of Accounting Theory II _____	3
DPR 110 Computer Programming — Assembler Language _____	5
DPR 204 Advanced Systems Analysis and Design _____	3
Data Processing elective ¹ _____	3-4
Humanities elective _____	3
	<u>17-18</u>

Second Semester

DPR 170 Introduction to Data Communications _____	3
DPR 202 Programming Systems _____	3
DPR 208 Computer Programming — Advanced COBOL or DPR 210 Computer Programming — Advanced Assembler Language _____	4
ECO 200 Introduction to Economics _____	3
	<u>13</u>

¹Elective: DPR 120, DPR 121, DPR 122, DPR 123, DPR 124, DPR 125, DPR 130, DPR 133, DPR 134, DPR 136, DPR 140, DPR 142, DPR 150, DPR 160, DPR 166, DPR 208, DPR 210, DPR 240, DPR 270 or DPR 280.

Dental Hygiene*

Dental Hygiene is a career program leading to an associate in applied science degree. The program meets State guidelines and is accredited by the Commission on Dental Accreditation of the American Dental Association.

Prior to receiving a license in the practice of dental hygiene, graduates must successfully complete the program and pass the Dental Hygiene Written National Board exam and the Northeast Regional Clinical exam.

**Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College.
- Submission of an official copy of American College Test (ACT) results. (This requirement will be waived for students who have completed 12 or more semester hours of college work.)
- High school graduation or equivalent (GED).
- A high school grade average of 2.5 or better (on a 4.0 scale) or if 12 semester hours of college credit have been completed, a college grade average of 2.0 or better (on a 4.0 scale).
- Completion of at least one full year of high school course work in biology with grades of "C" or better, or one semester of college course work in biology with a grade of "C" or better. Once college biology has been completed, *only* college biology will be used to determine if this admission requirement has been fulfilled.
- Completion of at least one full year of high school course work in chemistry with grades of "C" or better, or one semester of college course work in chemistry with a grade of "C" or better. Once college chemistry has been completed, *only* college chemistry will be used to determine if this admission requirement has been fulfilled.
- Students who have completed any of the following courses (or their equivalent) must have obtained a grade of "C" or better in each course completed: BIO 130 — Microbiology, BIO 160 — Human Anatomy, BIO 161 — Human Physiology, CHM 100 — Chemistry for the Health Sciences, CHM 125 — Organic and Biochemistry for the Health Sciences, DIT 101 — Basic Nutrition. Students who completed any of these courses more than five (5) years prior to beginning the Dental Hygiene Program must either repeat the course(s) and obtain a grade of "C" or better, or successfully proficiency test out of the course(s).

Students who meet the above requirements will be required to attend a Dental Hygiene Program Information session.

*Dental Hygiene is a limited enrollment program. See Limited Enrollment Programs section of this Bulletin for details.

**Subject to change. Contact the Admissions Office for additional information.

First Year

Summer Semester

BIO 160 Human Anatomy	4
CHM 100 Chemistry for the Health Sciences or	
CHM 125 Organic and Biochemistry for the Health Sciences ¹	4
	8

First Semester

BIO 130 Microbiology	4
DHY 100 Pre-Clinic	5
DHY 159 Head and Neck Anatomy	3
DHY 161 Dental Anatomy	2
DIT 101 Basic Nutrition	3
	17

Second Semester

BIO 161 Human Physiology	4
DHY 101 Clinical Dental Hygiene I	5
DHY 111 Dental Radiology	3
DHY 190 General and Oral Pathology	2
PSY 101 Introduction to Psychology	3
	17

Summer Semester

DHY 103 Dental Health Education	1
DHY 151 Clinical Dental Hygiene II	2
SPE 101 Fundamentals of Speech Communication	3
	6

Second Year

First Semester

DHY 200 Periodontology	2
DHY 202 Radiology I	1
DHY 220 Community Dentistry I	2
DHY 240 Dental Pharmacology	2
DHY 250 Clinical Dental Hygiene III	5
DHY 280 Dental Materials	2
ENG 101 Composition	3
	17

Second Semester

DHY 201 Ethics, Jurisprudence and Practice Management	2
DHY 203 Radiology II	1
DHY 221 Community Dentistry II	3
DHY 251 Clinical Dental Hygiene IV	5
Mathematics elective***	3
SOC 101 Introduction to Sociology	3
	17

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

¹Meet with student development faculty member or coordinator of the Dental Hygiene Program for appropriate testing and/or placement.

Dietetic Technician*

Dietetic Technician is a two-year career program leading to an associate in applied science degree. This program, with its major emphasis on nutritional care, prepares a student for employment in a hospital, nursing home or in community feeding programs under the direct or general supervision of registered dietitians.

The Dietetic Technician Program is approved by the American Dietetic Association, and graduates of the program are eligible to join the association.

**Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College.
- Submission of an official copy of American College Test (ACT) results. (This requirement will be waived for students who have completed 12 or more semester hours of college work.)
- High school graduation or equivalent (GED).
- Completion of at least one year of high school course work in science with a grade of "C" or better, or one semester of college course work in science with a grade of "C" or better.
- A satisfactory interview with the coordinator of the Dietetic Technician Program.

First Year

First Semester

BIO 135 Introduction to Human Anatomy and Physiology	4
DIT 100 Introduction to the Dietetic Technician Program	3
DIT 101 Basic Nutrition	3
FSM 114 Food Standards and Sanitation	3
Mathematics elective***	3
	16

Second Semester

BIO 136 Introduction to Human Disease	3
DIT 102 Advanced Nutrition	3
DIT 110 Principles of Food Preparation	3
DIT 150 Dietetic Clinical Laboratory I	3
English elective ¹	3
	15

Second Year

First Semester

DIT 200 Dietetic Clinical Laboratory II	4
DIT 201 Nutritional Services in Institutions	3
FSM 212 Food Service Supervision	4
PSY 101 Introduction to Psychology	3
SOC 101 Introduction to Sociology	3
	17

Second Semester

DIT 202 Nutrition Care Seminar	2
DIT 203 Dietetic Seminar	1
DIT 250 Dietetic Clinical Laboratory III	4
EDU 211 Educational Psychology	3
English elective ¹	3
SPE 101 Fundamentals of Speech Communication	3
	16

*Dietetic Technician is a limited enrollment program. See Limited Enrollment Programs section of this Bulletin for details.

**Subject to change. Contact the Admissions Office for additional information.

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

¹Students may take either ENG 101 or ENG 130 within the six (6) hour English requirement.

Digital Electronics and Microprocessor Technology

Digital Electronics and Microprocessors Technology is a two-year technical program leading to an associate in applied science degree. It is designed to prepare students for the field of digital electronics in industries associated with computers and microprocessor equipment. The curriculum offers courses in electronics, digital electronics, computer hardware, software and peripheral systems, mathematics and general education.

Graduates may be employed in a variety of electronics related industries with job classifications as technician, programmer or field service technician.

First Year

First Semester	
ELT 110 Introductory Electronics	2
ELT 210 Computer Programming	3
ENG 101 Composition	3
Humanities elective ¹	3
MTH 106 Mathematics I	5
	<u>16</u>

Second Semester

ELT 111 Electronics I, Resistive	3
ELT 203 Electronics II, Digital	5
ENG 102 Composition or	
ENG 103 Technical and	
Report Writing	3
MTH 107 Mathematics II	5
	<u>16</u>

Second Year

First Semester	
ELT 206 Electronic Computers	5
ELT 216 Microprocessor	
Software Applications	5
MTH 208 FORTRAN Computer	
Programming	3
Social Science elective ²	3
	<u>16</u>

Second Semester

ELT 217 Microprocessor	
Peripheral Systems	5
ELT 218 Principles of Microprocessor	
System Design	5
Electronics or Data Processing	
elective ³	3
Social Science elective ²	3
	<u>16</u>

¹Any 3-credit hour course in the humanities area will meet this requirement.

²Social Science electives: ANT 101, ECO 201, GEG 101, PSC 101, PSY 101, PSY 145, SOC 101.

³To be approved by Electronics Program Coordinator.

Education

The following first-year program is recommended for students who plan to transfer and major in education with a goal of teaching in an elementary or secondary school. Check with the school of your choice or a Student Development Center before planning your second year at Harper.

First Year

First Semester	
ENG 101 Composition	3
Humanities elective	3
Mathematics elective	3-4
Science elective	3
Social Science elective	3
	<u>15-16</u>

Second Semester

ENG 102 Composition	3
Humanities elective	3
Mathematics elective	3-4
Science elective	3
Social Science elective	3
	<u>15-16</u>

¹Most Education majors are required to have PSY 101 and at least one course in American history or government.

Electronics Technology

Electronics Technology is a two-year technical program leading to an associate in applied science degree. It is designed to prepare students for the field of electronics and associated industries. The curriculum offers courses in electronics, circuit analysis, mathematics, physics and general education, with laboratory emphasis placed on equipment familiarization and use.

Graduates may find employment as electronic engineering technicians, industrial technicians, electronic/electrical draftsmen, customer engineers, technical writers and research laboratory technicians.

First Year

First Semester

ELT 101 Circuits I	5
ELT 105 Electro-Mechanical Drafting	3
ELT 110 Introductory Electronics	2
ENG 101 Composition	3
MTH 106 Mathematics I	5
	<hr/> 18

Second Semester

ELT 102 Circuits II	4
ELT 111 Electronics I, Resistive	3
ELT 210 Computer Programming	3
Humanities elective ¹	3
MTH 107 Mathematics II	5
	<hr/> 18

Summer Semester

Social Science electives ²	6
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Second Year

First Semester

ELT 103 Circuits III, Networks	5
ELT 203 Electronics II, Digital	5
MTH 206 Mathematics III	3
PHY 101 Technical Physics I	4
	<hr/> 17

Second Semester

Electronics elective ³	4-5
ELT 204 Electronics III, Advanced Electronics	5
ENG 103 Technical and Report Writing	3
PHY 102 Technical Physics II	4
	<hr/> 16-17

¹Any 3-credit hour course in the humanities area will meet this requirement.

²Social Science electives: ANT 101, ECO 201, GEG 101, PSC 101, PSY 101, PSY 145, SOC 101.

³Electronics elective: ELT 205, ELT 206, ELT 207, ELT 215, ELT 216, ELT 217, ELT 218.



Engineering

A strong background in mathematics and the physical sciences will be required to complete an engineering curriculum at a university. Thus, the core math and science courses should be mastered by all students planning to pursue an engineering degree. The following represent suggested two-year pre-engineering curricula for students at different levels in their math and science background when they enter Harper. They are intended as general guides only. Student development faculty and engineering faculty should be consulted for aid in planning a program which will reflect the background of the student, the special requirements which may apply for different engineering areas and the requirements of specific transfer institutions.

A recommended program for a student who has completed college algebra and trigonometry and who wishes to major in mechanical, civil, aeronautical or general engineering follows. Students interested in electrical engineering should contact a student development faculty member before enrolling for the second semester of the first year. Electrical engineering and computer engineering students should consult a faculty member before planning their second year. Technical electives may be substituted for certain of these courses.¹

First Year

Summer Semester

SPE 101 Fundamentals of
Speech Communication _____3

First Semester

CHM 121 General Chemistry I² _____4
EGR 100 Introduction to
Engineering _____1
EGR 120 Engineering Graphics I _____3
ENG 101 Composition _____3
MTH 200 Calculus with Analytic
Geometry I _____5
16

Second Semester

CHM 122 General Chemistry II _____4
EGR 121 Engineering Graphics II or
MTH 208 FORTRAN Computer
Programming _____3
MTH 201 Calculus with Analytic
Geometry II _____5
PHY 201 General Physics I _____4
16

Second Year

Summer Semester

Humanities elective _____3

First Semester

EGR 150 Analytical Mechanics
(Statics) _____3
ENG 102 Composition _____3
MTH 202 Calculus with Analytic
Geometry III _____4
PHY 202 General Physics II _____4
Social Science elective _____3
17

Second Semester

EGR 211 Analytical Mechanics
(Dynamics) _____3
Humanities elective _____3
MTH 212 Differential Equations _____3
PHY 203 General Physics III _____4
Social Science elective _____3
16

¹Technical electives: EGR 211, EGR 212, EGR 260, EGR 262, EGR 270, MTH 203, MTH 209, MTH 215, MTH 265.

²CHM 131 and CHM 132 may be substituted where required for specialized curricula such as chemical engineering.

³Some engineering schools will require an equivalent of MTH 209 or MTH 215.

Executive Secretarial Development

Executive Secretarial Development is a two-year career program leading to an associate in applied science degree. The curriculum emphasizes office practices, secretarial duties and functions of office administration.

Graduates may be employed in any of a variety of organizations, including manufacturing firms, government agencies, insurance companies, service organizations, schools and colleges, banks, as well as advertising and airline companies.

First Year

First Semester

ENG 130 Business Writing	3
SEC 100 Introduction to Secretarial Administration	2
SEC 122 Intermediate Typing ¹	2
SEC 125 Shorthand I ¹	5
SEC 236 Secretarial Procedures	3
	<u>15</u>

Second Semester

MGT 111 Introduction to Business Organization	3
SEC 220 Automated Office Practices ¹	4
SEC 225 Shorthand II ¹	5
SPE 101 Fundamentals of Speech Communication	3
Word processing equipment electives ²	2
	<u>17</u>

Second Year

First Semester

ACC 099 Business Recordkeeping or ACC 101 Principles of Accounting Theory I	3
DPR 123 Spread Sheet/Budgeting for Micros	1
DPR electives ³	2
MTH elective ⁴	3
SEC 230 Executive Machine Transcriptions	2
SEC 237 Secretarial Seminar and Internship I ⁵	3
Word processing Equipment elective ²	1
	<u>15</u>

Second Semester

Economics elective ⁶	3
Humanities elective	3
MGT 167 Records Management	3
SEC 238 Secretarial Seminar and Internship II ⁵	3
Social Science elective	3
	<u>15</u>

¹Placement into SEC 122, SEC 125, SEC 220, SEC 225 is contingent upon previous training and consent of instructor.

²Electives: SEC 133, SEC 137.

³DPR electives: DPR 121, DPR 122, DPR 124.

⁴While students may take any mathematics course offered, depending upon their test scores and the advice of a student development faculty member, MGT 150 is recommended.

⁵Enrollment restricted to students in the second year of the program with the consent of the instructor.

⁶ECO electives: ECO 115, ECO 200 or ECO 201.

Fashion Design

Fashion Design is a two-year career program leading to an associate in applied science degree. The program is designed to train students in apparel design, flat pattern design, draping, fashion illustrating and in professional design room practices of tailoring. Facilities will simulate the professional atmosphere of the fashion industry.

Graduates may find employment as couture fashion designers, mass production fashion designers, flat pattern makers, fashion illustrators and fashion coordinators.

Close cooperation between the College and the fashion industry helps to ensure the type of training the fashion industry demands. Trips to manufacturers are included.

First Year

First Semester

English ¹	3
FAS 101 Flat Pattern Design and Draping I	3
FAS 103 Apparel Design and Construction I	3
FAS 105 Fashion Design Illustration I	1
FAS 107 Textiles I	2
FAS 110 Costume History	2
Social Science elective	3
	<u>17</u>

Second Semester

English ¹	3
FAS 102 Flat Pattern Design and Draping II	4
FAS 104 Apparel Design and Construction II	4
FAS 106 Fashion Design Illustration II	1
FAS 108 Textiles II	2
FAS 109 Fashion Arts and Design	2
	<u>16</u>

Second Year

First Semester

FAS 201 Advanced Flat Pattern Design and Draping I	4
FAS 203 Advanced Diversified Apparel Design I	4
FAS 205 Tailoring Techniques I	2
FAS 209 Advanced Fashion Illustration I	1
Mathematics elective***	3
Social Science elective	3
	<u>17</u>

Second Semester

FAS 202 Advanced Flat Pattern Design and Draping II	4
FAS 204 Advanced Diversified Apparel Design II	4
FAS 206 Tailoring Techniques II	2
FAS 210 Advanced Fashion Illustration II	1
FAS 212 Visual Fashion Merchandising	2
Humanities elective ²	3
	<u>16</u>

***A proficiency test, available in the testing center, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete MKT 106.

¹Students may elect ENG 100, ENG 101 or ENG 102, depending on their test scores and advice of a student development faculty member.

²ART 105 is recommended.

Fashion Merchandising

Fashion Merchandising is a two-year program leading to an associate in applied science degree.

The fashion merchandising curriculum provides all the phases of fashion merchandising, not only in business aspects, but also in aesthetic and creative sides of fashion, such as window display, fashion basics and textile. Students will study fashion history and trends as well as their influence on our lives. In addition, they will survey the development of style leading up to contemporary design. Students will also take courses in English composition, data processing, sociology and introductory psychology.

An educational background in fashion merchandising opens the door to various careers, such as fashion coordinating, fashion promoting, fashion advertising, fashion displaying, fashion copywriting, fashion photographing, fashion buying and store managing.

First Year

First Semester

ENG 101	Composition	3
FAS 107	Textiles I	2
FAS 110	Costume History	2
MGT 111	Introduction to Business Organization	3
MGT 150	Business Math	3
MKT 106	Merchandising of Furnishings and Softline Goods	3
		16

Second Semester

ENG 102	Composition	3
FAS 111	20th Century Costume and Trends	3
FAS 112	Fashion Basics	3
PSY 101	Introduction to Psychology	3
SPE 101	Fundamentals of Speech Communication	3
		15

Second Year

First Semester

ART 105	Introduction to Arts	3
FAS 229	Promotion of Fashion	3
MKT 140	Salesmanship	3
MKT 245	Principles of Marketing	3
MKT 250	Retailing	3
SOC 101	Introduction to Sociology	3
		18

Second Semester

DPR 101	Introduction to Data Processing	3
FAS 230	Contemporary Living	3
FAS 116	Fashion Industries Career Practicum and Seminar or	3
FAS 240	Fashion Projects	3
MKT 247	Consumer Buying Behavior	3
MKT 251	Retail Merchandise Management	3
		15

Financial Management

Financial Management is a two-year career program leading to an associate in applied science degree. The curriculum is structured to meet the needs of individuals in gaining or improving financial skills. The thrust of the program is to study the field of, and the options within, the corporate finance environment. The curriculum emphasizes developing competencies needed for middle level management positions in the field of corporate finance.

First Year _____

First Semester

BFC 101 Principles of Financial Institutions Operations _____	3
BFC 102 Commercial Law _____	3
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 150 Business Math _____	3
	<hr/>
	15

Second Semester

ACC 101 Principles of Accounting Theory I _____	3
BFC 201 Commercial Credit Collection Principles _____	3
ECO 115 Consumer Economics or ECO 201 Principles of Economics I _____	3
ENG 130 Business Writing I _____	3
Humanities elective _____	3
	<hr/>
	15

Second Year _____

First Semester

ACC 102 Principles of Accounting Theory II _____	3
BFC 200 Investment Management _____	3
DPR 120 Introduction to Business Software Packages _____	3
ECO 200 Introduction to Economics or ECO 202 Principles of Economics II _____	3
MGT 218 Introduction to Finance _____	3
	<hr/>
	15

Second Semester

BFC 215 Financial Statements Interpretation and Analysis _____	3
BFC 225 International Finance _____	3
ECO 210 Money and Banking _____	3
Electives ¹ _____	6
	<hr/>
	15

¹Electives: ACC 203, BFC 110, BFC 219, MAT 101, MKT 245, RES 124.

Fire Science Technology

Fire Science Technology is a two-year career program leading to an associate in applied science degree. This curriculum offers a broad education in the principles and practical applications of fire protection and prevention. It provides specialized in-service training for fire personnel and prepares students who wish to enter the profession. In addition, it helps to prepare the student to seek certification through the Office of the Illinois State Fire Marshal. Attractive career opportunities are available in industry, governmental agencies, training organizations, insurance and municipal fire departments. Students wishing to pursue a career in fire science should discuss these opportunities with the fire science coordinator or a student development faculty member before entering this program.

First Year

First Semester

ENG 101 Composition	3
FIS 100 Introduction to Fire Science	3
FIS 122 Fire Prevention Principles I	3
Mathematics elective ¹	3
PSY 101 Introduction to Psychology	3
	<u>15</u>

Second Semester

ENG 103 Technical and Report Writing	3
FIS 101 Municipal Fire Administration I	3
FIS 123 Fire Prevention Principles II	3
FIS 132 Hazardous Materials I	3
SPE 101 Fundamentals of Speech Communication	3
	<u>15</u>

Second Year

First Semester

CHM 100 Chemistry for the Health Sciences ²	4
FIS 133 Hazardous Materials II	3
FIS 222 Fire Prevention Principles III	3
FIS 242 Fire Hydraulics	3
Social Science elective ³	3
	<u>16</u>

Second Semester

FIS 223 Fire Prevention Principles IV	3
FIS 224 Fire Prevention Principles V	3
FIS 262 Water Supply Analysis	3
Humanities elective ³	3
Physical Science elective ³	3
	<u>15</u>

¹Students may elect any mathematics course, MTH 100 or higher, depending upon their test scores and advice of a student development faculty member.

²CHM 121 may be substituted if prerequisite is fulfilled.

³Electives must be selected upon the advice of a student development faculty member or the coordinator.

Food Service Management

Food Service Management is a two-year career program leading to an associate in applied science degree. Emphasis is placed on the techniques and technology of the food service industry from a management point of view. Graduates will be qualified to assume positions as production supervisors, management trainees and small unit managers. One-year certificate programs are offered in Bread and Pastry Arts and Culinary Arts.

First Year

First Semester

English ¹	3
FSM 111 Introduction to Food Service	2
FSM 112 Quantity Food Production or	
FSM 113 Quantity Food Service	4
FSM 114 Food Standards and Sanitation	3
MGT 150 Business Math	3
	15

Second Semester

ACC 099 Business Recordkeeping or	
ACC 101 Principles of Accounting Theory I	3
English ¹	3
MGT 111 Introduction to Business Organization (3) or Food Service Management elective ² (3-4)	3-4
FSM 112 Quantity Food Production or	
FSM 113 Quantity Food Service	4
FSM 115 Menu Planning	2
	15-16

Second Year

First Semester

ENG 130 Business Writing I	3
FSM 211 Purchasing and Storage	3
FSM 212 Food Service Supervision	4
PSY 101 Introduction to Psychology	3
Social Science elective	3
	16

Second Semester

FSM 213 Seminar and Internship	4
FSM 214 Cost Control	3
FSM 215 Restaurant Layout and Equipment (3) or Food Service Management elective ² (3-4)	3-4
Humanities elective	3
SPE 101 Fundamentals of Speech Communication	3
	16-17

¹Students may elect ENG 100, ENG 101 or ENG 102, depending on their test scores and the advice of a student development faculty member.

²Elective: FSM 130 or FSM 210.

Foreign Languages

See: Liberal Arts

Health Education

The successful completion of the health education transfer program will enable the student to obtain an associate in science degree and to transfer with junior status to most four-year colleges and universities. To insure satisfactory transfer, the student is advised to investigate the institution to which the student plans to transfer for specific general education requirements.

First Year

First Semester

BIO 110 Principles of Biology	4
ENG 101 Composition	3
PED 203 Health	3
Physical Education elective	1
Social Science elective	3
SPE 101 Fundamentals of Speech Communication	3
	<hr/>
	17

Second Semester

BIO 140 General Zoology	4
ENG 102 Composition	3
Mathematics elective	3
PED 201 First Aid	2
PED 205 Drugs in Our Culture	2
Physical Education elective	1
	<hr/>
	15

Second Year

First Semester

BIO 160 Human Anatomy	4
Elective	3
PED 207 Human Sexuality	2
PED 270 Community Health	2
PHI 180 Medical Ethics	3
Social Science elective	3
	<hr/>
	17

Second Semester

BIO 103 Man and Environment	3
BIO 161 Human Physiology	4
DIT 101 Basic Nutrition	3
EDU 211 Educational Psychology	3
Humanities elective	3
	<hr/>
	16

Horticulture

Horticulture is a two-year program leading to an associate in applied science degree. Several horticulture study areas are available with approval of the program coordinator, including arboriculture, floral design, landscaping, nursery management, golf course operations and turfgrass management. Students can prepare for employment with nursery and garden centers, lawn and tree care companies, landscapers, greenhouse and plant propagating operations, landscape maintenance firms and horticulture equipment dealers.

Students can choose a basic horticulture program of study or one of the following specialized study areas. Students earning an associate in applied science degree in horticulture must complete the following required core courses, required General Education courses, and must choose between 14-18 semester hours of coursework from the specialized study areas.¹

Required Core Courses:

PKM 100 Introduction to Park Management	1
PKM 101 Ornamental Plants	4
PKM 102 Plant Disease and Pests	4
PKM 110 Soil Science	4
PKM 106 Introductory Horticulture (2) and PKM 108 Introductory Horticulture Lab (2) or PKM 111 Basic Horticultural Skills (4)	4
PKM 140 Grounds Equipment and Shop Operation ²	4
PKM 250 Park Management Seminar ³	1

Required General Education Courses:

BIO 120 General Botany ⁴	4
English ⁵	6
Humanities elective	3
Management elective ⁶	3
Mathematics elective***	3
PED 201 First Aid	2
Social Science electives	3

Elective Course:

PKM 150 Park Management Internship ⁷	5
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Specialized Study Areas

Depending on the student's career needs, he or she may choose courses from the following specialized study areas.

Arboriculture

PKM 214 Principles of Landscape Design and Construction	4
PKM 220 Arboriculture	4
PKM 230 Contracts, Specifications and Estimating	3
PKM 244 Nursery Management	3

14

Floral Design

PKM 104 Floral Design	3
PKM 204 Advanced Floral Design	3
PKM 247 Floral Shop and Garden Center Operations	3
PKM electives	9
	18

Golf Course and Turfgrass Management

Must select courses totaling a minimum of 14

credit hours from the following:

PKM 210 Drainage and Irrigation	3
PKM 212 Turfgrass Science	4
PKM 214 Principles of Landscape Design and Construction	4
PKM 230 Contracts, Specifications, Estimating	3
PKM 242 Golf Course Management	4

Landscape

Must select courses totaling a minimum of 14 credit hours from the following:

PKM 210 Drainage and Irrigation	3
PKM 212 Turfgrass Science	4
PKM 214 Principles of Landscape Design and Construction	4
PKM 220 Arboriculture	4
PKM 230 Contracts, Specifications, Estimating	3
PKM 244 Nursery Management	3

Nursery Management

Must select courses totaling a minimum of 14 credit hours from the following:

PKM 210 Drainage and Irrigation	3
PKM 212 Turfgrass Science	4
PKM 214 Principles of Landscape Design and Construction	4
PKM 220 Arboriculture	4
PKM 230 Contracts, Specifications, Estimating	3
PKM 244 Nursery Management	3
PKM 247 Floral Shop and Garden Center Operations	3

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

¹Students are reminded that not all courses are offered each semester. In determining electives, the student should consult with the program coordinator or student development faculty member.

²This course should be taken before attempting to take the PKM 200 level courses. Floral Design study area students are not required to take PKM 140.

³PKM 250 should not be taken until the second year of study.

⁴BIO 120 and most of PKM 100 level courses should be taken before attempting PKM 200 level courses.

⁵Students must take either ENG 101 or ENG 130 within the six (6) hour English requirement.

⁶Students may take MGT 111, MGT 154 or MGT 160; however, only three MGT credit hours will count toward degree requirement.

⁷PKM 150 is a strongly recommended elective but is not required unless a double degree is desired, which also requires PKM 121 and PKM 140, plus MGT 111 or MGT 154.

Interior Design

Interior Design is a two-year career program leading to an associate in applied science degree. The curriculum is designed to prepare students for residential designer/sales positions in the retail home furnishings field.

First Year

First Semester	
ART 121 Design I ¹	3
ATE 101 Introduction to Architectural Technology I	4
English ²	3
IND 101 Basic Interior Design I	5
IND 103 Furniture History or	
IND 104 Basic Color I/CADD ¹	3
	18

Second Semester

FNA 112 History of Art II	3
IND 102 Basic Interior Design II	5
IND 103 Furniture History or	
IND 104 Basic Color I/CADD ¹	3
SPE 101 Fundamentals of Speech Communication	3
	14

Second Year

First Semester

ATE 102 Introduction to Architectural Technology II	4
IND 201 Advanced Interior Design I	6
IND 204 Advanced Color II/CADD ³	3
Social Science elective	3
	16

Second Semester

ENG 130 Business Writing I	3
IND 202 Advanced Interior Design II	6
Mathematics elective***	3
Social Science elective	3
	15

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must take MKT 140.

¹ART 121, IND 103 and IND 104 must be taken in the first year, either in the first or second semester as a prerequisite to IND 201.

²Students will take ENG 100, ENG 101 or ENG 102, depending on their test scores and the advice of a student development faculty member.

³IND 204 may be taken in the first year, second semester.

Journalism¹

Journalism is a two-year career program leading to an associate in applied science degree. The curriculum provides intensive study and practical training in contemporary journalism, including historic, sociologic and realistic situations. Graduates of the program are prepared for positions in newspapers; radio and television newsrooms; wire services; public relations and advertising agencies; and business, industrial and consumer magazines.

First Year

First Semester

ENG 101 Composition	3
HST 111 The American Experience to 1877	3
JNM 130 Fundamentals of Journalism	3
Mathematics elective	3
SPE 101 Fundamentals of Speech Communication	3
	15

Second Semester

HST 112 The American Experience Since 1877	3
Humanities elective	3
JNM 131 News Reporting and Writing	3
JNM 133 Feature Writing	3
JNM 134 Media Adjuncts	4
JNM 135 Principles of Photography	1
	17

Second Year

First Semester

JNM 234 Mass Communication	3
JNM 235 Copy Reading and News Editing	4
JNM 236 Radio and Television News	4
PSC 101 American Politics and Government	3
	14

Second Semester

ECO 200 Introduction to Economics or	
ECO 201 Principles of Economics I	3
Electives ²	5-6
JNM 237 Externship Study	5
PSC 220 Suburban, Urban and State Politics or	
Social Science elective	3
	16-17

¹Students must type 40 wpm or take SEC 121.

²Courses in communications, humanities, mathematics, science or social science are recommended.

Legal Secretary

Legal Secretary is a two-year career program leading to the degree of associate in applied science for those interested in pursuing secretarial careers in law firms, government, law departments of business firms and banks. The curriculum is designed to give the student experience in legal dictation and transcription, legal office procedures, background in legal terminology and supervised on-the-job training in a legal office or department.

First Year

First Semester

English elective	3
SEC 102 Survey of Law Office Practice	2
SEC 122 Intermediate Typing	2
SEC 125 Shorthand I	5
SPE 101 Fundamentals of Speech Communication	3
	<u>15</u>

Second Semester

ENG 130 Business Writing I	3
SEC 133 Word Processing Equipment: IBM Personal Computer	1
SEC 137 Word Processing Equipment: Wangwriter	1
SEC 225 Shorthand II	5
SEC 234 Legal Office Procedures	3
SEC 236 Secretarial Procedures ¹	3
	<u>16</u>

Second Year

First Semester

ACC 099 Business Recordkeeping or ACC 101 Principles of Accounting Theory I	3
ACC 211 Business Law I	3
DPR elective ²	1-2
SEC 230 Executive Machine Transcription	2
SEC 235 Legal Dictation and Transcription	3
SEC 237 Secretarial Seminar and Internship I	3
	<u>15-16</u>

Second Semester

Economics elective ³	3
Humanities elective	3
PSC 101 American Politics and Government	3
Mathematics elective***	3
SEC 238 Secretarial Seminar and Internship II	3
	<u>15</u>

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete a three (3) credit hour elective approved by the program coordinator.

¹A special section of this course is offered for legal secretarial students during the spring semester. Students must enroll in this special section before taking SEC 237.

²DPR elective: DPR 121, DPR 122, DPR 123 or DPR 124.

³Economics elective: ECO 115, ECO 200 or ECO 201.

Legal Technology*

Legal Technology is a two-year career program leading to an associate in applied science degree. The program is designed to prepare men and women as technically qualified assistants to a lawyer. Under the supervision of a lawyer, the legal technician may perform such functions as investigation, detail work with regard to probate matters, preparation of tax forms and returns, searching public and court records, office management, library service, bookkeeping, serving and filing legal documents and preparing legal forms.

First Year _____

First Semester

ACC 101 Principles of Accounting Theory I _____	3
ENG 101 Composition _____	3
LTE 101 Introduction to Legal Technology _____	3
LTE 103 Litigation _____	3
SOC 101 Introduction to Sociology _____	3
	<hr/> 15

Second Semester

ENG 103 Technical and Report Writing _____	3
LTE 102 Fundamentals of Legal Research _____	3
LTE 105 Family Law _____	3
LTE 123 Real Property Law _____	3
PSY 101 Introduction to Psychology _____	3
	<hr/> 15

Second Year _____

First Semester

ACC 211 Business Law I _____	3
LTE 202 Estate Planning _____	3
LTE 203 Income Taxation I _____	3
Mathematics elective*** _____	3
PSC 101 American Politics and Government _____	3
	<hr/> 15

Second Semester

ACC 102 Principles of Accounting Theory II or _____	3
LTE 204 Income Taxation II _____	3
ACC 212 Business Law II or LTE 210 Corporate and Securities Law _____	3
Humanities elective ¹ _____	3
LTE 200 Probate _____	3
LTE 206 Conference Course in Legal Technology ² _____	3
	<hr/> 15

*Legal Technology is a limited enrollment program. See Limited Enrollment Programs section of this Bulletin for details.

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must take LTE 212.

¹PHI 110 is recommended.

²Required for persons with no legal experience. Persons with legal experience may substitute another Legal Technology course.

Liberal Arts

The Liberal Arts transfer curriculum lays the foundation for a broad general education. It should be followed by those who wish to become lawyers, historians, philosophers, sociologists, English teachers, social workers, anthropologists and political scientists, and by those who have not chosen their field of specialization but who wish to satisfy the general education requirements of the university to which they will transfer.

Though the general education requirements of universities vary in some details, in general the student can be sure he or she will meet them if he or she takes at Harper two semesters of transfer-level English composition, two semesters of laboratory science, four semesters of foreign language, two semesters of mathematics and a number of courses in the social sciences and humanities. The student who has successfully completed a year or more of a foreign language in high school may qualify for advanced placement in the language at Harper College. In mathematics, the student may meet requirements of some universities through proficiency testing.

First Year

First Semester	
ENG 101 Composition	3
Foreign Language elective	4
Laboratory science ¹	4
Mathematics or elective	3
Social Science elective	3
	<hr/>
	17

Second Semester

ENG 102 Composition	3
Foreign Language elective	4
Laboratory science ¹	4
Mathematics or elective	3
Social Science elective	3
	<hr/>
	17

Second Year

First Semester

English ²	3
Foreign Language ³	3-4
Humanities elective ⁴	3
Social Science elective	3
SPE 101 Fundamentals of Speech Communication	3
	<hr/>
	15-16

Second Semester

Contemporary Studies and Life Skills electives	6
English ²	3
Foreign Language ³	3-4
Humanities elective ⁴	3
	<hr/>
	15-16

¹Physical or biological science or physics, chemistry, botany or other lab science.

²Advanced English, literature or speech.

³Consult a student development faculty member for specific language requirements of the university to which you plan to transfer.

⁴HUM 101 and HUM 102 are recommended. Other humanities areas include art, music, literature, philosophy, fine arts, SPE 107, SPE 111 or SPE 212.

Marketing/Management

Marketing/Management is a two-year career program leading to an associate in applied science degree. The curriculum is designed for persons interested in preparing for positions in the dynamic field of marketing. Career objectives of persons completing this program would be in the areas of sales, advertising and sales promotion, marketing, management, wholesaling, retailing or other specialized areas of marketing.

First Year _____

First Semester	
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 150 Business Math _____	3
MKT 140 Salesmanship or Marketing elective ¹ _____	3
PSY 101 Introduction to Psychology _____	3
	15

Second Semester

DPR 101 Introduction to Data Processing _____	3
ENG 130 Business Writing I _____	3
MGT 270 Principles of Management _____	3
MKT 245 Principles of Marketing or Marketing elective ¹ _____	3
PSY 145 Psychology in Business and Industry _____	3
	15

Second Year _____

First Semester	
ACC 099 Business Recordkeeping or ACC 101 Principles of Accounting Theory I _____	3
ECO 200 Introduction to Economics _____	3
MKT 217 Advertising _____	3
Marketing elective ¹ _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	15

Second Semester

ACC 102 Principles of Accounting Theory II or Marketing elective ¹ _____	3
ACC 211 Business Law I _____	3
Business elective _____	3
Humanities elective _____	3
Marketing elective _____	3
	15

¹Electives: MAT 125, MKT 106, MKT 140, MKT 141, MKT 190, MKT 217, MKT 240, MKT 245, MKT 246, MKT 247, MKT 250, MKT 255, MKT 260, MKT 265, MKT 290, MKT 292, MKT 293.

Material Management

Material Management is a two-year career program leading to an associate in applied science degree. The program is designed to provide in-service education for those persons working directly in, or in fields allied to, material management and physical distribution. Additionally, the program may provide pre-service training for those who may seek or be transferred into jobs within these fields.

First Year

First Semester

ACC 101 Principles of Accounting Theory I	3
DPR 101 Introduction to Data Processing	3
ENG 101 Composition	3
MAT 101 Fundamentals of Material Management	3
MGT 111 Introduction to Business Organization	3
	<u>15</u>

Second Semester

ACC 102 Principles of Accounting Theory II	3
English elective	3
MGT 270 Principles of Management	3
Material Management elective ¹	3
PSY 145 Psychology in Business and Industry	3
	<u>15</u>

Second Year

First Semester

ACC 211 Business Law I	3
ECO 200 Introduction to Economics	3
Material Management electives ¹	6
Mathematics elective***	3
	<u>15</u>

Second Semester

Humanities elective	3
MAT 228 Finance for Material Managers	3
Material Management electives ¹	9
	<u>15</u>

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must select an additional 200 level MAT course.

Electives are to be selected from the following list of courses, with approval of the coordinator or a student development faculty member:

Electives: Group I (select four courses)

MAT 120 Production Control Concepts	3
MAT 121 Principles of Physical Distribution	3
MAT 122 Inventory Control	3
MAT 123 Traffic and Transportation	3
MAT 124 Material Handling and Packaging	3
MAT 125 Purchasing	3

Electives: Group II (select two courses)

DPR 203 Systems Analysis and Design I	3
MAT 220 Advanced Production Control	3
MAT 221 Distribution Center Operations	3
MAT 223 Legal Aspects of Material Management	3
MAT 224 Advanced Material Handling and Warehousing	3
MAT 225 Practice of Regulatory Agencies	3
MAT 226 Material Requirements Planning (MRP)	3
MAT 230 International Material Management	3
MAT 259 Advanced Purchasing	3
MAT 280 Material Management Policy	3
MET 108 Manufacturing Processes and Materials	3
MGT 160 Principles of Supervision	3
MGT 225 Applied General Statistics	3
MGT 274 Industrial Management	3

Mechanical Engineering Technology

Mechanical Engineering Technology is a two-year technical program leading to an associate in applied science degree. The program is designed to train students in the fields of mechanical design and automated manufacturing techniques.

The Mechanical Engineering option includes courses in design, drafting, mathematics, mechanics, materials and general education.

The Automated Manufacturing option consists of courses in production control, process planning, automation, CAD/CAM, robotics, general education and other related areas of study.

Graduates of these programs could accept positions as mechanical designers, mechanical draftsmen, computer aided designers, mechanical engineering technicians, quality control technicians, production controllers, tool design technicians, numerical control machine programmers, process technicians or sales engineers.

Graduates of these programs may continue their education either by taking additional courses or, if they so desire, pursuing a bachelor of science in technology degree with a major in a field such as mechanical, manufacturing or industrial technology.

Automated Manufacturing option

First Year _____

First Semester

ENG 101 Composition _____	3
MET 102 Technical Drafting _____	3
MET 105 Basic Machine Shop or	
MET 205 Advanced Machine Shop _____	3
MTH 106 Mathematics I _____	5
NMC 101 Introduction to NC/CAM _____	3
	<hr/>
	17

Second Semester

ENG 103 Technical and	
Report Writing _____	3
MET 103 Descriptive Geometry _____	3
MET 108 Manufacturing Processes and	
Materials _____	3
MTH 107 Mathematics II _____	5
NMC 105 Part Programming I _____	3
	<hr/>
	17

Second Year _____

First Semester

MET 206 Metallurgy and Heat	
Treatment _____	2
MET 211 Process Planning and Tool	
Design _____	4
MET 235 Computer Graphics _____	5
NMC 215 Part Programming II _____	3
Social Science elective _____	3
	<hr/>
	17

Second Semester

Humanities elective _____	3
MET 236 Special Problems in Three-	
Dimensional Graphics _____	3
MET 245 Applied Digital Control _____	5
Social Science elective _____	3
Technical elective ¹ _____	3
	<hr/>
	17

¹Technical elective: MET 228, MET 237, NMC 216.

Mechanical Engineering option

First Year _____

First Semester

ENG 100 Composition or	
ENG 101 Composition _____	3
MET 102 Technical Drafting _____	3
MET 105 Basic Machine Shop or	
MET 205 Advanced Machine Shop _____	3
MTH 106 Mathematics I _____	5
NMC 101 Introduction to NC/CAM _____	3
	<hr/>
	17

Second Semester

ENG 103 Technical and	
Report Writing _____	3
MET 103 Descriptive Geometry _____	3
MET 108 Manufacturing Processes and	
Materials _____	3
MTH 107 Mathematics II _____	5
PHY 101 Technical Physics I _____	4
	<hr/>
	18

Second Year _____

First Semester

MET 201 Mechanisms _____	4
MET 206 Metallurgy and Heat	
Treatment _____	2
MET 211 Process Planning and Tool	
Design _____	4
MET 240 Strength of Materials and	
Statics _____	5
Social Science elective _____	3
	<hr/>
	18

Second Semester

Humanities elective _____	3
MET 207 Machine Design _____	4
MET 245 Applied Digital Control _____	5
Social Science elective _____	3
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	15



Medical Office Assistant

Medical Office Assistant is a two-year career program leading to an associate in applied science degree, designed for persons interested in becoming medical assistants in the physician's office, clinic or other health care setting. The curriculum is designed to give the student training in order to perform a variety of administrative and clinical tasks to facilitate the work of the doctor.

Administrative duties include patient reception, oral and written communications and record-keeping. Clinical duties include assisting with examinations and diagnostic tests, collection of laboratory specimens and patient interaction.

An orientation session is conducted and it is strongly recommended that interested persons attend. Detailed information will be sent to you upon request or upon application to the program.

First Year _____

First Semester

BIO 135 Introduction to Human Anatomy and Physiology ¹ or	
BIO 160 Human Anatomy _____	4
English elective _____	3
HSC 112 Medical Terminology _____	2
SEC 101 Introduction to the Health Care Field _____	3
SEC 122 Intermediate Typing _____	2
SEC 131 Business Machines _____	2
	<u>16</u>

Second Semester

ACC 099 Business Recordkeeping _____	3
BIO 136 Introduction to Human Diseases ¹ (3) or	
BIO 161 Human Physiology (4) _____	3-4
ENG 130 Business Writing I _____	3
HSC 190 Clinical Procedures I _____	2
SEC 230 Executive Machine Transcription _____	2
Social Science elective ² _____	3
	<u>16-17</u>

Second Year _____

First Semester

HSC 211 Clinical Procedures II _____	4
HSC 212 Clinical Laboratory Procedures _____	3
PSY 101 Introduction to Psychology _____	3
SEC electives ³ _____	2
SEC 241 Medical Office Procedures _____	4
	<u>16</u>

Second Semester

HSC 213 Medical Law and Ethics _____	3
Mathematics elective*** _____	3
MGT 267 Office and Administrative Management _____	3
SEC 240 Medical Transcription I _____	3
SEC 246 MOA Externship and Seminar _____	4
	<u>16</u>

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete PHI 180.

¹Students may take BIO 135 and BIO 136 or BIO 160 and BIO 161.

²ECO 115 or ECO 200 is recommended.

³SEC electives: SEC 133, SEC 137.

Medical Secretary

Medical Secretary is a two-year career program leading to an associate in applied science degree, designed for the person interested in becoming a medical secretary in a health care facility, insurance company, extended care facility, home health care agency, pharmaceutical house, medical supply company, or hospital in administration, nursing or other medical services department.

Alternate job titles would include medical receptionist, doctor's secretary, insurance secretary, claims clerk, nursing unit secretary, ward clerk, medical typist or dental receptionist.

An orientation session is conducted and it is strongly recommended that interested persons attend. Detailed information will be sent to you upon request or upon application to the program.

First Year

First Semester

BIO 135 Introduction to Human Anatomy and Physiology ¹ or	4
BIO 160 Human Anatomy	4
English elective	3
HSC 112 Medical Terminology	2
SEC 101 Introduction to the Health Care Field	3
SEC 122 Intermediate Typing	2
SEC 131 Business Machines	2
	<u>16</u>

Second Semester

ACC 099 Business Recordkeeping	3
BIO 136 Introduction to Human Diseases ¹ (3) or	
BIO 161 Human Physiology (4)	3-4
ENG 130 Business Writing I	3
HSC 213 Medical Law and Ethics	3
PSY 101 Introduction to Psychology	3
	<u>15-16</u>

Second Year

First Semester

Mathematics elective***	3
MGT 111 Introduction to Business Organization	3
SEC 170 Introduction to Word Processing	3
SEC 230 Executive Machine Transcription	2
SEC 241 Medical Office Procedures	4
	<u>15</u>

Second Semester

MGT 267 Office and Administrative Management	3
Secretarial Science electives ²	2
SEC 240 Medical Transcription I	3
SEC 245 Medical Secretarial Seminar and Externship	4
Social Science elective ³	3
	<u>15</u>

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete PHI 180.

¹Students may take BIO 135 and BIO 136 or BIO 160 and BIO 161.

²Secretarial science electives: SEC 133, SEC 137.

³ECO 115 or ECO 220 is recommended.

Music

The curriculum at most schools of music is a classical-traditional program requiring a minimum of four full years of academic work leading to the bachelor of music, bachelor of arts or bachelor of science in music. A music student should be able to perform proficiently on at least one instrument (voice is categorized as an instrument), and should have a basic working knowledge and proficiency at the keyboard. All music programs require credit hours in both applied and ensemble music.

A student who successfully completes the courses suggested in this curriculum guide will have met all requirements for an associate in arts degree. Check with the school of your choice for specific requirements.

The **music** curriculum at Harper is designed to provide the student with a program equivalent to the first two years of most four-year college programs, with emphasis in music education, musicology, composition, applied music, and theory and literature.

The **piano pedagogy** option is designed to provide the knowledge and skills necessary to teach beginning and intermediate piano students. It will provide opportunities for observation of individual and group instruction as well as supervised student teaching.

Music

First Year¹

First Semester	
Applied Music elective ²	2-4
ENG 101 Composition	3
Group Performance ³	1
Mathematics elective	3
MUS 111 Theory of Music I	3
MUS 115 Aural Skills I	1
MUS 120 Introduction to Music Literature	3
MUS 165 Class Piano I	2
	<hr/> 18-20

Second Semester

Applied Music elective ²	2-4
ENG 102 Composition	3
Group Performance ³	1
Instrumental or Vocal Techniques	2
MUS 112 Theory of Music II	3
MUS 116 Aural Skills II	1
Science elective	4
Social Science elective	3
	<hr/> 19-21



Second Year	
First Semester	
Applied Music elective ²	2-4
Group Performance ³	1
Humanities elective	3
MUS 211 Theory of Music III	3
MUS 215 Aural Skills III	1
Science or Mathematics elective	3
Social Science elective	3
	16-18

Second Semester	
Applied Music elective ²	2-4
Group Performance ³	1
Instrumental or Vocal Techniques	2
MUS 212 Theory of Music IV	3
MUS 216 Aural Skills IV	1
MUS 223 Instrumental Literature or	
MUS 224 Keyboard and Vocal	
Literature	3
Social Science elective	3
SPE 101 Fundamentals of	
Speech Communication	3
	18-20

Piano Pedagogy

First Year	
First Semester	
Applied Music elective ²	2
ENG 101 Composition	3
Group Performance ³	1
Mathematics elective	3
MUS 111 Theory of Music I	3
MUS 115 Aural Skills I	1
MUS 120 Introduction to Music	
Literature	3
MUS 265 Class Piano III	2
	18

Second Semester	
Applied Music elective ²	2
ENG 102 Composition	3
Group Performance ³	1
MUS 112 Theory of Music II	3
MUS 116 Aural Skills II	1
MUS 266 Class Piano IV	2
Science elective	4
Social Science elective	3
	19

Second Year	
First Semester	
Applied Music elective ²	2
Group Performance ³	1
Humanities elective	3
MUS 211 Theory of Music III	3
MUS 215 Aural Skills III	1
MUS 271 Piano Pedagogy I	3
Science or Mathematics elective	3
Social Science elective	3
	19

Second Semester	
Applied Music elective ²	2
Group Performance ³	1
MUS 212 Theory of Music IV	3
MUS 216 Aural Skills IV	1
MUS 223 Instrumental Literature or	
MUS 224 Keyboard and Vocal	
Literature	3
MUS 272 Piano Pedagogy II	3
Social Science elective	3
SPE 101 Fundamentals of	
Speech Communication	3
	19

¹All majors in music must demonstrate minimum proficiency on the piano and are advised to take MUS 100 as part of their elective credit.

²To be elected from courses numbered MUS 180 and MUS 280.

³To be elected from MUS 130, MUS 136, MUS 140, MUS 145 and MUS 150.

Nursing (Practical and Associate Degree)*

The Nursing Program is designed to include sufficient and appropriate content to enable students to receive a certificate in practical nursing at the completion of the first year level and sufficient and appropriate content to enable students to receive an associate in applied science degree in nursing at the completion of the two-year sequence.

**Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College.
- Submission of an official copy of American College Test (ACT) results. (This requirement will be waived for students who have completed 12 or more semester hours of college work.)
- High school graduation or equivalent (GED).
- A high school grade average of "C" or better, or if 12 semester hours of college credit have been completed, a college grade average of "C" or better.
- Completion of at least one year of high school biology, chemistry and math with grades of "C" or better, or one semester of college biology, chemistry and math with grades of "C" or better.

Once college work has been completed in any of these subject areas, only college work will be used to determine if the particular subject admission requirement has been fulfilled.

- Satisfactory scores on the Entrance Examination for Schools of Nursing.
- Attendance at a Nursing Program information meeting.

Licensed practical nurses are eligible for admission into the RN completion program after they:

- Fulfill all Nursing Program admission requirements as listed above.
- Arrange an interview with the Director of the Nursing Program.
- Complete BIO 160, BIO 161, PSY 101 and PSY 216 (or their equivalents) with grades of "C" or better.
- Submit an "Employer Evaluation Form."

Licensed Practical Nurses applying for spring semester entry must successfully complete NUR 200 prior to the spring semester in which they plan to enroll in the RN completion program.

Graduates, after passing the LPN or RN licensure examinations, are qualified for positions in a variety of hospital and specialized care settings.

First Year

First Semester

BIO 160 Human Anatomy ¹	4
NUR 101 Nursing Fundamentals	9
NUR 103 Nursing Survey I	1
PSY 101 Introduction to Psychology	3
	<hr/> 17

Second Semester

BIO 161 Human Physiology ¹	4
NUR 102 Nursing Care of Hospitalized Patients	9
PSY 216 Child Psychology	3
	<hr/> 16

Summer Semester

NUR 104 Nursing Field Experience ²	4
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Second Year

First Semester

BIO 130 Microbiology	4
ENG 101 Composition	3
NUR 201 Advanced Nursing I	8
NUR 200 Pharmacology	2
	<hr/> 17

Second Semester

ENG 102 Composition	3
Mathematics elective***	3
NUR 202 Advanced Nursing II	8
NUR 203 Nursing Survey II	1
SOC 101 Introduction to Sociology	3
	<hr/> 18

*Nursing is a limited enrollment program. See Limited Enrollment Programs section of this Bulletin for details.

**Subject to change. Contact the Admissions Office for additional information.

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

¹A grade of "C" or better in BIO 160 and BIO 161 is required for all students entering second level.

²Required for students electing to earn a certificate in Practical Nursing. It is not required for the student who proceeds to the second level of study.

Park and Grounds Operation Management

Park and Grounds Operation Management is a two-year career program leading to an associate in applied science degree. This program prepares the student to function as a park operations supervisor or grounds maintenance supervisor in public parks, high density housing complexes, cemetery-memorial parks, golf courses, industrial-office parks and educational parks.

First Year

First Semester

BIO 120 General Botany	4
PKM 100 Introduction to Park Management	1
PKM 101 Ornamental Plants	4
PKM 140 Grounds Equipment and Shop Operation	4
PED 201 First Aid	2
	<hr/> 15

Second Semester

Mathematics elective***	3
PKM 110 Soil Science	4
PKM 102 Plant Diseases and Pests	4
PKM 106 Introductory Horticulture (2) and PKM 108 Introductory Horticulture Lab (2) or PKM 111 Basic Horticulture Skills (4)	4
	<hr/> 15

Summer Semester¹

PKM 150 Park Management Internship	5
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Second Year

First Semester

English ²	3
PKM 210 Drainage and Irrigation	3
PKM 212 Turfgrass Science	4
PKM 214 Principles of Park Design and Construction	4
Social Science elective	3
	<hr/> 17

Second Semester

English ²	3
Humanities elective	3
PKM 220 Arboriculture	4
PKM 230 Contracts, Specifications, Estimating	3
PKM 250 Park Management Seminar	1
Social Science elective	3
	<hr/> 17

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

¹Strongly recommended elective but not required unless a double degree is desired, which also requires PKM 121 and PKM 140, and one of the following: MGT 111, MGT 150 or MGT 154. Students are reminded that not all courses are offered each semester.

²Students must take either ENG 101 or ENG 130 within the six (6) hour English requirement.

Physical Education¹

The successful completion of the physical education transfer program will enable the student to obtain an associate in science degree and to transfer with junior status to most four-year colleges and universities. To ensure satisfactory transfer, the student is advised to investigate the institution to which he or she plans to transfer for specific general education requirements.

A dance option is provided for students who wish to pursue a physical education degree with an emphasis in dance.

Physical Education

First Year

First Semester

BIO 110 Principles of Biology	4
ENG 101 Composition	3
PED 200 Introduction to Physical Education	2
PED 203 Health	3
PED 222 Football Techniques or PED 224 Basketball Techniques	2
SPE 101 Fundamentals of Speech Communication	3
	17

Second Semester

Elective ²	3
ENG 102 Composition	3
Mathematics elective ³	4
PED 201 First Aid	2
PED 204 Selected Physical Education Activities	2
PED 208 Bioscientific Foundations of Human Movement	3
Physical Education elective	1
	18

Second Year

First Semester

BIO 160 Human Anatomy	4
Humanities elective	3
PED 210 Sports Officiating	2
Physical Education elective	1
PSY 101 Introduction to Psychology	3
Social Science elective	3
	16

Second Semester

BIO 161 Human Physiology	4
Humanities elective	3
PED 206 Athletic Training Techniques	3
PED 209 Principles of Teaching Aerobic Dance/Exercise or PED 228 Aquatics	2
PED 220 Track and Field Techniques or PED 226 Baseball Techniques	2
Science elective	4
	18

Dance Emphasis

First Year

First Semester

BIO 110 Principles of Biology	4
ENG 101 Composition	3
PED 200 Introduction to Physical Education	2
PED 203 Health	3
PED 246 Tap Dance	1
Physical Education elective	1
SPE 101 Fundamentals of Speech Communication	3
	17

Second Semester

Elective	3
ENG 102 Composition	3
Mathematics elective	4
PED 201 First Aid	2
PED 204 Selected Physical Education Activities	2
PED 243 Modern Dance II	1
Physical Education elective	1
	16

Second Year

First Semester

BIO 160 Human Anatomy	4
Humanities elective	3
PED 240 Dance Composition	2
PED 242 Ballet II	1
PSY 101 Introduction to Psychology	3
Social Science elective	3
	16

Second Semester

BIO 161 Human Physiology	4
Humanities elective	3
PED 209 Principles of Teaching Aerobic Dance/Exercise or PED 244 Folk Dance II	2
PED 228 Aquatics	2
PED 241 Jazz Dance II	1
Science elective	4
	16

¹The following physical education courses can, in addition to the "100" level courses, serve to satisfy the 3 credit hour physical education teacher certification requirements for the State of Illinois: PED 201, PED 203, PED 204.

²Elective: HST 111, HST 112 or PSC 101.

³Selection of mathematics elective is contingent on requirements of four-year college or university to which student is transferring.

Real Estate

Real Estate is a two-year career program in professional development for those men and women who desire to excel as real estate salespersons or wish to expand their career opportunities to include managing or owning a real estate business. Career objectives might also include appraising, banking, savings and loan, title company, mortgage brokerage, estate counseling and others.

First Year _____

First Semester

ACC 101 Principles of Accounting Theory I _____	3
ATE 209 Building Construction Principles for Realtors _____	3
ENG 100 Composition or	
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
RES 101 Real Estate Transactions _____	3
RES 105 Real Estate Math Applications or	
SPE 115 Interviewing _____	1
	16

Second Semester

ACC 102 Principles of Accounting Theory II _____	3
ENG 130 Business Writing I _____	3
HST 218 Illinois and Local History _____	3
RES 121 Advanced Principles, Marketing and Brokerage _____	3
RES 123 Real Estate Law _____	3
	15

Second Year _____

First Semester

ACC 211 Business Law I or	
MKT 245 Principles of Marketing _____	3
BFC 112 Principles of Property and Casualty Insurance (2) or	
MKT 140 Salesmanship (3) _____	2-3
DPR 100 Survey of Information Processing or	
DPR 101 Introduction to Data Processing _____	3
RES 122 Real Estate Appraisal I _____	3
RES 124 Real Estate Finance _____	3
	14-15

Second Semester

BFC 212 Home Mortgage Lending or	
MKT 217 Advertising _____	3
ECO 200 Introduction to Economics _____	3
Mathematics elective*** _____	3
PHI 150 Business Ethics _____	3
RES 233 Real Estate Problems Seminar _____	3
	15

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must take a three (3) credit hour RES elective.

Recreation

The successful completion of the recreation transfer program will enable the student to obtain an associate in arts degree and to transfer with junior status to most four-year colleges and universities. To ensure satisfactory transfer, the student is advised to investigate the institution to which he or she plans to transfer for specific requirements.

First Year _____

First Semester

BIO 101 Biology Survey (3) or	
BIO 110 Principles of Biology (4) _____	3-4
ENG 101 Composition _____	3
Humanities elective _____	3
REC 200 Leisure: Its Uses and Resources _____	2
REC 202 Foundations for Recreation and Park Services _____	2
SPE 101 Fundamentals of Speech Communication _____	3
	16-17

Second Semester

ENG 102 Composition _____	3
HST 111 The American Experience to 1877 or	
HST 112 The American Experience since 1877 _____	3
Humanities elective _____	3
PED 201 First Aid _____	2
REC 206 Principles of Camping Management _____	3
Science elective _____	3
	17

Second Year _____

First Semester

PED 203 Health _____	3
PSY 101 Introduction to Psychology _____	3
REC 208 Outdoor Recreation Planning _____	2
REC 210 Performing Arts as Leisure Opportunities _____	2
Science elective _____	3
Social Science elective _____	3
	16

Second Semester

Mathematics elective ¹ _____	3
PED elective ² _____	1
REC 204 Introduction to Therapeutic Recreation _____	2
REC 214 Basic Field Experience _____	2
Science elective _____	3
Social Science elective _____	3
	14

¹Selection of mathematics elective is contingent on requirements of four-year college or university to which student is transferring.

²Select from Contemporary Studies and Life Skills.

Refrigeration and Air Conditioning Technology

Refrigeration and Air Conditioning Technology is a two-year technical program leading to an associate in applied science degree. The courses in the curriculum are theory and service oriented. Theory courses deal with energy conversions. Service courses are strongly related to a hands-on philosophy. Emphasis is placed upon operating and service equipment.

Graduates from this program may be employed as engineering laboratory assistants, equipment salesmen, heating and refrigeration servicemen, estimators and system designers or stationary engineers.

First Year¹ _____

First Semester

English elective ² _____	3
RAC 101 Refrigeration Fundamentals _____	4
RAC 103 Heating Principles _____	4
RAC 105 Heating and Cooling Controls _____	4
	<u>15</u>

Second Semester

MET 101 Drafting for Air Conditioning and Heating ³ _____	3
RAC 102 Refrigeration Systems _____	4
RAC 104 Residential Comfort Systems _____	4
RAC 106 Advanced Controls _____	4
	<u>15</u>

Second Year¹ _____

First Semester

English elective ² _____	3
RAC 201 Refrigeration System Design I _____	4
RAC 203 Air Conditioning Principles _____	4
Social Science elective _____	3
	<u>14</u>

Second Semester

Humanities elective ⁴ _____	3
Mathematics elective*** _____	3
RAC 202 Refrigeration System Design II _____	4
RAC 204 Air Distribution _____	3
Social Science elective _____	3
	<u>16</u>

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete a three (3) credit hour course from the following list: MET 110, MGT 111, MGT 154, MGT 160, RAC 208, RAC 211 or RAC 290.

¹RAC 290 may be substituted for some of the listed RAC courses, with approval of coordinator.

²Students may take ENG 100 or ENG 101 the first semester, depending upon their test scores and the advice of a student development faculty member. ENG 102, ENG 103 or ENG 130 are suggested second semester electives.

³Students will enroll in sections of MET 101 designed for RAC students.

⁴Suggested humanities elective: ART 122 or PHI 110.

Science and Mathematics

The following program is typical of the first two years of a bachelor's degree program in physical science, mathematics or computer science.

Special care should be taken in selecting the laboratory science courses appropriate to the student's career plans. The student's program should be designed so that course sequences are completed at Harper before transfer.

Chemistry and Chemical Engineering majors should elect CHM 131-132 and CHM 204-205, while Physics majors should aim at MTH 201-202 and 203. Mathematics majors should complete the sequence of MTH 105-201, 202 and 203 or 212. Mathematics courses numbered MTH 104 or below usually may not be used for credit other than as electives in these programs.

Some transfer institutions do not require foreign languages in mathematics and science programs. Thus, students may wish to defer their language program until the second year, when transfer plans are known.

Check with the transfer school of your choice for specific requirements in all areas.

First Year _____

First Semester

ENG 101 Composition _____	3
Foreign Language elective _____	4
Mathematics elective _____	3-5
Laboratory Science elective _____	4-5
	<hr/>
	14-17

Second Semester

ENG 102 Composition _____	3
Foreign Language elective _____	4
Mathematics elective _____	3-5
Laboratory Science elective _____	4-5
	<hr/>
	14-17

Summer Semester

MTH 208 FORTRAN or	
MTH 209 PASCAL _____	4

Second Year _____

First Semester

Mathematics elective _____	3-5
Laboratory Science elective _____	4-5
Social Science elective _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<hr/>
	13-16

Second Semester

Contemporary Skills and Life Science elective _____	3-4
Mathematics elective _____	4-5
Laboratory Science elective _____	4-5
Social Science elective _____	3
	<hr/>
	14-17

Secretarial Career

See: Executive Secretarial Development
 Legal Secretary
 Medical Office Assistant
 Medical Secretary

Social Science

The following first-year program is recommended for students who plan to transfer and major in such fields as history, political science, anthropology, psychology or sociology. Check with the school of your choice or a Student Development Center before planning your second year at Harper.

First Year _____	
First Semester	
ENG 101 Composition _____	3
Foreign Language ¹ _____	4
Mathematics or Science elective _____	3-4
Social Science elective _____	3
Elective ² _____	3
	16-17
Second Semester	
ENG 102 Composition _____	3
Foreign Language ¹ _____	4
Mathematics or Science elective _____	3-4
Social Science elective _____	3
Elective ² _____	3
	16-17

¹Check with the transfer school of your choice or a Student Development Center to determine language requirement.

²Additional social science electives may be selected.

Supervisory and Administrative Management

Supervisory and Administrative Management is a two-year career program leading to an associate in applied science degree. The program is designed to assist students in a wide variety of business occupations. The curriculum is structured to meet the needs of individuals interested in gaining or improving management skills. The program not only develops abilities to organize, coordinate and evaluate the functions of a unit, department or branch of an organization in either an industrial or an administrative management capacity, but it also provides the fundamental management skills needed by the successful owner-manager of a business.

First Year _____	
First Semester	
ACC 101 Principles of Accounting Theory I _____	3
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 160 Principles of Supervision _____	3
PSY 101 Introduction to Psychology _____	3
	15
Second Semester	
ACC 102 Principles of Accounting Theory II _____	3
DPR 101 Introduction to Data Processing _____	3
English elective _____	3
Mathematics elective*** _____	3
MGT 270 Principles of Management _____	3
	15
Second Year _____	
First Semester	
ACC 211 Business Law I _____	3
ECO 200 Introduction to Economics _____	3
Management electives ¹ _____	6
MGT 245 Principles of Marketing _____	3
	15
Second Semester	
Humanities elective _____	3
Management electives ¹ _____	6
MGT 218 Introduction to Finance _____	3
MGT 291 Problems in Management and Supervision _____	3
	15

***A proficiency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students who utilize the proficiency test to meet the mathematics requirement must complete a three (3) credit hour MGT elective.

¹These electives require approval of the coordinator or a student development faculty member.

Accounting Aide

This is a certificate program designed for persons interested in pursuing careers as junior accountants in business, industry and government. Despite the increasing use of data processing in accounting work, there is an acute shortage of persons with the training and basic intellect needed to be successful in accounting. Any combination of 19 credit hours may be selected from the courses listed below, providing the appropriate prerequisites have been satisfied.

ACC 101 Principles of Accounting Theory I	3
ACC 102 Principles of Accounting Theory II	3
ACC 155 Tax and Payroll Accounting	4
ACC 201 Intermediate Accounting I	3
ACC 202 Intermediate Accounting II	3
ACC 203 Introductory Cost Accounting	3
ACC 250 Income Tax Accounting	3
ACC 251 Advanced Tax Accounting	3
ACC 252 Advanced Cost Accounting	3
ACC 253 Advanced Accounting I	3
ACC 254 Auditing	3
ACC 255 Advanced Accounting II	3

Accounting Clerk

This certificate program provides the student with the courses needed for an entry level position in such areas as accounts payable, accounts receivable and inventory accounting.

ACC 099 Business Recordkeeping	3
MGT 150 Business Math	3
Typing elective ¹	2
	8

Accounting — Payroll

This certificate curriculum in payroll accounting will provide the student with the courses needed for an entry level position in this particular area. The certificate could be earned in one, or no more than two, semesters.

ACC 155 Tax and Payroll Accounting	4
MGT 150 Business Math	3
Typing elective ¹	2
	9

¹Typing elective: SEC 121, SEC 122 or SEC 221, depending upon previous training and consent of the instructor.

Administrative Assistant

This 30-hour certificate program is designed for persons with secretarial experience who are interested in expanding their business knowledge for higher level positions such as administrative assistant, office manager, or a higher level management position. A combination of 30 credit hours may be selected from the following courses with the approval of the coordinator of the program or a student development faculty member.

Required:

ACC 101 Principles of Accounting Theory I ¹	3
ENG 130 Business Writing I	3
MGT 111 Introduction to Business Organization ¹	3
MGT 160 Principles of Supervision	3
MGT 280 Human Relations in Business	3

Electives: Select at least 15 credit hours from the following courses:

Accounting elective	3
ACC 211 Business Law I ¹	3
DPR 101 Introduction to Data Processing	3
DPR 121 General Accounting Applications for Micros	2
DPR 122 Data Base for Micros	1
DPR 123 Spread Sheet/Budgeting for Micros	1
DPR 124 Decision Support for Micros	1
ECO 200 Introduction to Economics ¹	3
ENG 103 Technical and Report Writing	3
MGT 167 Records Management	3
MGT 265 Personnel Management	3
MGT 267 Office and Administrative Management	3
MGT 270 Principles of Management	3
MGT 275 Labor-Management Relations	3
PSY 145 Psychology in Business and Industry	3
SEC 236 Secretarial Procedures ¹	3
Word Processing equipment electives	1-3

¹For those who have passed the Certified Professional Secretary Examination within the past five years, credit will automatically be given for this course.

Air Conditioning _____

See: Refrigeration and Air Conditioning

Alternative Living Resident Supervisor _____

See: Habilitation Aide

Architectural Technology _____

This is a technical program leading to a certificate upon completion of any of the following course offerings totaling 15 credit hours, providing the combination has approval of a student development faculty member. The curriculum emphasis is on architecture in the related areas of construction, drafting, computer programming, estimating and specifications.

ATE 101 Introduction to Architectural Technology I	4
ATE 102 Introduction to Architectural Technology II	4
ATE 103 Building Materials Technology I	4
ATE 104 Building Materials Technology II	4
ATE 105 Computer Math for Architectural Technology I	3
ATE 106 Computer Math for Architectural Technology II	3
ATE 201 Comprehensive Building Project I	4
ATE 202 Comprehensive Building Project II	4
ATE 203 Construction Problems I	4
ATE 204 Construction Problems II	4
ATE 205 Computer Graphics and Optimization	3
ATE 206 Computer Applications in Architecture	3
ATE 207 Behavior of Architectural Materials I	3
ATE 208 Behavior of Architectural Materials II	3

Banking, Finance and Credit _____

This program, totaling 18 credit hours, is designed for those currently employed in, or seeking employment in, banks, savings and loans associations or other finance-oriented enterprises. The curriculum emphasizes developing the competencies necessary for supervisory and public contact positions in the finance field. Students may apply this entire program toward the two-year associate degree in Banking and Savings Association Management.

ACC 101 Principles of Accounting Theory I	3
BFC 101 Principles of Financial Institution Operations	3
BFC 102 Commercial Law	3
BFC 115 Personal Banking/Advanced Principles or	
BFC 118 Credit Administration	3
BFC 211 Accounting for Financial Institutions	3
Elective ¹	3

¹Elective: BFC 110, BFC 117, BFC 200, BFC 212, BFC 213, BFC 215, BFC 216, BFC 217, BFC 219, BFC 220, BFC 225, BFC 235, ECO 210.

Bread and Pastry Arts _____

This is a one-year certificate program planned to prepare students for entrance into the food service and baking industry. Graduates may be able to secure positions as qualified bakers and bakers' helpers in institutional, retail and commercial bakeries.

FSM elective ¹	3-4
FSM 107 Basic Bread and Pastry Arts	5
FSM 110 Introduction to Food Service	2
FSM 114 Food Standards and Sanitation	3
	13-14

Second Semester	
FSM electives ¹	8
FSM 108 Advanced Bread and Pastry Arts	5
FSM 115 Menu Planning	2
	15

¹FSM electives: FSM 112, FSM 113, FSM 130, FSM 211, FSM 212, FSM 213, FSM 214, FSM 215.

Building Codes and Enforcement

This certificate program, which totals 24 credit hours, is designed to meet the individual and training needs of those employed in the building code compliance field, as well as those in the building and construction industry who are interested in keeping abreast of building code changes and requirements.

The emphasis of this specialized program is on building codes and their interpretation and application in the field. This offers students a unique opportunity to develop and expand their knowledge and skills. The certificate may enhance students' opportunities for employment and career advancement. New employment opportunities are cyclical in nature, and students should consult the program coordinator or student development faculty member before registering for this program.

BCE 101 Basic Construction for Building Codes	3
BCE 102 Basic Code Enforcement Techniques	3
BCE 103 Plumbing and Electrical Codes	3
BCE 104 Basic Mechanical and Energy Conservation Codes	3
BCE 201 BOCA Basic Building Codes	3
ENG 103 Technical and Report Writing	3
FIS 123 Fire Prevention Principles II ¹	3
SPE 101 Fundamentals of Speech Communication	3

¹Prerequisite of FIS 122 will be waived.

CAD Technician

This certificate program is developed for persons interested in a concentrated exposure in computer aided drafting, or CAD. This is especially suitable for those in the field of engineering who wish to fill a gap in their knowledge or those who wish to receive pre-service training in the area of CAD.

MET 102 Technical Drafting	3
MET 103 Descriptive Geometry	3
MET 235 Computer Graphics	5
MET 236 Special Problems in Three-Dimensional Graphics	3
Technical electives ¹	3-5

17-19

¹Electives: MET 105, MET 211, MET 237, NMC 101.

Certified Professional Secretary

This is a 6 credit hour certificate program specifically designed for individuals with a high degree of secretarial skill and business experience who are currently employed as secretaries and wish to raise their level of professionalism and/or qualify for promotion into executive secretarial, administrative assistant or managerial types of positions within a company.

This program emphasizes advanced secretarial and business training in order to provide the secretary with a deeper and broader understanding of the dynamics of the business world and the vital role performed by the secretary in the ever-increasing demands of the business.

SEC 260 Behavioral Science in Business	1
SEC 261 Business Law	1
SEC 262 Economics and Management	1
SEC 263 Accounting	1
SEC 264 Office Administration and Communication	1
SEC 265 Office Technology	1

Child Development _____

This certificate program, totaling 18 credit hours, emphasizes theoretical and practical aspects of early childhood education. This certificate will satisfy preliminary college credit requirements for employment in child development and early childhood education centers for normal and handicapped children.

Required:

CCA 102 Child Development I _____	3
CCA 103 Child Development II _____	3

Electives: Select any 12 credit hours from the following courses:

CCA 101 Introduction to Child Development Careers _____	3
CCA 111 First Three Years of Life _____	3
CCA 115 Principles of Day Care _____	3
CCA 209 Language Arts for the Young Child _____	3
CCA 210 Creative Activities for Young Children _____	3
CCA 214 Principles of Preschool Education _____	6
CCA 218 Principles of Special Education _____	6
CCA 219 Psychology of Exceptional Children _____	3
CCA 220 Child Development Practicum Internship _____	6
CCA 221 Workshop in Early Childhood Education _____	3
CCA 225 Mental Health in Child Development _____	3
CCA 226 Child Guidance _____	3
CCA 230 Movement and Rhythms for the Young Child _____	3
CCA 235 Principles of School Age Care _____	3
CCA 236 Administration of School Age Child Care _____	3
CCA 252 Child-Family-Community _____	3
CCA 253 Administration of Early Childhood Programs _____	3
HSC 220 Health, Nutrition and Safety _____	3

CNC Technician _____

This certificate program allows for in-depth course work in numerical control. Computers are now integrated into the systems used in the control of manufacturing equipment. Capabilities of these systems are similar to those of many small microcomputers. CNC, which stands for computerized numerical control, relates to this type of system. The following courses should help provide an individual with the background to assume a responsible position in this area.

MET 105 Basic Machine Shop _____	3
NMC 101 Introduction to NC/CAM _____	3
NMC 105 Part Programming I _____	3
NMC 215 Part Programming II _____	3
Technical electives ¹ _____	6
	18

¹Technical electives may be chosen from ELT 110, MET 205, MTH 100, MTH 106.

Criminal Justice _____

This certificate program is designed to provide specialized education for those currently employed, or other interested persons who wish to obtain a certificate indicating completion of the courses as a group. Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has coordinator approval. These courses must be taken at Harper College.

CRJ 101 Introduction to Criminal Justice _____	3
CRJ 105 Criminal Courts of the U.S. _____	3
CRJ 116 Introduction to Forensics _____	3
CRJ 203 Law and Society _____	3
CRJ 207 Vice and Drug Control _____	3
CRJ 213 Crime Prevention _____	3
CRJ 215 Alternatives to Confinement _____	3
CRJ 216 Investigative Process _____	3
CRJ 220 Police Administration _____	3
CRJ 222 Police Operations _____	3
CRJ 224 Police Supervision _____	3
CRJ 226 Case Management _____	3
CRJ 235 Street Procedures _____	4
CRJ 238 Defensive Techniques _____	3

Culinary Arts _____

This is a one-year certificate program planned to prepare students for entrance into the food service industry. Graduates may be able to secure positions as head cooks, assistant cooks, specialty cooks or chefs' assistants.

First Semester

FSM elective ¹ _____	3-4
FSM 109 Basic Quantity Culinary Arts _____	5
FSM 111 Introduction to Food Service _____	2
FSM 114 Food Standards and Sanitation _____	3
	13-14

Second Semester

FSM electives ¹ _____	8
FSM 110 Advanced Quantity Culinary Arts _____	5
FSM 115 Menu Planning _____	2
	15

¹FSM electives: FSM 112, FSM 113, FSM 130, FSM 211, FSM 212, FSM 213, FSM 214, FSM 215.

Data Processing — Computer Operator

This is a two-semester certificate program which includes the study of introduction to data processing, computer logic and programming technology, programming systems, an internship at an industrial training station and general clerical subjects. Graduates may find employment as computer operators, tape librarians, peripheral equipment handlers or in other clerical positions in data processing installations in business, industry and government.

First Semester

DPR 101 Introduction to Data Processing	3
DPR 106 Computer Logic and Programming Technology	3
DPR 135 Computer Operator (DOS)	3
ENG 101 Composition	3
MGT 111 Introduction to Business Organization	3
	15

Second Semester

Data Processing elective ¹	3-5
DPR 136 Job Control/Utilities	3
ENG 103 Technical and Report Writing	3
MGT 150 Business Math	3
	12-14

¹Elective: DPR 108, DPR 120, DPR 121, DPR 122, DPR 123, DPR 124, DPR 125, DPR 130 or DPR 170.

Data Processing — Microcomputers in Business

This is a certificate program designed to familiarize a student with the business uses of microcomputers. The student will gain exposure to a variety of microcomputers and micro-computer software. This exposure will be useful to the person whose job or business requires the use of a microcomputer.

ACC 101 Principles of Accounting Theory I	3
Data Processing elective ¹	3
DPR 101 Introduction to Data Processing	3
DPR 130 BASIC for Business	4
DPR 132 Advanced Business Software Packages	4
SEC 110 Basic Keyboarding	1
	18

¹Elective: Three hours are to be selected from DPR 120, DPR 121, DPR 122, DPR 123, DPR 124 or DPR 125.

Data Processing — Technical

Any combination of 15 credit hours may be selected from the courses listed below, providing the appropriate prerequisites have been satisfied.

DPR 101 Introduction to Data Processing	3
DPR 106 Computer Logic and Programming Technology	3
DPR 108 Computer Programming — COBOL	5
DPR 110 Computer Programming — Assembler Language	5
DPR 120 Introduction to Business Software Packages ¹	3
DPR 121 General Accounting Applications for Micros ¹	2
DPR 122 Data Base for Micros ¹	1
DPR 123 Spread Sheet/Budgeting for Micros ¹	1
DPR 124 Decision Support for Micros ¹	1
DPR 125 Word Processing for Micros ¹	1
DPR 130 BASIC for Business	4
DPR 132 Advanced Business Software Packages	4
DPR 135 Computer Operator (DOS)	3
DPR 140 RPG II Programming	3
DPR 142 PL/I Programming Language	3
DPR 150 Business FORTRAN	3
DPR 160 Introduction to PASCAL Programming	4
DPR 170 Introduction to Data Communications	3
DPR 202 Programming Systems	3
DPR 203 Systems Analysis and Design I	3
DPR 204 Advanced Systems Analysis and Design	3
DPR 208 Computer Programming — Advanced COBOL	4
DPR 210 Computer Programming — Advanced Assembler Language	4
DPR 240 Advanced RPG II	3
DPR 250 Data Processing Math and Computer Statistics	4
DPR 270 Data Communications - Applications	4
DPR 280 Introduction to Data Base	3

¹No more than four hours may be selected from this group.

Digital Electronics and Micro-processor Technology

This is a 23-hour certificate program designed to give the student a job entry level skill in the field of digital electronics and microprocessors.

ELT 110	Introductory Electronics	2
ELT 111	Electronics I, Resistive	3
ELT 203	Electronics II, Digital	5
ELT 206	Electronic Computers	5
ELT 210	Computer Programming	3
MTH 106	Mathematics I	5

Electronics

Any combination of 16 credit hours may be selected from the courses listed below, providing the combination has approval of program coordinator.

ELT 101	Circuits I	5
ELT 102	Circuits II	4
ELT 103	Circuits III, Networks	5
ELT 105	Electro-Mechanical Drafting	3
ELT 110	Introductory Electronics	2
ELT 111	Electronics I, Resistive	3
ELT 203	Electronics II, Digital	5
ELT 204	Electronics III, Advanced Electronics	5
ELT 205	Electronic Instrumentation	4
ELT 206	Electronic Computers	5
ELT 207	UHF Communications and Reception	4
ELT 210	Computer Programming	3
ELT 215	Electrical Control and Motors	4
MTH 100	Basic Applied Mathematics	3
MTH 106	Mathematics I	5
MTH 107	Mathematics II	5
MTH 206	Mathematics III	3

Fashion Design

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has coordinator approval.

FAS 101	Flat Pattern Design and Draping I	3
FAS 102	Flat Pattern Design and Draping II	3
FAS 103	Apparel Design and Construction I	3
FAS 104	Apparel Design and Construction II	3
FAS 105	Fashion Design Illustration I	1
FAS 106	Fashion Design Illustration II	1
FAS 107	Textiles I	2
FAS 108	Textiles II	2
FAS 109	Fashion Arts and Design	2
FAS 110	Costume History	2
FAS 114	Fashion Modeling	1
FAS 201	Advanced Flat Pattern Design and Draping I	4

FAS 202	Advanced Flat Pattern Design and Draping II	4
FAS 203	Advanced Diversified Apparel Design I	4
FAS 204	Advanced Diversified Apparel Design II	4
FAS 205	Tailoring Techniques I	2
FAS 206	Tailoring Techniques II	2
FAS 209	Advanced Fashion Illustration I	1
FAS 210	Advanced Fashion Illustration II	1
FAS 212	Visual Fashion Merchandising	2

Fire Science Technology

This certificate program is designed to upgrade people currently employed in the fire science field and to enable them to seek more responsible positions within that field by furthering their knowledge in special areas of fire science.

Electives: Select at least 6 credit hours from the following courses:

ENG 100	Composition	3
ENG 101	Composition	3
ENG 103	Technical and Report Writing	3
SOC 101	Introduction to Sociology	3
MTH 100	Basic Applied Mathematics	3

Electives: Select at least 9 credit hours from the following courses, providing the combination has approval of a student development faculty member:

FIS 100	Introduction to Fire Science	3
FIS 101	Municipal Fire Administration I	3
FIS 103	Fire Fighting Tactics I	3
FIS 112	Fire Alarm and Extinguishing Systems	3
FIS 115	Construction Design and Fire Safety	3
FIS 122	Fire Prevention Principles I	3
FIS 123	Fire Prevention Principles II	3
FIS 132	Hazardous Materials I	3
FIS 133	Hazardous Materials II	3
FIS 145	Fire Instructor I	3
FIS 201	Municipal Fire Administration II	3
FIS 203	Fire Fighting Tactics II	3
FIS 222	Fire Prevention Principles III	3
FIS 223	Fire Prevention Principles IV	3
FIS 224	Fire Prevention Principles V	3
FIS 242	Fire Hydraulics	3
FIS 262	Water Supply Analysis	3
HSC 110	Emergency Medical Technician Training	5

Food Service Management _____

This certificate program is designed for people presently employed in the food service industry to enable them to upgrade their management skills or to assume more responsible positions. A minimum of 15 credit hours may be selected from the courses listed below.

FSM 111 Introduction to Food Service _____	2
FSM 114 Food Standards and Sanitation _____	3
FSM 115 Menu Planning _____	2
FSM 130 Hospitality Law and Risk Management _____	4
FSM 210 Hospitality Facility Maintenance _____	3
FSM 211 Purchasing and Storage _____	3
FSM 212 Food Service Supervision _____	4
FSM 214 Cost Control _____	3
FSM 215 Restaurant Layout and Equipment _____	3

Habilitation Aide Certificates _____

Habilitation Aide

A one semester, six-credit-hour certificate program leading to recognition by the Department of Public Health and the Department of Mental Health as a habilitation aide, employable in state-approved residential facilities, serving the developmentally disabled.

CHA 105 Habilitation Aide I _____	4
CHA 110 Habilitation Aide II _____	2

Alternate Living Resident Supervisor¹

This four-credit-hour certificate program is designed for those interested in working with developmentally disabled persons who are living in small group homes and other alternate residential facilities where residents function in a more independent environment than those in the intermediate care facilities.

Required:

CHA 140 Alternate Living Resident Supervisor I _____	4
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Elective:²

CHA 145 Alternate Living Resident Supervisor II _____	2
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¹Students must possess certification as a habilitation aide.

²Strongly recommended elective but not required.

Horticulture _____

This is a 16-credit-hour program designed for students wishing to acquire basic knowledge and techniques in the ornamental horticulture field for personal or vocational use. The techni-

cal training will benefit those students who are currently employed or contemplating employment in any of several ornamental horticulture occupations.

Required:

BIO 120 General Botany _____	4
PKM 110 Soil Science _____	4
PKM 106 Introductory Horticulture (2) and PKM 108 Introductory Horticulture Lab (2) or PKM 111 Basic Horticultural Skills (4) _____	4

Elective: Select one course.

PKM 101 Ornamental Plants _____	4
PKM 102 Plant Disease and Pests _____	4

Industrial and Retail Security¹ _____

This certificate program is designed to provide a specialized group of courses for those presently employed and for those who may wish to have a better knowledge of this employment area when seeking employment in the security field. To qualify for the certificate, students must take a total of 15 credit hours at Harper College.

Required:

CRJ 250 Industrial Security Administration _____	3
CRJ 252 Industrial Fire Protection, Disaster Control _____	3
CRJ 253 Safety Management _____	3

Electives:

CRJ 201 Criminal Law I _____	3
CRJ 202 Criminal Law II _____	3
CRJ 213 Crime Prevention _____	3
CRJ 216 Investigative Process _____	3
CRJ 222 Police Operations _____	3
CRJ 226 Case Management _____	3
CRJ 235 Street Procedures _____	4
CRJ 238 Defensive Techniques _____	3

¹Students having special needs should see the coordinator.

Industrial Sales Management and Development _____

This program is designed to provide in-service and pre-service training and development for industrial sales and sales management personnel representing manufacturers, service marketers, wholesalers or other marketing middlemen. Through the selection of courses, this program can satisfy both the career needs of individuals seeking to develop and expand their selling and account servicing skills and individuals preparing for sales management responsibilities. This program would be especially appropriate for individuals who are entering the professional field without a formal sales or marketing education.

Program requirements are satisfied by completing 6 hours from Group I and 9 hours from Group II for a total minimum of 15 credit hours. To achieve an individual program designed to complement the student's industrial and educational background, the selection of courses should be made in consultation with the coordinator.

Electives: Group I (select at least two courses¹).

MKT 140 Salesmanship	_____3
MKT 141 Sales Management	_____3
MKT 240 Advanced Sales Skills	_____3
MKT 247 Consumer Buying Behavior	_____3

Electives: Group II (select at least three courses¹).

ACC 211 Business Law I	_____3
MAT 125 Purchasing	_____3
MGT 111 Introduction to Business Organization	_____3
MGT 160 Principles of Supervision	_____3
MKT 141 Sales Management	_____3
MKT 240 Advanced Sales Skills	_____3
MKT 245 Principles of Marketing	_____3
MKT 246 Industrial Marketing	_____3
MKT 247 Consumer Buying Behavior	_____3

¹Students must satisfy prerequisites for each course selected.

Interpreter Training* _____

The Interpreter Training Program is a part-time 30 hour certificate program designed to provide students with entry level interpreting/transliterating skills, a general knowledge of deafness and an understanding of the interpreting profession. Students enrolled in this program must already possess sign language skills as determined by a sign language evaluation. For those students not meeting the requirements of the sign language evaluation, Harper courses SGN 101, SGN 102 and SGN 201 are offered to assist in acquiring the necessary skills. (See sign language course information.) In addition to preparing students for careers as full-time interpreters, the program seeks to meet the needs of individuals already working in other fields (such as education, health, business and law) in which interpreting skills would be useful.

Required:

ITP 110 Manual Interpreting/ Transliterating I	_____3
ITP 111 Voice Interpreting/ Transliterating I	_____3
ITP 120 Manual Interpreting/ Transliterating II	_____3
ITP 121 Voice Interpreting/ Transliterating II	_____3
ITP 201 Issues in Interpreting	_____4
ITP 210 Special Areas of Interpreting	_____3

ITP 211 Voice Interpreting/ Transliterating III	_____3
ITP 220 Interpreting Practicum	_____2
PSY 101 Introduction to Psychology	_____3
PSY 150 Psychology of Deafness	_____3

*Interpreter Training is a limited enrollment program. Contact the Admissions Office for details.

Legal Secretary _____

This certificate program is designed for persons who possess a high degree of office secretarial skill and are interested in pursuing secretarial careers in law firms, government or law departments of business firms. This is a 27-credit hour program in which 18 credit hours are required courses.

Required:

SEC 102 Survey of Law Office Practice	_____2
SEC 133 Word Processing Equipment: IBM Personal Computer	_____1
SEC 137 Word Processing Equipment: Wangwriter	_____1
SEC 225 Dictation and Transcription	_____5
SEC 234 Legal Office Procedures	_____3
SEC 235 Legal Dictation and Transcription	_____3
SEC 236 Secretarial Procedures	_____3

Electives: Select any three of the following courses with the advice of the coordinator.

ACC 101 Principles of Accounting Theory I	_____3
ACC 211 Business Law I	_____3
Economics elective ¹	_____3
MGT 111 Introduction to Business Organization	_____3
MGT 267 Office and Administrative Management	_____3
SEC 170 Introduction to Word Processing	_____3

¹Economics elective: ECO 115, ECO 200 or ECO 201.

Machinist _____

This certificate program allows those interested or presently engaged in metalworking to develop knowledge and skills to assume responsible positions in the field.

MET 102 Technical Drafting _____	3
MET 105 Basic Machine Shop _____	3
MET 110 Basic Welding _____	3
MET 205 Advanced Machine Shop _____	3
Technical electives ¹ _____	3-5
	15-17

¹Technical electives: MET 108, MET 202, MET 210, MTH 100, MTH 106.

Material Management _____

This certificate program is designed to provide in-service education for those persons working directly in, or in fields related to, material management and physical distribution. This particular curriculum format is especially suitable for those who may be in the field and are seeking to fill in knowledge or skill "gaps" in their total preparation. Additionally, the program may provide pre-service training for those who may seek or be transferred into jobs within these fields.

Required:

MAT 101 Fundamentals of Material Management _____	3
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Electives: Group I (select at least four courses).

MAT 120 Production Control Concepts _____	3
MAT 121 Principles of Physical Distribution _____	3
MAT 122 Inventory Control _____	3
MAT 123 Traffic and Transportation _____	3
MAT 124 Material Handling and Packaging _____	3
MAT 125 Purchasing _____	3

Electives: Group II (select one course).

DPR 203 Systems Analysis and Design I _____	3
MAT 220 Advanced Production Control _____	3
MAT 221 Distribution Center Operations _____	3
MAT 223 Legal Aspects of Material Management _____	3
MAT 224 Advanced Material Handling and Warehousing _____	3
MAT 225 Practice of Regulatory Agencies _____	3
MAT 226 Material Requirements Planning (MRP) _____	3
MAT 228 Finance for Material Managers _____	3
MAT 259 Advanced Purchasing _____	3
MAT 280 Material Management Policy _____	3

MGT 225 Applied General Statistics _____	3
MGT 270 Principles of Management _____	3

Mechanical Drafting _____

This certificate program has been developed in conjunction with area industries to prepare students for challenging careers in drafting.

MET 102 Technical Drafting _____	3
MET 103 Descriptive Geometry _____	3
MET 211 Process Planning and Tool Design _____	4
MTH 100 Basic Applied Mathematics or MTH 106 Mathematics I _____	3-5
Technical elective ¹ _____	3
	16-18

¹Electives: MET 105 MET 201, MET 235.

Medical Office Assistant _____

This one-year certificate is designed for the person interested in improving his/her medical assisting skills or expanding previous office experience. The curriculum offers training in order to perform a variety of administrative and clinical tasks to facilitate the work of the physician in a medical office, clinic or other health care setting. Administrative duties include patient reception, oral and written communications, and recordkeeping. Clinical duties include assisting with examinations and diagnostic tests, collection of laboratory specimens, and patient interaction. An orientation session is conducted and it is strongly recommended that interested persons attend. Detailed information will be sent to you upon request or upon application to the program.

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or BIO 160 Human Anatomy _____	4
HSC 112 Medical Terminology _____	2
HSC 190 Clinical Procedures I _____	2
SEC 101 Introduction to the Health Care Field _____	3
Secretarial Science elective ¹ _____	1
SEC 241 Medical Office Procedures _____	4
	16

Second Semester

BIO 136 Introduction to Human Disease _____	3
HSC 211 Clinical Procedures II _____	4
HSC 212 Clinical Laboratory Procedures _____	3
HSC 213 Medical Law and Ethics _____	3
SEC 240 Medical Transcription I _____	3
	16

Summer Semester

SEC 246 MOA Externship and Seminar _____	4
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¹Secretarial Science elective: SEC 133, SEC 137.

Medical Secretary _____

A one-year certificate program designed for the person who is interested in expanding his/her previous office experience or health care training and learning skills necessary to work as a medical secretary in a health care facility, insurance company, extended care facility, home health care agency, pharmaceutical house, medical supply company, or hospital in administration, nursing or other medical services department. Alternate job titles, or those similar to medical secretary, would include medical receptionist, doctor's secretary, insurance secretary, claims clerk, nursing unit secretary, ward clerk, medical typist or dental receptionist/secretary. An orientation session is conducted and it is strongly recommended that interested persons attend. Detailed information will be sent to you upon request or upon application to the program.

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy _____	4
HSC 112 Medical Terminology _____	2
SEC 101 Introduction to the Health Care Field _____	3
SEC 131 Business Machines _____	2
Secretarial Science electives ¹ _____	2
SEC 230 Executive Machine Transcription _____	2
	<u>15</u>

Second Semester

BIO 136 Introduction to Human Diseases _____	3
HSC 213 Medical Law and Ethics _____	3
MGT 267 Office and Administrative Management _____	3
SEC 240 Medical Transcription I _____	3
SEC 241 Medical Office Procedures _____	4
	<u>16</u>

Summer Semester

SEC 245 Medical Secretarial Externship and Seminar _____	4
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¹Secretarial Science electives: SEC 133, SEC 137.

Medical Transcriptionist _____

A one-year certificate program designed for the person interested in expanding previous secretarial or health care experience and learning skills necessary to transcribe medical reports in a hospital, large medical practice or clinic. An orientation session is conducted and it is strongly recommended that interested persons attend. Detailed information will be sent to you upon request or upon application to the program.

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy _____	4
HSC 112 Medical Terminology _____	2
HSC 190 Clinical Procedures I _____	2
SEC 101 Introduction to the Health Care Field _____	3
SEC 230 Executive Machine Transcription _____	2
SEC 240 Medical Transcription I _____	3
	<u>16</u>

Second Semester

BIO 136 Introduction to Human Diseases _____	3
HSC 211 Clinical Procedures II _____	4
HSC 213 Medical Law and Ethics _____	3
Secretarial Science electives ¹ _____	2
SEC 242 Medical Transcription II _____	3
	<u>15</u>

Summer Semester

SEC 244 Medical Transcription Seminar and Externship _____	4
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¹Secretarial Science electives: SEC 133, SEC 137.

Operating Room Technician*

This certificate program is one full year in length, two semesters and an eight-week summer session. It prepares students to function as members of the surgical team under the supervision of qualified professional nurses in hospital areas concerned with the principles and practice of surgical asepsis as applied to the surgical patient before, during and following surgery.

**Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College.
- Submission of an official copy of American College Test (ACT) results. (This requirement will be waived for students who have completed 12 or more semester hours of college work.)
- High school graduation or equivalent (GED).
- Completion of at least one year of high school biology with a grade of "C" or better, or one semester of college biology with a grade of "C" or better.
- A satisfactory personal interview with the coordinator of the Operating Room Technician Program.

Upon successful completion of the program the students will be eligible to take the National Certification Examination of the Association of Operating Room Technicians.

First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy	4
HSC 112 Medical Terminology	2
ORT 101 Operating Room Techniques I	6
ORT 111 Clinical Hospital Practicum I	5
	17

Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology (4)	3-4
ORT 102 Operating Room Techniques II	6
ORT 112 Clinical Hospital Practicum II	6
PSY 101 Introduction to Psychology	3
	18-19

Summer Semester

ORT 103 Operating Room Techniques III	2
ORT 113 Clinical Hospital Practicum III	7
	9

*Operating Room Technician is a limited enrollment program. See Limited Enrollment Programs section of this Bulletin for details.

**Subject to change. Contact the Admissions Office for additional information.

Park and Grounds Operation Management

This certificate program is designed to provide technical training for students who are currently employed or contemplating employment in the many facets of park and ground maintenance operations. These courses can also be taken by students wishing to acquire techniques and knowledge in this area for personal or vocational use. Any combination of 16 credit hours may be selected from courses listed below, providing the combination has coordinator approval.

BIO 120 General Botany	4
PKM 100 Introduction to Park Management	1
PKM 101 Ornamental Plants	4
PKM 102 Plant Diseases and Pests	4
PKM 110 Soil Science	4
PKM 106 Introductory Horticulture (2) and	
PKM 108 Introductory Horticulture Lab (2) or	
PKM 111 Basic Horticultural Skills (4)	4
PKM 121 Facilities Management	3
PKM 140 Grounds Equipment and Shop Operation	4
PKM 210 Drainage and Irrigation	3
PKM 212 Turfgrass Science	4
PKM 214 Principles of Park Design and Construction	4
PKM 220 Arboriculture	4
PKM 230 Contracts, Specifications, Estimating	3
PKM 240 Grounds Equipment Power Units	4
PKM 241 Management of Ice Rink Facilities	3
PKM 242 Golf Course Management	4
PKM 245 Management of Aquatic Facilities	4

Personal Banking

This certificate program is specifically designed for individuals with experience as a personal banker with a bank or savings and loan institution, who wish to raise their level of professionalism within the industry. This program emphasizes advanced investment planning skills and a deeper and broader understanding of the services offered through a financial institution.

ACC 155 Tax and Payroll Accounting	4
BFC 101 Principles of Financial Institution Operations	3
BFC 110 Principles of Insurance	3
BFC 115 Personal Banking/Advanced Principles	3
BFC 200 Investment Management	3
BFC 213 Trust Functions and Services	3
MKT 140 Salesmanship	3

22

Pharmacy Technician _____

This certificate program provides technical and practical pharmaceutical knowledge leading to employment as an assistant to a registered pharmacist. It offers basic academic training in prescription order processing, inventory activities, over-the-counter drug sales, recordkeeping, product prepackaging, bulk compounding and manufacturing, computer operations and related tasks. A practicum serves to expand the technical training of the technician by actual on-the-job pharmacy experience.

Currently, the State of Illinois requires a pharmacy apprentice license for internship (practicum) and employment in a pharmacy. The applicant for a pharmacy license should be free of conviction of any criminal offense (other than minor traffic violations).

First Semester

HSC 112 Medical Terminology _____	2
PHT 101 Introduction to Pharmacy Technology _____	1
PHT 102 Pharmacy Law _____	1
PHT 110 Pharmacology I _____	4
PHT 111 Pharmacy Operations I _____	4
PSY 107 Humanistic Psychology _____	2
SEC 099 Review Typing _____	1
SEC 136 Word Processing Equipment: ForeWord _____	1
	<u>16</u>

Second Semester

BIO 136 Introduction to Human Disease _____	3
PHT 112 Pharmacy Operations II _____	5
PHT 120 Pharmacology II _____	4
PHT 140 Sterile Products and Aseptic Techniques _____	3
	<u>15</u>

Summer Semester

PHT 113 Pharmacy Technician Practicum _____	6
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Production Engineering Technician _____

This certificate program allows for in-depth course work in the technical aspects of manufacturing, quality control and production planning. Such a program should provide an individual with the necessary background to assume a responsible position in these areas. Any combination of at least 15 credit hours may be selected from the courses listed below, provided that the combination has the program approval of the coordinator.

MAT 120 Production Control Concepts _____	3
MET 102 Technical Drafting _____	3
MET 105 Basic Machine Shop _____	3
MET 108 Manufacturing Processes and Materials _____	3
MET 211 Process Planning and Tool Design _____	4
MTH 100 Basic Applied Mathematics ¹ _____	3
NMC 101 Introduction to NC/CAM _____	3
NMC 105 Part Programming I _____	3
NMC 215 Part Programming II _____	3
NMC 220 Special Problems _____	3

¹Students with appropriate background should elect MTH 106.

Production Welding _____

This certificate program allows for those interested or presently working in a welding occupation to prepare for work and/or a more responsible position in the field. This certificate is not to be confused with the American Welding Society or local industrial welding certifications.

MET 102 Technical Drafting _____	3
MET 105 Basic Machine Shop _____	3
MET 110 Basic Welding _____	3
MET 210 Advanced Welding _____	3
Technical electives ¹ _____	3-5
	<u>15-17</u>

¹Technical electives: MET 108, MET 205, MET 206, MTH 100.

Real Estate

This is a certificate program of professional development for those presently engaged in the real estate business and for those who want an opportunity to explore the field. A total of 18 credit hours is required for this program. Any of the required courses in the sequence can be applied toward meeting the educational requirements of the Illinois Real Estate Licensure Laws.

Required:

RES 101 Real Estate Transactions	3
RES 121 Advanced Principles, Marketing and Brokerage	3
RES 122 Real Estate Appraisal I	3
RES 123 Real Estate Law	3
RES 124 Real Estate Finance	3

Elective: Select one course.

ATE 209 Building Construction Principles for Realtors	3
RES 230 Property Management Methods	3
RES 232 Real Estate Appraisal II	3
RES 233 Real Estate Problems Seminar	3

Refrigeration and Air Conditioning Certificates

The following certificate programs are designed to prepare the students for servicing refrigeration and heating equipment or selling environmental equipment to contractors and/or servicemen.

Heating Service

RAC 103 Heating Principles	4
RAC 105 Heating and Cooling Controls	4
RAC 106 Advanced Controls	4
	12

Refrigeration Service

RAC 101 Refrigeration Fundamentals	4
RAC 102 Refrigeration Systems	4
RAC 105 Heating and Cooling Controls	4
RAC 106 Advanced Controls	4
	16

Refrigeration and Air Conditioning

MET 101 Drafting for Air Conditioning and Heating	3
RAC 101 Refrigeration Fundamentals	4
RAC 102 Refrigeration Systems	4
RAC 103 Heating Principles	4
RAC 104 Residential Comfort Systems	4
RAC 105 Heating and Cooling Controls	4
RAC 106 Advanced Controls	4
	27

Residential Comfort Systems

RAC 101 Refrigeration Fundamentals	4
RAC 103 Heating Principles	4
RAC 104 Residential Comfort Systems	4
RAC 105 Heating and Cooling Controls	4
RAC 106 Advanced Controls	4
	20

Retail Merchandising

This is a 14-credit-hour certificate program designed for individuals with career interests in the retail management field. It is especially appropriate for those individuals employed in retailing who are seeking skills and knowledge which may prepare them for career advancement.

Required:

FAS 212 Visual Fashion Merchandising	2
MKT 106 Merchandising of Furnishings and Softline Goods or	
MKT 250 Retailing	3
MKT 251 Retail Merchandise Management	3

Electives: Select at least 6 credit hours from the following courses:

ACC 099 Business Recordkeeping or ACC 101 Principles of Accounting Theory I	3
MGT 111 Introduction to Business Organization	3
MGT 154 Small Business Management	3
MGT 160 Principles of Supervision	3
MKT 245 Principles of Marketing	3

Secretarial and General Office Certificates

The following certificate programs are designed specifically for individuals without any formal office training or for persons currently in the work force who want to acquire additional knowledge and skills for specific office positions. Credit hours received for one certificate may be applied toward any other certificate or degree program in Secretarial Science.

Certified Professional Secretary

See: Certified Professional Secretary

General Office Assistant¹

This certificate program is designed for persons interested in working in an office in any type of business organization. The curriculum is designed to give basic training in office skills and business knowledge that is expected in the business world today.

Graduates of the program are prepared for positions as typists, clerks, receptionists and general office assistants. A combination of 28 credit hours may be selected from the following courses, with approval of the coordinator or a student development faculty member:

ACC 099 Business Recordkeeping	3
DPR 123 Spread Sheet/Budgeting for Micros	1
ECO 115 Consumer Economics	3
ENG 100 Composition	3
ENG 130 Business Writing I	3
MGT 111 Introduction to Business Organization	3
MGT 150 Business Math	3
SEC 099 Typewriting Review	2
SEC 121 Elementary Typing	2
SEC 122 Intermediate Typing	2
SEC 131 Business Machines	2
SEC 133 Word Processing Equipment: IBM Personal Computer	1
SEC 137 Word Processing Equipment: Wangwriter	1
SEC 236 Secretarial Procedures	3
SPE 101 Fundamentals of Speech Communication	3

¹Placement into courses contingent upon previous training.

Legal Secretary

See: Legal Secretary

Secretarial

This certificate program is designed to give experience, training and development in secretarial skills in order to obtain general secretarial or word processing secretarial positions, to be promoted into a secretarial position or to expand and update one's secretarial/office skills. Students may apply this entire program toward the two-year Executive Secretarial Development degree program.

A combination of 21 credit hours is required for this certificate with the approval of the coordinator or student development faculty member.

Required:

SEC 100 Introduction to Secretarial Administration	2
SEC 133 Word Processing Equipment: IBM Personal Computer	1
SEC 220 Automated Office Practices	4
SEC 225 Shorthand II ¹ (5) or SEC 230 Executive Machine Transcription (2)	2-5
SEC 236 Secretarial Procedures	3

Electives: Select at least 6-9 credit hours from the following courses:

ENG 130 Business Writing I	3
DPR 121 General Accounting Applications for Micros	1
DPR 122 Data Base for Micros	1
DPR 123 Spread Sheet/Budgeting for Micros	1
DPR 124 Decision Support for Micros	1
SEC 122 Intermediate Typing ¹	2
SEC 131 Business Machines	2
SEC 137 Word Processing Equipment: Wangwriter	1
SEC 225 Shorthand II ¹	5
SEC 230 Executive Machine Transcription	2
SPE 101 Fundamentals of Speech Communication	3

¹Placement into courses contingent upon previous training.

Supervisory and Administrative Management _____

This is a certificate program requiring completion of 18 credit hours.

Required:

MGT 111 Introduction to Business Organization _____	3
MGT 160 Principles of Supervision _____	3
MGT 270 Principles of Management _____	3
MGT 291 Problems of Management and Supervision ¹ _____	3

Electives: Select at least 6 credit hours from the following courses:

ACC 101 Principles of Accounting Theory I _____	3
MGT 154 Small Business Management _____	3
MGT 165 International Management _____	3
MGT 167 Records Management _____	3
MGT 168 OSHA Standards and Compliance Procedures _____	3
MGT 265 Personnel Management _____	3
MGT 267 Office and Administrative Management _____	3
MGT 274 Industrial Management _____	3
MGT 275 Labor-Management Relations _____	3
MGT 280 Human Relations in Business _____	3

¹MGT 291 should be the last course taken in completing this sequence.

Word Processing Operator _____

This certificate program is designed for the individual with good typing skills who is interested in entering the field of word processing as a word processing operator.

English ¹ _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 167 Records Management _____	3
SEC 122 Intermediate Typing ² _____	2
SEC 133 Word Processing Equipment: IBM Personal Computer ³ _____	3
SEC 137 Word Processing Equipment: Wangwriter _____	1
SEC 139 Word Processing Equipment: Advanced Wangwriter _____	1
SEC 230 Executive Machine Transcription _____	3
	<u>19</u>

¹Students may take ENG 100, ENG 101 or ENG 130 depending upon their English assessment and the advice of a student development faculty member.

²Students must meet prerequisite; those who do not should first enroll in either SEC 099 or SEC 121, depending on their typing background.

³Students may select any three word processing programs currently offered.

Course Descriptions

Course Numbering System

Courses Offered at Harper College

Course Numbering System

In general, courses numbered below 100 are not intended for transfer credit. These courses may be counted toward the A.A.S. degree, but not the A.A. or A.S. degrees.

Courses numbered 100 or above may be expected to fulfill transfer requirements. In some cases the courses designed primarily for vocational programs may not be acceptable in transfer to all four-year institutions. Students should see a student development faculty member for clarification on the transferability of these courses.

Courses numbered 200 and above are intended for the sophomore level.

Sample Course Listing

ACC 211 Business Law I (3-0)	3 hrs.
— course title	
— course number	
— course prefix	
— hours of lecture	
per week	
hours of lab	
per week	
— semester hours	
of credit	

The following outlines of courses offered at Harper College describe the content of each course at the time of publication of the Bulletin. Harper College reserves the right to revise course content to reflect changing conditions, trends and information within the discipline.

Course Outlines

In accordance with Illinois law, Harper College maintains a file of course outlines for all courses listed in the Bulletin. Complete information is given on course content, methodology and objectives. The outlines are available for student review in the Division offices or in the office of the Dean of Instruction.

Prerequisites

Many course descriptions state that a prerequisite (for example — satisfactory completion of a specific course or instructor consent) is necessary for enrollment in such a course. Students are advised that enrolling in a course without satisfying the prerequisite may result in the student being withdrawn from such course at the request of the instructor. Refer carefully to Bulletin course descriptions.

Accounting

ACC 099 Business Recordkeeping (3-0) **3 hrs.**

Standard bookkeeping procedures for small firms, both business and professional. Journalizing, posting and preparing trial balances and financial statements. Procedures for handling petty cash and bank deposits and withdrawals.

ACC 101 Principles of Accounting Theory I (3-0) **3 hrs.**

Presents course material in the following sequential order with emphasis on the basic structure of accounting, accounting for a merchandise enterprise, receivables, payables, inventories, deferrals and accruals, intangible assets, accounting systems and payroll systems.

ACC 102 Principles of Accounting Theory II (3-0) **3 hrs.**

Presents course material in the following sequential order with emphasis on partnerships, corporations, brand accounting, cost accounting (job order and process cost), standard cost, individual income taxes, cost-volume-profit relationships, statement of changes in financial condition and financial statement analysis.

Prerequisite: ACC 101.

ACC 155 Tax and Payroll Accounting (4-0) **4 hrs.**

Explanation of the federal tax structure and instruction in the application of tax principles to specific problems. Also, the preparation of payroll records, including tax returns for old age benefits and employment insurance.

ACC 201 Intermediate Accounting I (3-0) **3 hrs.**

Problem solving course in accounting principles begun in ACC 101 and ACC 102. Accounting and reporting process, accounting theory, inventories, tangible and intangible fixed assets.

Prerequisite: ACC 102.

ACC 202 Intermediate Accounting II (3-0) **3 hrs.**

Accounting for corporations, including capital stock, retained earnings, bonds payable, income statement and balance sheet analysis, pensions and leases, fund flow analysis, consignments and installment sales.

Prerequisite: ACC 201.

ACC 203 Introductory Cost Accounting (3-0) **3 hrs.**

Includes an examination of the nature of costs and the use of relevant accounting data for purposes of improved decision making. Topics covered are product costs (process, job order

and standard), overhead variance, by-product costs, joint-product cost and direct and variable costing.

Prerequisite: ACC 102.

ACC 211 Business Law I (3-0) 3 hrs.

History of the source of law, civil and criminal wrongs, law of contracts, agency, employment, property and related topics. Problems and case materials are used.

(NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

ACC 212 Business Law II (3-0) 3 hrs.

Business organizational concepts, commercial transactions, basic legal concepts of commercial paper, sales, secured transactions, creditors' rights and related topics. Problems and case materials are used.

Prerequisite: ACC 211.

(NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

ACC 213 Legal Environment of Business (3-0) 3 hrs.

Introduces the student to the nature, function and application of law in the commercial context. Emphasizes the regulation of business by statutes, administrative regulations and court decisions.

Prerequisite: ACC 211 or consent of instructor.

ACC 250 Income Tax Accounting (3-0) 3 hrs.

Offers a practical study of current federal and Illinois state income taxes as they relate to business and individual income tax procedures. Topics studied include income inclusions and exclusions, capital gains and losses, business and personal deductions and accounting methods.

Prerequisite: ACC 102.

ACC 251 Advanced Tax Accounting (3-0) 3 hrs.

Presents the basic concepts of corporation income taxation, partnerships, estates and trusts. The course includes a study of the taxation on the transfer of wealth, both during lifetime and testamentary.

Prerequisite: ACC 102.

ACC 252 Advanced Cost Accounting (3-0) 3 hrs.

Continues the study of cost accounting concepts with an emphasis on the development of accounting information for management decisions. Topics include segment performance measurement, transfer pricing, cost behavior patterns, capital budgeting and decision models.

Prerequisite: ACC 203.

ACC 253 Advanced Accounting I (3-0) 3 hrs.

Studies municipal accounts, business combinations and the preparation of consolidated financial statements. Topics will include branches, consolidated statements, elimination of intercompany transactions, general funds and nonprofit service organizations.

Prerequisite: ACC 202.

ACC 254 Auditing (3-0) 3 hrs.

Examines the auditory theory and procedures involving the topical areas of audit reporting, auditing standards and evidence, statistical, sampling and electronic data processing. The legal and ethical dimensions of auditing will also be studied with emphasis on how government affects financial reporting through court decisions, federal securities laws, the S.E.C. and the Foreign Corrupt Practice Act.

Prerequisite: ACC 253.

ACC 255 Advanced Accounting II (3-0) 3 hrs.

Continues the study of advanced accounting concepts with heavy problem solving and simulated professional examination conditions.

Prerequisite: ACC 253.

Adult Educational Development

AED 001 Nonnative Literacy Skills I (1-0 to 4-0) 1-4 hrs.

Introduces basic English syntactic structures and a practical repertory of noun vocabulary and cultural information. Exercises pre-reading and pre-writing skills as needed and introduces phonic analysis. Focuses on simple, practical reading and writing tasks. Prepares the student for AED 002.

AED 002 Nonnative Literacy Skills II (1-0 to 4-0) 1-4 hrs.

Reviews and expands basic syntactic structures, adding cultural information and vocabulary needed for everyday situations. Introduces word order and sequencing as literacy skills and continues studies of phonic analysis. Prepares the student for AED 003.

AED 003 Nonnative Literacy Skills III (1-0 to 4-0) 1-4 hrs.

Completes the study of basic syntactic structure in the context of everyday situations. Introduces prediction in reading and capitalization and punctuation in writing; completes the study of phonic analysis. Prepares the student for AED 004.

AED 004 Nonnative Literacy Skills IV (1-0 to 4-0) 1-4 hrs.

Introduces basic concepts related to personal finances, driver education, transportation, health care and community resources. Studies American customs related to greeting cards and gifts, appropriate eye contact and concepts of time and space. Introduces and/or reinforces cursive script reading, levels of formality, relaxed pronunciation and idiomatic expressions.

AED 021 Basic Reading Skills (1-0 to 4-0) 1-4 hrs.

Introduces basic word recognition and word attack skills including prereading skills, sight words, phonics skills and structural analysis skills; comprehension and advanced reading skills in relation to words, sentences, selections and sequence; and specialized skills in locating and organizing information, reading maps, interpreting graphs, tables or diagrams, and developing personal reading skills. Introduces skills of application, analysis and evaluation of reading materials. Prepares the student for AED 023.

AED 023 Pre-GED Reading Skills (1-0 to 3-0) 1-3 hrs.

Reinforces and reviews word recognition and word attack skills of structural analysis; comprehension and advanced reading skills including deriving meaning from words, sentences, selections and identifying sequence; specialized reading skills including locating and organizing information, reading maps and interpreting graphs, tables or diagrams; and personal reading skills. Introduces skills of application, analysis and evaluation. Prepares the student for AED 025.

AED 025 GED Social Studies and Science (1-0 to 6-0) 1-6 hrs.

Reviews specific social studies, science and U.S./Illinois Constitution content areas and skills. Emphasis is upon review of comprehension, application, analysis and evaluation levels of cognitive skills. Prepares the student for the GED Social Studies, Science and U.S./Illinois Constitution tests.

AED 031 Basic English Skills (1-0 to 6-0) 1-6 hrs.

Presents basic English grammar and usage, spelling rules, vocabulary/dictionary use, capitalization and punctuation. Develops skill in producing short, clear writing examples. Prepares the student for AED 033.

AED 033 Pre-GED English Skills (1-0 to 3-0) 1-3 hrs.

Reinforces basic English grammar and usage, spelling rules, vocabulary/dictionary use, capitalization, punctuation and sentence/paragraph development. Introduces skills of application, analysis and evaluation. Prepares the student for AED 035.

AED 035 GED Writing Skills and Literature (1-0 to 3-0) 1-3 hrs.

Reviews basic grammar and usage: sentence structure, style, logic and paragraph organization, punctuation, capitalization and spelling. Produces writing samples that require the writer to take a position and defend it with appropriate evidence, detail and argumentative strategies. Prepares students for the GED Writing Skills Test. Reviews literary types, terms, techniques, interpretation and commentary to prepare the student for the GED Interpreting Literature and the Arts Test.

AED 041 Basic Mathematical Skills (1-0 to 6-0) 1-6 hrs.

Introduces basic arithmetic skills including the fundamental operations with whole numbers, decimals, fractions and mixed numbers, verbal reasoning and measurement systems. Prepares the student for AED 043.

AED 043 Pre-GED Mathematical Skills (1-0 to 3-0) 1-3 hrs.

Reinforces arithmetic skills including the fundamental operations with decimals, fractions, mixed numbers, verbal reasoning and measurement systems. Introduces percents, ratio and proportion and charts and graphs. Introduces comprehension, application, analysis and evaluation levels of cognitive skills. Prepares the student for AED 045.

AED 045 GED Mathematics (1-0 to 3-0) 1-3 hrs.

Reviews arithmetic skills including decimals, fractions, numbers, verbal reasoning, measurement, percents, ratio and proportion and charts and graphs. Introduces algebra and geometry concepts, multi-step problem solving, using formulas and numeration statistics. Emphasizes review of comprehension, application, analysis and evaluation levels of cognitive skills. Prepares the student for the GED Mathematics Test.

AED 065 Adult Pre-Employment Skills (1-0 to 3-0) 1-3 hrs.

Introduces, reinforces or reviews the world of work and values clarification, interest, attitude and work inventories, aptitude and skill assessment, career exploration, job search, employment documents, interviewing, job retention skills and resignation or dismissal.

AED 071 Citizenship Training (1-0 to 3-0) 1-3 hrs.

Introduces the basic structure, functions and purposes of U.S. federal, state and local government and major aspects of American history. Reviews the responsibilities and application/test procedures for U.S. citizenship. Studies American customs and institutions.

Air Conditioning

See: Refrigeration and Air Conditioning

Anthropology

ANT 101 Introduction to Anthropology (3-0) 3 hrs.

Addresses such central questions as "What does it mean to be human?" and "How did we get to be the way we are?" Among the topics to be examined will be human, physical and cultural evolution, the origin of culture, language, religion, kinship, economics and the impact of contemporary life on the world's populations.

ANT 202 Cultural Anthropology (3-0) 3 hrs.

Describes and analyzes how people throughout the world define and resolve the problems of life that are found everywhere. Some of the specific topics studied will be religion, social structure, law, "the unknown," economics and the formation of behavior within particular groups.

ANT 203 American Indians (3-0) 3 hrs.

Designed to acquaint the student with our American heritage. There are detailed studies of various American Indian groups, both before and after the arrival of the Europeans. The religion, social organization, art work and relationship to the natural environment of the native American is viewed as offering solutions for some of the problems that confront the Western world today.

ANT 204 Archeology and Physical Anthropology (3-0) 3 hrs.

Describes 20 million years of human development and evolution, through viewing the fossil record and other sources of archeological information. The rise and development of modern civilization are studied, as are the archeological methods of scientists who examine culture change through the long prehistorical growth of mankind.

ANT 250 Field Methods in Archeology I (1-4) 3 hrs.

Provides intensive introduction to the methods and techniques of archeological survey and excavation through practical fieldwork, accompanied by lecture and discussion. The student will participate in laboratory analysis of materials excavated within the Midwest. Prerequisite: ANT 101 and/or consent of the instructor.

(NOTE: This course is taught only at an archeological site during the summer.)

ANT 255 Field Methods in Archeology II (1-4) 3 hrs.

Designed for students who have had previous field school experience at the introductory level. This is an intensive course in advanced field methods in archeology. In addition to the continued pursuit of excavation procedures and techniques, the student will be concerned with some of the theoretical and interpretative aspects of archeological analysis. Prerequisite: ANT 101, ANT 250 and/or consent of instructor. (NOTE: This course is taught only at an archeological site during the summer.)

Architectural Technology

ATE 101 Introduction to Architectural Technology I (1-6) 4 hrs.

Introduces pragmatic fundamentals of architecture and general technical procedures. Covers drafting and sketching, working drawings, mechanical and electrical services and estimating and specification formats.

ATE 102 Introduction to Architectural Technology II (1-6) 4 hrs.

Introduces orthographic, oblique and perspective projections. Covers cross-referencing, indexing, specifications and cost control budgeting. Includes development of working drawings and specifications.

ATE 103 Building Materials Technology I (2-4) 4 hrs.

Covers typical brick bearing walls and their methods of bonding. Includes wood floor, wall and ceiling construction based on balloon and platform framing.

ATE 104 Building Materials Technology II (2-4) 4 hrs.

Covers column, beam, girder and cladding assemblies based on bolted and welded construction techniques. Prerequisite: ATE 103 or consent of instructor.

ATE 105 Computer Mathematics for Architectural Technologies I (3-0) 3 hrs.

Covers basic algebra and an introduction to trigonometry; introduction to FORTRAN IV, application to architectural area and volume computations for gross floor and exterior wall designs.

ATE 106 Computer Mathematics for Architectural Technologies II (3-0) 3 hrs.

Covers algebra, trigonometry and analytic geometry related to computer techniques applicable to architectural building materials. SYMAP planning, critical path and building geometry. Prerequisite: ATE 105 or consent of instructor.

- ATE 201 Comprehensive Building Project I (0-8)** 4 hrs.
Covers finish materials, zoning and building ordinance formats, specification, mechanical and electrical equipment coordination, site utilities, working drawings, shop drawing format and building optimization in estimating.
Prerequisite: ATE 102.
- ATE 202 Comprehensive Building Project II (0-8)** 4 hrs.
Analyzes zoning and building code requirements applicable to developing and completion of building projects. Covers architectural practice, construction, scheduling, itemized cost estimates, contingency provisions, general condition and architect-engineer-contractor fee schedule.
Prerequisite: ATE 201.
- ATE 203 Construction Problems I (2-4)** 4 hrs.
Covers detailing, investigation and analysis of fire resistivity of materials, construction types. Underwriters Laboratories hourly ratings, fire-proofing, sprinkling and insurance requirements.
Prerequisite: ATE 104.
- ATE 204 Construction Problems II (2-4)** 4 hrs.
Covers detailing of stairs, glazing, sealants, millwork, suspended ceiling systems, doors, windows, ceramic tile and roofing. Investigates bronze, aluminum, stainless steel, interior terrazzo, granite and marble.
Prerequisite: ATE 203.
- ATE 205 Computer Graphics and Optimization (3-0)** 3 hrs.
Covers basic principles of differential and integral calculus for computer applications related to graphics, zoning ordinances and building codes.
Prerequisite: ATE 106.
- ATE 206 Computer Applications in Architecture (3-0)** 3 hrs.
Covers special problems emphasizing actual job conditions using total computer techniques for building specifications, perspectives, working drawings and optimization programs in estimating.
Prerequisite: ATE 205.
- ATE 207 Behavior of Architectural Materials I (3-0)** 3 hrs.
Covers the strength of materials with integrated topics from physics. Introduces major concepts in scientific thought, interpretation of physical measurement and structural development of matter. Emphasizes application to building construction.
Prerequisite: ATE 104.
- ATE 208 Behavior of Architectural Materials II (3-0)** 3 hrs.
Continues ATE 207. Covers interactions of matter interpreted through concepts of force, motion and energy, the visible and invisible electromagnetic spectrum and the nature of electric fields and forces. Includes Hooke's Law, elasticity, shear and moment diagrams.
Prerequisite: ATE 207.
- ATE 209 Building Construction Principles for Realtors (3-0)** 3 hrs.
Covers fundamental aspects of building principles. Includes legal description, surveys, foundations, masonry and frame walls, roofing, insulation, interior finishes, painting, heating, ventilating, air conditioning, plumbing and electrical installations. Covers the fundamentals of cost estimating.
- ATE 210 Cost Estimating (3-0)** 3 hrs.
Introduces methods of preparing estimates for various types of building contracts. Covers order of magnitude, scope, fast track, guaranteed maximum, guaranteed minimum with cost saving contingency and lump sum contract.
Prerequisite: ATE 203 or consent of instructor.
- ATE 211 Solar Energy Architecture (3-0)** 3 hrs.
Surveys fundamentals of solar energy for low temperature applications. Covers history of solar energy, sun power, climatic data, energy conservation, heat loss calculations, state of solar use, solar calculations, systems and costs.
- Art**
-
- ART 100 Art Seminar (1-0)** 1 hr.
Problems relating to the artist and art student. Required of all majors. May be repeated up to two hours credit.
- ART 105 Introduction to Arts (3-0)** 3 hrs.
Introduction to study of visual arts with an emphasis on the following aspects: building the student's awareness of aesthetic concepts, theory and criticism; developing sensitivity to works of art; and acquainting the student with vocabulary applicable to describe visual situations. Required of all majors.
- ART 110 Drawing I (0-6)** 3 hrs.
Studio course emphasizing the design elements and principles as applied to visual imagery.
- ART 111 Drawing II (0-6)** 3 hrs.
Studio course emphasizing the interaction between design abilities, image and content.
Prerequisite: ART 110 or consent of instructor.

ART 121 Design I (0-6) 3 hrs.

Studio course emphasizing the use of design elements and principles as applied to concepts of second dimension.

ART 122 Design II (0-6) 3 hrs.

Studio course emphasizing the use of design elements and principles as applied to concepts of the third dimension.

Prerequisite: ART 121 or consent of instructor.

ART 201 Drawing Studio (0-6) 3 hrs.

Studio course emphasizing drawing as visual idea. May be repeated up to six hours credit.

Prerequisite: ART 111 or consent of instructor.

ART 206 Printmaking Studio (0-6) 3 hrs.

Emphasizes traditional and contemporary methods of graphic reproduction of visual ideas pertaining to the fine arts. May be repeated up to six hours credit.

Prerequisite: ART 111, ART 121 or consent of instructor.

ART 225 Figure Drawing Studio (0-6) 3 hrs.

Studio course with primary emphasis on drawing the human figure in action and from still poses. Rapid sketching, long poses, memory work, studio and lecture. May be repeated up to six hours credit.

Prerequisite: ART 111 or consent of instructor.

ART 236 Composition (0-6) 3 hrs.

Emphasizes pictorial composition in line, value, pattern and color. May be repeated up to six hours credit.

Prerequisite: ART 111 and ART 121.

ART 261 Painting Studio (0-6) 3 hrs.

Emphasizes the relationship between painting and visual ideas. May be repeated up to six hours credit.

Prerequisite: ART 122 or consent of instructor.

ART 270 Stagecraft (0-6) 3 hrs.

Emphasizes the technical processes of the stage. Includes stage structures and scenery, construction processes, lighting theory and practices, costuming and relating equipment and hardware. Laboratory work will be correlated with the school's theatrical productions.

ART 291 Ceramics Studio (0-6) 3 hrs.

Emphasizes the exploration of ceramic media as related to the expression of visual ideas. May be repeated up to six hours credit.

Prerequisite: ART 122 or consent of instructor.

ART 296 Sculpture Studio (0-6) 3 hrs.

Emphasizes the exploration of sculptural media as related to visual ideas. May be repeated up to six hours credit.

Prerequisite: ART 122 or consent of instructor.

Astronomy**AST 101 Introductory Astronomy (3-2) 4 hrs.**

Introduces the various topics of astronomy using a non-mathematical approach. Covers the origin of the universe, structure and composition of galaxies, the solar system, historical astronomy, constellations, meteors, comets and the latest from space exploration. Laboratory experience will complement the above.

Banking, Finance and Credit**BFC 101 Principles of Financial Institution Operations (3-0) 3 hrs.**

Surveys the internal operations of a bank and of a savings and loan association. Emphasizes the general principles of operations applicable to institutions of all sizes. Provides a sound foundation for newcomers to the industry regardless of age or prior academic experience.

BFC 102 Commercial Law (3-0) 3 hrs.

Provides a general knowledge of, and prepares the banker or credit manager to act in accordance with, legal principles pertaining to business and to banking. Topics include contracts, commercial paper, bank deposits and collections, bankruptcy, the Statute of Frauds, insurance law and appropriate articles of the Uniform Commercial Code.

BFC 110 Principles of Insurance (3-0) 3 hrs.

Surveys the concepts of risk management for individuals and companies. Analyzes the various types of life, health, real property and liability insurance and the rights and obligations of the policy owner and the life insurance company.

BFC 112 Principles of Property and Casualty Insurance (2-0) 2 hrs.

Presents the fundamental principles of property and casualty insurance. Designed for those seeking to qualify for the insurance profession in the State of Illinois. Subject matter includes the legal and ethical characteristics of property and liability insurance.

BFC 113 Principles of Life, Accident and Health Insurance (2-0) 2 hrs.

Presents the fundamental principles of life, accident and health insurance. Designed for those seeking to qualify for the insurance profession in the State of Illinois. Subject matter includes the contractual, legal and ethical characteristics of life, accident and health insurance.

**BFC 115 Personal Banking/
Advanced Principles (3-0) 3 hrs.**

Continues the study of financial institution operations, emphasizing concepts relating to personal banking. Primary coverage will include customer investment counseling with emphasis on the services offered through a financial institution. Topics include checking accounts, N.O.W. accounts, time deposits, money market accounts and the contractual nature of these accounts. Also includes ownership methods, insurance coverage and an introduction to consumer lending. Recommended prerequisite: BFC 101.

**BFC 117 Marketing for Financial
Institutions (3-0) 3 hrs.**

Provides an overview of the essentials of public relations and marketing for financial institutions. Includes the goals, development, implementation and evaluation of internal and external public relations and marketing plans.

**BFC 118 Credit Administration 3 hrs.
in Financial Institutions (3-0)**

Emphasizes the identification and examination of factors influencing and determining a financial institutional loan policy. Topics include methods of credit investigation and analysis, credit operation techniques, case problems in credit administration and standard and unconventional types of loans.

**BFC 200 Investment 3 hrs.
Management (3-0)**

Studies the basic principles and fundamentals of public and corporate securities and their markets. Alternative investment practices, objectives and tax implications will be considered. Further presents advanced investment analysis techniques dealing with commodities, options, financial futures and precious metal selection.

Prerequisite: Prior or concurrent enrollment in ECO 115 or MGT 111.

**BFC 201 Commercial Credit and 3 hrs.
Collection Principles (3-0)**

Provides the principles of commercial credit management. Emphasizes analysis and control of funds advanced to customers through sales (Accounts Receivable Management). Topics include credit associations, asset management, credit policies, basic principles of credit analysis and collection principles.

Prerequisite: ACC 101 or consent of coordinator.

**BFC 202 Advanced Commercial 3 hrs.
Credit and Collection (3-0)**

Continues study of commercial credit management. Emphasis is placed on Accounts Receivable Management. Topics include financial statement analysis, budgeting, bad debts and

receivables cash flow and a detailed study of bankruptcy proceedings and international credit transactions.

Prerequisite: BFC 201.

**BFC 211 Accounting for Financial 3 hrs.
Institutions (3-0)**

Basic accounting procedures, techniques and systems used in banks, savings and loans and other financial institutions. Emphasis on the components of the Statement of Condition and Income Statement.

Prerequisite: ACC 101, BFC 101 and consent of coordinator.

**BFC 212 Home Mortgage 3 hrs.
Lending (3-0)**

Emphasizes the role of the mortgage loan officer seeking to develop a sound mortgage portfolio. The mortgage market is described, followed by the acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan processing and servicing and finally the obligations of the mortgage loan officer in overall portfolio management.

Recommended prerequisite: ACC 211.

**BFC 213 Trust Functions and 3 hrs.
Services (3-0)**

Introduction to trust operations. Presents the duties of, and services rendered by, institutions engaging in trust business, differentiating between the business and legal aspects of trust functions. Intended for all bankers and not limited to only those specializing in trust functions and services.

**BFC 215 Financial Statements 3 hrs.
Interpretation and
Analysis (3-0)**

Explores the characteristics of financial statements and financial statements analysis. Emphasis is on the income statement, balance sheet and sources and uses of funds statement. Effects of reserves, inventory valuations, depreciation, depletion, amortization, subsidiaries and affiliates. Cash flow, reported earnings and taxable earnings. Interpretation of the financial data by means of ratio analysis. Prerequisite: ACC 101.

**BFC 216 Bank Auditing and 3 hrs.
Internal Control (3-0)**

Explores principles, standards, techniques and professionalism in bank auditing. External audits and the role of the external auditor. Internal control, audit procedures and the role of the internal auditor. Audits by directors, trust department audits, EDP audits, other audits. Customer confirmations.

Prerequisite: ACC 101 (MGT 111 is recommended).

BFC 217 Uniform Commercial Code (3-0) 3 hrs.

The Uniform Commercial Code and related uniform acts and their impact upon common documents. Instruments considered include negotiable instruments, nonnegotiable instruments and quasi-negotiable instruments. Topics include formal requirements form and content, interpretation, delivery, negotiation, endorsement, presentment, notice of dishonor and protest, acceptance and certification and discharge.
Prerequisite: BFC 102.

BFC 219 Consumer and Commercial Credit in Financial Institutions (3-0) 3 hrs.

Emphasizes the practical aspects of both consumer and commercial credit management. Techniques of lending such as credit verification, secured and unsecured lending, slow loans and workouts.
Prerequisite: BFC 118 or minimum of six months lending experience.

BFC 220 Human Resource Management in Banking (3-0) 3 hrs.

Presents the theories and application of human resource management in banking. Surveys the techniques of selecting, motivating and controlling bank employees. Personal selection, interviewing, training and rewarding employees will be stressed in this course.
Prerequisite: BFC 101.

BFC 225 International Finance (3-0) 3 hrs.

Emphasizes international trade financing. Presents mechanics of importing and exporting, credit and political considerations. Focuses on credit considerations, market product profiles, letters of credit, collection, credit information outside the United States and entry into these markets.
Prerequisite: ACC 101.

BFC 235 Banking Internship (1-15) 3 hrs.

Provides cooperative work experience as a banking trainee. Credit for this course will be given for participation in supervised cooperative work experience. The experience must be provided through an organized training plan in a college-approved training station. One lecture hour per week will be devoted to job analysis and banking issues.
Prerequisite: Consent of coordinator and completion of the first semester course work in the Banking and Savings Association Management Program.

Biology

BIO 101 Biology Survey (3-0) 3 hrs.

Surveys the science of biology, emphasizing chemical and physical properties of living things; overview of plant and animal kingdoms; systems of control; growth; differentiation; reproduction; genetics, ecology and evolution.

BIO 103 Man and Environment (3-0) 3 hrs.

Surveys and analyzes man's role as an environmental modifier. Ecological, social cultural, economic and political influences on environment are considered. The historical and current pollution problems and other environmental disruptions are analyzed and evaluated. Possible remedial courses of action are discussed and evaluated.

BIO 110 Principles of Biology (3-3) 4 hrs.

Studies and emphasizes cell structure and function by exploring the various patterns that have evolved within cells for carrying out important life functions. This includes cell ultrastructure, cell surface-volume relationships, cellular metabolism and energetics, mitosis and meiosis, genetics, DNA, RNA and protein synthesis, gene action, population genetics, development and environment.
Prerequisite: High school biology with "C" or better, BIO 101 or consent of instructor.

BIO 120 General Botany (3-3) 4 hrs.

Surveys the plant kingdom emphasizing ecological relationships, plants and their growth, structure, physiology and reproduction.
Prerequisite: High school biology with "C" or better, BIO 101 or consent of instructor.

BIO 122 Heredity, Evolution and Culture (3-0) 3 hrs.

Examines life and the evolutionary record with emphasis on man and the gene pool. Factors such as social and environmental entities and the problems of the 20th century are considered.

BIO 130 Microbiology (2-4) 4 hrs.

Examines characteristics and importance of microorganisms; emphasis on identification, anatomy and physiology, control, relationship to health and disease and economic importance.
Prerequisite: High school biology with "C" or better, BIO 101 or BIO 110 or consent of instructor. College chemistry or equivalent is desirable.

BIO 135 Introduction to Human Anatomy and Physiology (4-0) 4 hrs.

Surveys the human body, with emphasis on basic physical and chemical concepts, anatomy, physiology and embryology. Designed to meet the needs of students in certain allied health career programs.

BIO 136 Introduction to Human Disease (3-0) 3 hrs.

Surveys the nature of human disease, with emphasis on the functional disturbances within the body systems. Designed to meet the needs of students in certain allied health career programs. (Cannot be used to satisfy Group III Math or Science requirement.)
Prerequisite: BIO 135, BIO 160 or consent of instructor.

BIO 140 General Zoology (3-3) 4 hrs.

Surveys the animal kingdom based on theory of organic evolution, including morphology, histology, physiology, taxonomy, parasitology, embryology and ecology.
Prerequisite: High school biology with "C" or better, BIO 101 or consent of instructor.

BIO 150 Field Biology (2-4) 4 hrs.

Emphasizes field and laboratory work with local soils, flora, fauna — their collection, identification and ecological relationships. Assists students in acquiring basic working knowledge in field work. Field work or field trips every class day, weather permitting.
Prerequisite: BIO 120, BIO 140 or consent of instructor.

BIO 160 Human Anatomy (3-2) 4 hrs.

Introduces the anatomy of the human body; the following systems studied either regionally or systemically; integumentary, skeletal, articular, muscular, circulatory, lymphatic, nervous, respiratory, digestive, excretory, endocrine and reproductive. Includes some introductory histology. Specially designed for studies in health careers, biology and physical education.
Prerequisite: Academic average of "C" or better or consent of instructor.

BIO 161 Human Physiology (3-2) 4 hrs.

Emphasizes physiological principles at the molecular, cellular, tissue, organ and system level, as they pertain to the human organism. The following systems are studied in detail: skeletal, muscular, circulatory, nervous, digestive, respiratory, urinary, reproductive and endocrine. In this course, special applications will be made to meet the needs of students in health careers, biology and physical education.
Prerequisite: BIO 160.

BIO 210 Biological Principles (3-3) 4 hrs.

Emphasizes the following topics: the origin and evolution of life, cell structure and functions, transformation of energy, biological chemistry, physical and chemical life processes, regulatory mechanisms, cellular reproduction, inheritance, gene action and development. Primarily for Biology major and minor students.
Prerequisite: One semester of college chemistry (CHM 121) or two years of high school chemistry and physics.

BIO 220 Botanical Principles (3-3) 4 hrs.

Studies the plant kingdom emphasizing ecological relationships, evolutionary relationships, growth, structure, physiology, energy relationships, life cycles, and reproduction. Primarily for Biology majors and minor students.
Prerequisite: BIO 210.

BIO 240 Zoological Principles (3-3) 4 hrs.

Studies the animal kingdom emphasizing the evolutionary study from protozoans through vertebrates including organic evolution, morphology, histology, physiology, taxonomy, parasitology, embryology and ecology. Primarily for Biology major and minor students.
Prerequisite: BIO 210.

Building Codes and Enforcement

BCE 101 Basic Construction for Building Codes (3-0) 3 hrs.

Introduces materials used in building construction, their growth or manufacture, preparation and application. Emphasizes frame and masonry construction types, working drawings and structural details for code compliance.

BCE 102 Basic Code Enforcement Techniques (3-0) 3 hrs.

Introduces building inspection principles. Includes application of building codes to structures in the inspection process. Covers application of zoning restrictions and regulations, code interpretation using reference documents, components of field inspection and report requirements. Emphasizes plan and specification review, permit processes and issuance, legal ramifications in inspection law.
Prerequisite: ENG 103 or consent of instructor.

BCE 103 Plumbing and Electrical Codes (3-0) 3 hrs.

Introduces basic theory and code requirements for plumbing and electrical systems and their installation. Concentrates on procedures, practices and layouts and code inspection problems for residential installations up to and including six unit dwellings.

BCE 104 Basic Mechanical and Energy Conservation Codes (3-0) 3 hrs.

Introduces the theory and code requirements for mechanical and energy conservation systems. Covers procedures, layouts and safety principles for heating, cooling and ventilation systems; application of HVAC code requirements for residential units (up to six dwelling units) and light commercial buildings. Includes application of energy conservation code requirements to principles of building inspection and identification of components in heating, ventilating and air conditioning systems to discern code violations.

BCE 201 BOCA Basic Building Codes (3-0) 3 hrs.

Covers the latest edition of the BOCA Basic Building Code. Explains its use, intent, rationale and interpretation. Includes enforcement and administration, liability, plan review and permit process definitions, use groups, types of construction, general building limits, special uses, means of egress, materials and tests, fire resistive construction, mechanical equipment and systems, fire protection systems, electric wiring and equipment, elevators, plumbing systems and use of reference standards.

Cardiac Exercise Technology

HPI 100 Introduction to the Cardiac Exercise Technology Program (1-0) 1 hr.

Exposes students to the exercise laboratory, defines major areas of study and their importance within the curriculum and examines the role of the exercise specialist in various health and fitness centers.

HPI 101 Fundamentals of Exercise Testing (2-2) 3 hrs.

Provides a fundamental understanding of the physiological parameters measured to assess physical fitness, the importance of each measurement and the significance of abnormal findings. In addition, considerable laboratory experience is offered in the operation of sophisticated diagnostic physiological instrumentation.

HPI 102 Exercise Physiology (3-0) 3 hrs.

Examines the effects of muscular activity on basic human functions and relates such effects directly to practice in physical education, athletic coaching and rehabilitative conditioning. Prerequisite: BIO 161.

HPI 103 Advanced First Aid Procedures (1-2) 3 hrs.

Provides practice in the recognition of cardiac arrhythmias, familiarizes students with the primary cardiac medications and their actions, defines the exercise specialist's role in emergency procedures and in the use of emergency equipment and identifies the legal responsibilities and guidelines under which the exercise specialist must function. Prerequisite: HPI 101 and PED 201.

HPI 104 Data Analysis and Exercise Prescription (3-0) 3 hrs.

Defines guidelines for conducting physical fitness tests, provides an in-depth understanding of the physiological significance of data generated during fitness testing and outlines methods for translating such data into exercise

prescriptions both for patients afflicted with cardiovascular disease and for noncardiac subjects.

Prerequisite: HPI 101.

HPI 105 Electrocardiography (3-2) 4 hrs.

Provides instruction and practice in the performance of both resting and exercise diagnostic electrocardiograms, develops skills in basic arrhythmia detection and ST segment analysis and examines the role of the cardiac exercise specialist in cardiovascular preventive/rehabilitative exercise programs.

Prerequisite: HPI 101 and BIO 160.

HPI 106 Cardiovascular Physiology and Pathology (3-0) 3 hrs.

Provides an in-depth understanding of the anatomy and physiology of the cardiovascular system, discusses the risk factors associated with the development and progression of coronary artery disease, examines the effects of coronary artery disease on heart pump function and evaluates the roles of exercise and pharmacotherapeutics in enhancing cardiovascular efficiency.

Prerequisite: HPI 102 and BIO 161.

HPI 107 Internship (0-20) 4 hrs.

Provides students with practical experience in diagnostic exercise testing, exercise prescription and class supervision with both cardiac and noncardiac subjects.

Prerequisite: DIT 101, HPI 102, HPI 103, HPI 104, HPI 105, HSC 112, PED 204, PSY 230.

HPI 108 Practical Experience in Administering Adult Fitness Program (1-2) 2 hrs.

Provides practical experience in organizing, administering and adapting a wide variety of physical education activities to meet the needs of special groups such as patients recovering from cardiovascular irregularities and individuals with multiple risk factors for heart disease. In addition, provides training in fitness testing and techniques for handling special problems related to training cardiac patients.

Chemistry

CHM 100 Chemistry for the Health Sciences (3-3) 4 hrs.

Introduces basic concepts of inorganic and organic chemistry and biochemistry. Emphasizes chemical principles applied to biological systems. Laboratory exercises apply theory to biological and consumer products. Especially designed for students in allied health sciences. Meets the prerequisite of the Nursing Program.

CHM 110 Fundamentals of Chemistry (3-3) 4 hrs.

Introduces concepts of chemistry. Emphasizes the composition of matter, the periodic table, the chemistry of solutions and chemical calculations. For students whose preparation does not permit enrollment in CHM 121 and CHM 131. Prerequisite: MTH 102 or concurrent enrollment.

CHM 121 General Chemistry I (3-3) 4 hrs.

Studies principles of atomic structure, bonding, stoichiometry, states of matter and kinetic theory. Provides laboratory experience in volumetric, gravimetric, gas analytical methods and in molecular weight determinations. Prerequisite: Two semesters of high school chemistry or CHM 110, MTH 102 or concurrent enrollment.

CHM 122 General Chemistry II (3-3) 4 hrs.

Continues CHM 121. Principles of chemical kinetics, equilibria, electro-chemistry, thermodynamics, redox, descriptive chemistry of metals and non-metals and an introduction to organic chemistry. Laboratory includes experiments related to the lecture material along with the theory and practice of qualitative analysis. Prerequisite: CHM 121.

CHM 125 Organic and Biochemistry for the Health Sciences (3-3) 4 hrs.

Introduces principles and health applications of organic chemistry and biochemistry. Studies the structure, nomenclature and reactions of organic compounds. Also studies carbohydrates, lipids, proteins, enzymes, nucleic acids, metabolic pathways and bioenergetics. Includes related laboratory exercises. Intended for students in the allied health sciences but open to all non-physical science majors. Prerequisite: CHM 110 or CHM 121 or placement exam and consent of the chemistry department chairperson.

CHM 131 College Chemistry I (3-6) 5 hrs.

Studies principles of chemistry including molecular, atomic, nuclear and electronic theories of matter and their relations to the periodic table. Quantitatively treats oxidation-reduction, chemical thermodynamics, bonding, behavior of gases, kinetics, equilibrium and solutions. Emphasizes interpretation of laboratory data. Primarily for students in chemistry, chemical engineering or physical sciences. Prerequisite: Two semesters of high school chemistry with at least a "B" average, or at least a "B" in CHM 110, MTH 103 or concurrent enrollment.

CHM 132 College Chemistry II (3-6) 5 hrs.

Continues CHM 131. Primarily for students in chemistry, chemical engineering or physical science curricula. Laboratory includes qualitative analysis. Prerequisite: CHM 131.

CHM 201 Basic Organic Chemistry (3-3) 4 hrs.

Survey of organic chemistry covering nomenclature, structure, reactions and synthesis of the major classes of organic compounds, including hydrocarbons, alcohols, aldehydes, ketones, carboxylic acids and amines. The laboratory includes experiments in distillation, crystallization, chromatography, extraction, synthesis and analysis. Prerequisite: CHM 122 or consent of instructor.

CHM 204 Organic Chemistry I (3-6) 5 hrs.

Application of modern theories of electronic structures to the study of chemical and physical properties of organic compounds. Laboratory includes syntheses, qualitative organic analyses, IR and visible spectrophotometry, gas chromatography, thin-layer chromatography, polarimetry and refractometry. Prerequisite: CHM 122 or CHM 132.

CHM 205 Organic Chemistry II (3-6) 5 hrs.

Continues CHM 204. Prerequisite: CHM 204

CHM 210 Quantitative Analysis (3-6) 5 hrs.

Studies chemical, theoretical and applied methods relevant to sampling, gravimetric analysis, titrimetry, acid-base reactions, chemical separations, chromatography and spectroscopy. Prerequisite: CHM 122 or CHM 132 or equivalent.

Child Development

CCA 101 Introduction to Child Development Careers (3-0) 3 hrs.

Surveys various career opportunities available in early childhood professions. Introduces history and application of child development philosophies. Self-examination of attitudes, skills and abilities needed in this field. Observation/participation in an early childhood program

CCA 102 Child Development I (3-0) 3 hrs.

Presents research, theory and practical application related to development from conception through preschool years. Discusses social, emotional, physical and cognitive growth of the child, children in groups and professional practice.

CCA 103 Child Development II (3-0) 3 hrs.
Presents research, theory and practical application related to development from age 5 through maturity. Discusses social, emotional, physical and cognitive growth within age-related stages. Stresses relevance of developmental theory in working with children and adults in an early childhood program.
Prerequisite: CCA 102 or consent of instructor.

CCA 111 First Three Years of Life (3-0) 3 hrs.
Examines the theories and research related to infants and toddlers with a focus on methods of care given in home-based and school-based infant programs. Observation of infants and infant programs.

CCA 115 Principles of Day Care (3-0) 3 hrs.
Provides practicalities of day care programming. Emphasizes curriculum planning, implementation, assessment, use of materials and equipment. Includes participation in day care program.

CCA 209 Language Arts for the Young Child (3-0) 3 hrs.
Provides study of language development including methods for encouraging language growth, the development of vocabulary and listening skills. Surveys and analyzes children's prose and poetry. Stresses techniques of oral reading, story telling, puppetry and felt board presentations.

CCA 210 Creative Activities for Young Children (3-0) 3 hrs.
Examines the theoretical framework for art and creativity. Acquaints the student with a variety of creative art materials and methods appropriate for use in programs for young children. Includes firsthand experience with materials and planning an art program. Stresses the relationship of the art experience within the curriculum and the role of art experience within the early childhood program.

CCA 214 Principles of Preschool Education (5-2) 6 hrs.
Relates theory and practice of early childhood programming. Emphasizes curriculum, program planning, assessment, use of materials, equipment, role of teacher and techniques of classroom management. Students will observe and participate in early childhood programs.
Prerequisite: Sophomore standing in Child Development or consent of instructor.



CCA 218 Principles of Special Education (5-2) 6 hrs.
Examines the growth and development of severely and profoundly handicapped children. Children with special needs will be studied, with a focus on special education programs, family issues and community concerns. The relevant laws at federal, state and local levels will be discussed. Students will observe and become involved with children in special education programs in the community and become conversant with the language of special education. Prerequisite: PSY 101 or concurrent enrollment, and sophomore standing.

CCA 219 Psychology of Exceptional Children (3-0) 3 hrs.
Stresses identification, classification and programming of exceptional children, individually and in groups. Discusses local, state and federal legislation requirements. Studies specialized educational approaches for exceptional children, including gifted. Prerequisite: PSY 101.

CCA 220 Child Development Practicum Internship (3-15) 6 hrs.
Places the student under supervision as a student teacher in an early childhood classroom. Utilizes skills, techniques and principles learned in child development courses. Student also meets weekly for seminar. Prerequisite: Consent of instructor.

CCA 221 Workshop in Early Childhood Education (3-0) 3 hrs.
Concentrates on the application of Piaget's principles in math and science. Provides experience in planning, implementing and assessing math and science activities; includes construction of teacher-made materials.

CCA 225 Mental Health in Child Development (3-0) 3 hrs.
Focuses on exploration of students' personal experiences within the family and cultural institutions; discusses impact of sex roles, school and family systems; deals with separation issues and family trauma; emphasizes team building and the development of effective interpersonal communication skills. Prerequisite: PSY 101

CCA 226 Child Guidance (3-0) 3 hrs.
Emphasizes theory and practice of effective methods for guiding children's behavior. Includes problems of aggression, passivity and overactivity and methods for guiding emotional growth.

CCA 230 Movement and Rhythms for the Young Child (3-0) 3 hrs.
Presents research, theory and practical application as it relates to teaching music and move-

ment; illustrates appropriate methods, materials and equipment for use in classroom programming.

CCA 235 Principles of School Age Care (3-0) 3 hrs.
Relates theory and practice of school age programming. Emphasizes program planning, implementation and assessment, use of materials, principles of growth and development, role of teacher and techniques of classroom management. Students will observe and participate in school age child care.

CCA 236 Administration of School Age and Child Care (3-0) 3 hrs.
Focuses on the elements which are necessary to administer school age child care programs: establishment and operations, legal issues, policy setting, staff selection, parent and community relationships, physical facilities, programming, budgeting and administrative responsibilities. Prerequisite: CCA 235 or consent of instructor.

CCA 252 Child-Family-Community (3-0) 3 hrs.
Concentrates on teacher's role in working with the child's family and community, stresses parent education, changing families and legal responsibilities. Specifies criteria and methods for effective parent-teacher communication. Includes an in-depth study of community resources.

CCA 253 Administration of Early Childhood Programs (3-0) 3 hrs.
Provides guidelines for the establishment and operation of a child development center. Emphasizes the director's role in programming, school policies, budgeting, record keeping, licensing, municipal codes, insurance, staff development, evaluation procedures, parent communication and community resources.

Communication Skills

CMN 094 Grammar and Usage Review (1-0) 1 hr.
Presents sequential instruction to review grammar and usage. Concentrates on applying basic principles of grammar to the conventions of correct usage. Covers such topics as sentence structure and frequent sentence errors. Carries no transfer credit.

CMN 095 Punctuation Review (1-0) 1 hr.
Presents sequential instruction to review punctuation and mechanics. Covers various punctuation marks and other conventions of form for written communication, such as capitalization and abbreviations. Carries no transfer credit.

CMN 096 Organization Skills (1-0) 1 hr.
Presents sequential instruction in the organizational skills related to written communication. Course will cover outlining, patterns of organization, paragraph structure and other pre-writing topics. Carries no transfer credit.

CMN 097 Spelling Improvement (1-0) 1 hr.
Presents a sequential program of instruction for the student who needs assistance in improving spelling skills. Carries no transfer credit.

CMN 098 Vocabulary Development (1-0) 1 hr.
Presents sequential instruction for the student who desires techniques to acquire a broader vocabulary. Carries no transfer credit.

Criminal Justice

CRJ 101 Introduction to Criminal Justice (3-0) 3 hrs.
History, role, development, and constitutional aspects of law enforcement and public safety. Review of agencies and functions involved in processes of administration of criminal justice.

CRJ 104 Introduction to Corrections (3-0) 3 hrs.
Provides the student with an integrated knowledge about the system through which the criminal offender is processed. Emphasis will be placed upon the philosophical bases of punishment and treatment techniques in institutional community-based programs plus parole programs.

CRJ 105 Criminal Courts of the U.S. (3-0) 3 hrs.
Provides the student with a broad body of knowledge concerning the court structures of the United States. The course will examine the historical development of the judicial branch of government, the role of the courts in the criminal justice system, levels of courts and roles of persons employed in this unit of the Criminal Justice program.

CRJ 116 Introduction to Forensics (3-0) 3 hrs.
Introduces student to the use of scientific disciplines in crime investigation. Identifies the variety of sources of evidence and the means by which comparative analysis can be made. Introduces student to probability theory. Develops skills in crime scene technology, fingerprinting, photography and recording.

CRJ 201 Criminal Law I (3-0) 3 hrs.
Principles of administration and criminal law, theory, history and purpose. Substantive crimes and their punishment, rules of evidence and general criminal procedures.

CRJ 202 Criminal Law II (3-0) 3 hrs.
Continues CRJ 201. Principles of arrest, search and seizure; evaluation of evidence and proof, including kinds, degrees, admissibility and competence. Rules of evidence of particular importance of operational level in law enforcement. Courtroom and criminal trial procedures. Prerequisite: CRJ 201 or consent of coordinator.

CRJ 203 Law and Society (3-0) 3 hrs.
Focuses on the concept of law and its relationship to crime and the administration of criminal justice in a democratic society. Attention is directed toward the historical background of American law, social norms, criminal law, law and force, morals, justice, freedom and custom. An examination of the functions of the executive, legislative and judicial branches of government is made in relationship to law and the administration of criminal justice in present and future societal problems.

CRJ 205 Juvenile Delinquency (3-0) 3 hrs.
Organization, jurisdiction and functions of juvenile agencies. Juvenile court movement, juvenile detention, processing and treatment. Statutes and court procedures for juveniles. Problems of juvenile delinquency, theories of causation and prevention programs. Police responsibilities and contacts, current community, state and federal prevention programs.

CRJ 207 Vice and Drug Control (3-0) 3 hrs.
Historical and sociological development problems in drug addiction and vice control; fundamental understanding of narcotic addiction and effects of hypnotic drugs; the operation of lotteries, bookmaking and other types of gambling and prostitution as these factors are involved in the daily routine of police work.

CRJ 209 Police-Public-Community Relations (3-0) 3 hrs.
Examines current issues in relationships between the police and the community, with emphasis on distinguishing between the concepts of public and community relations, problem areas of racial minority groups, juveniles, the adult criminal offender, the press and the prevention of crime.

CRJ 210 Introduction to Criminology (3-0) 3 hrs.
Examines the nature and extent of crime in American society, theories of crime causation and control of criminal behavior.

CRJ 213 Crime Prevention (3-0) 3 hrs.

Crime prevention as a specific function of police service requiring inputs from both private and public interests. Explores deterrent-reducing programs and introduces contemporary concepts of site-hardening and opportunity education. Examines the philosophy and organization structure of crime prevention units, their service targets and potential problem areas.

CRJ 215 Alternatives to Confinement (3-0) 3 hrs.

Study of formal and informal alternatives to custodial handling of offenders. Takes systems approach to examine traditional and contemporary offender diversion programs. Theories, objectives and the systematic consequences of change are examined.

CRJ 216 Investigative Process (3-0) 3 hrs.

Studies the art of investigation to reconstruct facts and circumstances of any event. Prepares students to plan and execute investigations commonly performed in civil and criminal work with concentration on obtaining direct evidence through interviewing, interrogation, observation and the use of documents and records.

CRJ 220 Police Administration (3-0) 3 hrs.

Introduces basic principles of police administration and management as applied to the police function. Emphasis on organization structure and management processes, identifying the police role in staff functions.

CRJ 222 Police Operations (3-0) 3 hrs.

Examines police operations, including patrol, investigation, traffic, juvenile and special operations. Manpower distribution, analysis of operations and enforcement policy will be stressed.

CRJ 224 Police Supervision (3-0) 3 hrs.

Focuses on supervisory problems within a police organization, equating sound principles of human relations and supervisory techniques to effective police performance. Course includes the topics of morale and discipline motivation, authority and control, the supervisory process and its responsibilities, principles of communications, professional ethics and the decision-making process.
Prerequisite: CRJ 101 or consent of coordinator.

CRJ 226 Case Management (3-0) 3 hrs.

Studies the investigative process from a supervisory and managerial perspective. Emphasizes means of assessing case priorities, resource allocation, performance evaluation and the investigator's relationships with others, influencing the successful completion and prosecution of criminal investigation.

CRJ 235 Street Procedures (3-2) 4 hrs.

Introduces techniques and procedures used by police and security personnel in job-related activities. Includes discussion and practice in areas such as vehicle stops, initiating investigations, responding to calls, building checks, emergency situations, crowd control and report preparation.
Prerequisite: Sophomore standing

CRJ 238 Defensive Techniques (2-2) 3 hrs.

Introduces principles of self-defense and weaponless control for police and security personnel. Includes psychology, physical and mental preparation, practice in defense and control techniques.
Prerequisite: Sophomore standing and consent of instructor.

CRJ 250 Industrial Security Administration (3-0) 3 hrs.

Organization and management of industrial security units including government security; protection of commercial and industrial manpower, facilities, and installations; security and police operations; administrative, legal and technical problems; specialized programs for factories, railroads, retail stores, insurance firms, credit bureaus, etc.

CRJ 252 Industrial Fire Protection Disaster and Control (3-0) 3 hrs.

Administration of fire and accident prevention programs; development of policy, rules, and regulations; operations for fire and accident control; equipment facilities, inspections, investigations and records. Special problems and hazards.

CRJ 253 Safety Management (3-0) 3 hrs.

Principles, responsibility and procedures of management for controlling operations to provide safety in business and industry. Analysis of accident costs, organization and operation of a safety program, psychological aspects, physical conditions and radiation hazards.

CRJ 299 Criminal Justice Practicum (1-10) 3 hrs.

Provides students with a broad educational experience through appropriate observation and directed experience in operating segments of the criminal justice system. Students will be assigned to a criminal justice agency in addition to participation in a seminar.
Prerequisite: Sophomore standing and consent of coordinator.

Data Processing

DPR 100 Survey of Information Processing (3-0) 3 hrs.

Provides the student with an understanding of computers and software as they are used in the business environment. The impact on society is also addressed through discussion of new developments, the rapid rate of technological change, careers, privacy and security. This course is not intended for data processing majors and does not include programming.

DPR 101 Introduction to Data Processing (2-2) 3 hrs.

Covers the history, scope and significance of data processing, including the following areas: mechanical data processing, unit record data processing and electronic data processing systems and equipment. Included in the section of electronic data processing will be a brief study of a rudimentary programming language where the student will write a series of elementary level case studies using the language. (NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

DPR 106 Computer Logic and Programming Technology (2-2) 3 hrs.

Familiarizes the student with the necessary tools to design efficiently the steps in a business computer program. Includes advanced concepts of the BASIC programming language. Requires the students to code and debug their own samples cases. Also teaches documentation, problem analysis, structured programming logic, decision tables, system flowcharting, table utilization and file maintenance. Prerequisite: DPR 101 or concurrent enrollment.

DPR 108 Computer Programming — COBOL (4-4) 5 hrs.

Provides an in-depth study of COBOL. Extensive laboratory experience in writing, testing, debugging and documenting programs for business applications. Emphasis on structured design and documentation. Prerequisite: DPR 101, DPR 106 and MTH 102 with grade of "C" or better or consent of instructor.

DPR 110 Computer Programming — Assembler Language (4-4) 5 hrs.

Utilizes program writing, testing, debugging and documentation, using the IBM S/360-370, 4300, etc., assembler language. Extensive laboratory experience in planning, writing and testing programs for typical business applications. Prerequisite: DPR 108 with grade of "C" or better or consent of instructor.

DPR 120 Introduction to Business Software Packages (2-2) 3 hrs.

Provides an opportunity to become proficient in the use of currently popular software packages on a variety of microcomputers.

DPR 121 General Accounting Applications for Micros (1-2) 2 hrs.

Provides an opportunity to become proficient in the use of a currently popular general accounting package. Prerequisite: ACC 101 with a grade of "C" or better or consent of instructor.

DPR 122 Data Base for Micros (.5-1) 1 hr.

Provides an opportunity to become proficient in the use of a currently popular data base package.

DPR 123 Spread Sheet/Budgeting for Micros (.5-1) 1 hr.

Provides an opportunity to become proficient in the use of a currently popular spread sheet package.

DPR 124 Decision Support for Micros (.5-1) 1 hr.

Provides an opportunity to become proficient in the use of a currently popular decision support package. Prerequisite: DPR 123 with a grade of "C" or better or consent of instructor.

DPR 125 Word Processing for Micros (.5-1) 1 hr.

Provides an opportunity to become proficient in the use of a currently popular word processing package.

DPR 130 BASIC for Business (3-2) 4 hrs.

Utilizes elementary as well as some extended features of the BASIC programming language, with particular emphasis on practical business-oriented applications appropriate for the types of microcomputers and minicomputers used in small businesses. Prerequisite: DPR 101 with a grade of "C" or better or consent of instructor.

DPR 132 Advanced Business Software Packages (3-2) 4 hrs.

Provides an opportunity to build a business system using BASIC programming and software packages. These systems will be developed on a variety of microcomputers. Prerequisite: DPR 130, ACC 101, SEC 110 and three credit hours chosen from: DPR 120, DPR 121, DPR 122, DPR 123, DPR 124 and DPR 125 with a grade of "C" or better or consent of instructor.

- DPR 133 Personal Computer Programming — Assembler Language (3-2)** 4 hrs.
Introduces assembler language programming on a personal computer with emphasis on writing well-formed programs for a variety of business applications.
Prerequisite: DPR 130 with a grade of "C" or better or consent of instructor.
- DPR 134 Personal Computer (DOS) (2-2)** 3 hrs.
Covers beginning and advanced personal computer DOS commands with a special emphasis on business file management.
Prerequisite: DPR 130 with a grade of "C" or better.
- DPR 135 Computer Operator (DOS) (1-4)** 3 hrs.
Covers actual computer operations, giving the student experience handling and setting up disk and tape file runs. The student will also learn card reader and printer operations.
Prerequisite: Prior or concurrent enrollment in DPR 101 and DPR 106 and consent of instructor.
- DPR 136 Job Control/Utilities (3-1)** 3 hrs.
Provides the student with an understanding of Job Control Language and utility programs. Emphasis is placed on the operational aspects of these topics. There will be numerous assignments requiring coding and running of utility programs and job control.
Prerequisite: DPR 101, DPR 106 and DPR 135 with a grade of "C" or better or consent of instructor.
- DPR 137 Internship/Computer Operator Field Project (1-15)** 3 hrs.
Provides students with coordinated computer operations or related experience in a data processing installation. Case studies will be used in the event that training stations are not available.
Prerequisite: Second semester standing with a GPA of 2.5 overall and 3.0 in data processing courses and consent of coordinator.
- DPR 140 RPG II Programming (2-2)** 3 hrs.
Gives experience in writing, testing, debugging and documenting programs for business applications using a report writing-type language (RPG II).
Prerequisite: DPR 101 and DPR 106 with a grade of "C" or better or consent of instructor.
- DPR 142 PL/1 Programming Language (2-2)** 3 hrs.
Programming techniques in the PL/1 language will be developed for a wide variety of programs of both a business and a non-business nature.
Prerequisite: DPR 101 and DPR 106 with a grade of "C" or better or consent of instructor.
- DPR 150 Business FORTRAN (2-2)** 3 hrs.
Introduces FORTRAN 77 as it applies to business applications. Programming projects will include applications such as finance, marketing and accounting.
Prerequisite: DPR 101, DPR 106 and MTH 102 with grade of "C" or better or consent of instructor.
- DPR 160 Introduction to PASCAL Programming (3-2)** 4 hrs.
Provides an introduction to the elements of PASCAL programming. The course uses the PASCAL programming language to develop problem-solving skills for business applications.
Prerequisite: DPR 101 and DPR 106 with grade of "C" or better or consent of instructor.
- DPR 166 Introduction to Programming in C (3-2)** 4 hrs.
Introduces and develops programming techniques in the C language. A wide range of problems of both a business and non-business nature will be studied, including system programming type problems. Language features unique to C will be addressed, along with problem-solving techniques.
Prerequisite: DPR 101 and DPR 106 or DPR 130 with a grade of "C" or better or consent of instructor.
- DPR 170 Introduction to Data Communications (3-0)** 3 hrs.
Provides an introduction to telecommunications, information analysis, system design, terminal equipment, data modems, common carrier facilities and communications processing equipment.
Prerequisite: DPR 101 with grade of "C" or better or consent of instructor.
- DPR 200 Introduction to Business Computer Programming (3-2)** 4 hrs.
Studies the application of modern data processing equipment to business information systems. Familiarizes the student with basic concepts of high level computer programming. The student will write programs suitable to process data for business applications. The use of packaged programs for statistical applications will be introduced. Designed for transfer students only.
Prerequisite: MTH 103 or MTH 124 with a grade of "C" or better, or consent of instructor.

DPR 202 Programming Systems (3-0) 3 hrs.
Indicates purpose and function of various programming systems such as program compilers, operating systems, utility programs, sort/merges and job control language.
Prerequisite: DPR 110 with grade of "C" or better or consent of instructor.

DPR 203 Systems Analysis and Design I (3-0) 3 hrs.

Includes the functions and techniques of systems analysis, design and development. These include analyzing information flow, developing, organizing and using management data, establishing system specifications and equipment needs and implementing management information systems. Stresses methods and tools used in systems analysis and design.
Prerequisite: DPR 101 and DPR 106 with grade of "C" or better and completion or concurrent enrollment in ACC 101 or consent of instructor.

DPR 204 Advanced Systems Analysis and Design (3-0) 3 hrs.

Continues DPR 203. Advanced concepts in management information systems to extend the student's knowledge of the systems approach to problems in business and industry. Specific data processing systems as they relate to inventory control, production planning, finance, purchasing and accounting will be presented. Source data automation, data capture equipment, time-sharing systems and total integrated information systems concepts.
Prerequisite: DPR 203 with a grade of "C" or better or consent of instructor.

DPR 208 Computer Programming — Advanced COBOL (3-2) 4 hrs.

Familiarizes the student with advanced features of COBOL. The course includes extensive table handling, the SORT feature, indexed file handling, report writing and modular programming.
Prerequisite: DPR 108 and DPR 110 with grade of "C" or better or consent of instructor.

DPR 210 Computer Programming — Advanced Assembler Language (3-4) 4 hrs.

Continues DPR 110. Programming magnetic tape, random storage devices and remote terminal systems. Includes use of IOCS for input-output devices.
Prerequisite: DPR 110 with grade of "C" or better or consent of instructor.

DPR 215 Accounting Information Systems (3-0) 3 hrs.

Provides the student with an understanding of the structure and function of modern computerized business systems. Emphasis is placed on analysis as opposed to system

design. Topics studied include forms design, information gathering techniques, coding and methods of evaluation and review.
Prerequisite: DPR 101, DPR 106 and DPR 108 with grade of "C" or better or consent of instructor.

DPR 230 Internship and/or Case Study (1-15) 3 hrs.

Applies data processing skills in practical situation. Field project or case study in local data processing installation. Open only to data processing degree candidates.
Prerequisite: Fourth semester standing with an overall GPA of 3.0 and 3.50 GPA in data processing courses.

DPR 240 Advanced RPG II (2-2) 3 hrs.

Provides instruction in advanced concepts of the RPG language. Emphasis is on disk and tape applications involving multiple input and output files, tables, arrays and subroutines.
Prerequisite: DPR 140 with grade of "C" or better or consent of instructor.

DPR 270 Data Communications Applications (3-2) 4 hrs.

Introduces Customer Information Control System (CICS) as a data communications operating system. Command level CICS will be used
Prerequisite: DPR 170, DPR 202 and either DPR 208 or DPR 210 with a grade of "C" or better or consent of instructor.

DPR 280 Introduction to Data Base (3-0) 3 hrs.

Provides an overview of the theory of data base systems and the principal data base management systems current in the field. The course includes physical representation, modeling, commercial systems and implementation.
Prerequisite: DPR 208, or DPR 210 with a grade of "C" or better or consent of instructor.

Dental Hygiene

DHY 100 Pre-Clinic (3-6) 5 hrs.

Introduces the student to clinical dental hygiene with emphasis on the role of the dental hygienist in the control and prevention of dental disease.
Prerequisite: Freshman standing in Dental Hygiene Program.

DHY 101 Clinical Dental Hygiene I (2-9) 5 hrs.

Applies theoretical concepts in a clinical setting and introduces periodontology. Refines clinical skills and emphasizes the preventive aspects of dentistry. The student performs traditional dental hygiene clinical functions.
Prerequisite: Freshman standing in Dental Hygiene Program.

DHY 103 Dental Health Education (0-2)	1 hr.	DHY 200 Periodontology (1-2)	2 hrs.
Introduces principles of dental health education. Develops skills as a dental health educator and dental health resource person. Emphasizes communication skills and the development of learning and teaching strategies, motivation techniques, activities and visual aids for classroom and private office use. Prerequisite: Completion of first year of Dental Hygiene Program.		Reviews etiological and histological components of periodontal disease emphasizing current theoretical concepts in treatment and management of periodontally involved patients. Provides laboratory experience to refine non-surgical techniques. Prerequisite: Sophomore standing in Dental Hygiene program.	
DHY 111 Dental Radiology (2-3)	3 hrs.	DHY 201 Ethics, Jurisprudence and Practice Management (2-0)	2 hrs.
Provides theory in radiation physics, safety and the biological effects of ionizing radiation. Intraoral exposure techniques, darkroom procedures and film interpretation are emphasized in the laboratory. Practical experience provided on manikins and selected patients. Prerequisite: Freshman standing in Dental Hygiene program.		Studies the development of dental office and clinic practice management procedures and professional interrelationships. Considers the role of the dental hygienist in the various dental specialties and various employment modalities. Prerequisite: Sophomore standing in Dental Hygiene Program.	
DHY 151 Clinical Dental Hygiene II (0-6)	2 hrs.	DHY 202 Radiology I (0-2)	1 hr.
Provides clinical practice in oral prophylaxis on adult patients, including preventive techniques, exposing radiographs and patient management. Prerequisite: Completion of first year of Dental Hygiene Program.		Continues practice in the techniques of exposing, processing, mounting and evaluating dental radiographs. Prerequisite: DHY 111, DHY 151 and sophomore standing in Dental Hygiene Program.	
DHY 159 Head and Neck Anatomy (3-0)	3 hrs.	DHY 203 Radiology II (0-2)	1 hr.
Introduces anatomy of the head and neck regions with special emphasis on the human dentition. Skeletal, muscular, glandular, circulatory, nervous and epithelial structures are considered in detail. Also includes introductory material on human histology and orofacial embryology. Prerequisite: Freshman standing in Dental Hygiene Program.		Continues DHY 202. Prerequisite: DHY 202 and sophomore standing in Dental Hygiene Program.	
DHY 161 Dental Anatomy (1-2)	2 hrs.	DHY 220 Community Dentistry I (1-2)	2 hrs.
Introduces the student to terms and anatomic structures of the oral cavity including a detailed study of crown and root morphology of both primary and permanent dentitions. Prerequisite: Freshman standing in Dental Hygiene Program.		Emphasizes the theory and practice of public health principles including the planning, development and implementation of community dental programs. Provides an orientation and field experiences with the aged, physically and mentally handicapped populations. Statistical and research methods are introduced. Prerequisite: DHY 103 and sophomore standing in Dental Hygiene program.	
DHY 190 General and Oral Pathology (2-0)	2 hrs.	DHY 221 Community Dentistry II (2-2)	3 hrs.
Studies fundamentals of microscopic and gross pathology and general pathological processes. Specially emphasizes diseases of dental and periodontal tissues and of the supporting oral structures. Correlates clinical manifestations of disease with dental hygiene practice. Prerequisite: Freshman standing in Dental Hygiene Program.		Continues DHY 103 and DHY 220 principles including field experiences with special populations. Introduces hospital and/or clinical, rotational experiences, Emphasizes the presentation of dental health information in group situations, in-service programs, health promotion strategies and consumer advocate activities. Prerequisite: DHY 220.	
		DHY 240 Dental Pharmacology (2-0)	2 hrs.
		Examines the principles of drug actions and characteristics of major drug groups. Emphasis is placed on drugs used in dentistry and the management of dental patients who receive drug treatment for medical problems. Prerequisite: Sophomore standing in Dental Hygiene Program.	

DHY 250 Clinical Dental Hygiene III (1-12) 5 hrs.
Continue clinical practice of dental hygiene with emphasis on the comprehensive treatment of periodontally involved patients.
Prerequisite: DHY 151 and sophomore standing in Dental Hygiene Program.

DHY 251 Clinical Dental Hygiene IV (1-12) 5 hrs.
Continues DHY 250.
Prerequisite: DHY 250 and sophomore standing in Dental Hygiene Program.

DHY 280 Dental Materials (1-2) 2 hrs.
Introduces the student to the use and manipulation of materials used in dentistry. Includes familiarization with techniques and procedures used in the dental profession.
Prerequisite: Sophomore standing in Dental Hygiene Program.

Dietetic Technician

DIT 100 Introduction to the Dietetic Technician Program (2-3) 3 hrs.
Introduces the program including the history of nutrition care services and role of the dietetic technician. Includes dietetic clinical laboratory practice in a local hospital.
Prerequisite: Freshman standing in Dietetic Technician Program and prior or concurrent enrollment in BIO 135, DIT 101 and FSM 114.

DIT 101 Basic Nutrition (3-0) 3 hrs.
Introduces the principles of human nutrition and their application to the needs of normal individuals of all age groups.

DIT 102 Advanced Nutrition (3-0) 3 hrs.
Studies the nutritional care of a patient through the prescription of modified diets. Emphasis on techniques of diet counseling.
Prerequisite: Freshman standing in Dietetic Technician Program or consent of instructor, DIT 101 and concurrent enrollment in BIO 136.

DIT 110 Principles of Food Preparation (2-2) 3 hrs.
Introduces the scientific principles of food preparation, menu planning for individuals and families of different socioeconomic backgrounds, grocery shopping. Laboratory practice includes adjusting recipes for modified diets, demonstration and use of equipment.
Prerequisite: Freshman standing in Dietetic Technician program or consent of instructor and FSM 114.

DIT 150 Dietetic Clinical Laboratory I (1-6) 3 hrs.
Offers integrated clinical approach to the nutritional care of patients in a community hospi-

tal. Provides practice processing diet orders, assisting patients with menu selection, checking meal trays, taking diet histories, making nutrient analyses and giving diet instructions.
Prerequisite: DIT 100 and prior or concurrent enrollment in BIO 136, DIT 102 and DIT 110.

DIT 200 Dietetic Clinical Laboratory II (1-9) 4 hrs.
Offers clinical experience in community agencies that include nutrition as one of their services. Assigned progression can include school lunch, day care centers, retirement centers, home-delivered meals, commercial processors and hospitals.
Prerequisite: Sophomore standing in Dietetic Technician program and DIT 150.

DIT 201 Nutritional Services in Institutions (3-0) 3 hrs.
Surveys institutions, agencies and organizations that assist the community in meeting nutritional needs of its people. Studies nutritional needs of various age groups under different socioeconomic conditions.
Prerequisite: Sophomore standing in Dietetic Technician Program.

DIT 202 Nutrition Care Seminar (2-0) 2 hrs.
Reviews planning, implementing and evaluating nutrition care given to individuals and groups of people having specific disease conditions, both acute and chronic.
Prerequisite: DIT 201.

DIT 203 Dietetic Seminar (1-0) 1 hr.
Identifies and discusses the employment opportunities in the nutritional care field, roles of the dietetic technician, responsibilities of allied health professionals and membership in professional organizations.
Prerequisite: DIT 201.

DIT 250 Dietetic Clinical Laboratory III (1-9) 4 hrs.
Offers student assigned clinical laboratory experience in approved community agencies. Provides opportunity to reach entry-level position competence by practicing skills under the supervision of a registered dietitian.
Prerequisite: DIT 200 and concurrent enrollment in DIT 202 and DIT 203.

Economics

ECO 115 Consumer Economics (3-0) 3 hrs.
Introduces the concepts of personal financial planning within the current economic environment. Emphasizes topics such as basic macroeconomic theory, obtaining credit, purchasing insurance, investment alternatives, basic real estate finance and tax planning.

ECO 200 Introduction to Economics (3-0) 3 hrs.

Descriptive rather than a quantitative approach to the study of economics. Major topics cover economic history, the elements of macroeconomics, microeconomics and a comparative look at other economic systems. Specifically designed for students in career-vocational curricula.

ECO 201 Principles of Economics I (3-0) 3 hrs.

Economic problems faced by our society. Examination of resource allocation, national income and economic development, from a macroeconomic approach.

ECO 202 Principles of Economics II (3-0) 3 hrs.

Continues ECO 201. Economic problems faced by the individual and the firm. Examination of market structures, price and output determination. The microeconomic approach. Prerequisite: ECO 201.

ECO 210 Money and Banking (3-0) 3 hrs.

Stresses the practical aspects of money and banking, and emphasizes the basic monetary theory needed by the banking student to apply his knowledge to his particular job. Historical treatment has been kept to a minimum.

Emphasis is placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, governmental fiscal policy, balance of payments and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios.

Prerequisite: ECO 200 or ECO 201.

ECO 225 Introduction to Comparative Economic Systems (3-0) 3 hrs.

Compares and analyzes economic conditions as they exist in different economic systems. Emphasizes the trade-offs between efficiency and equity, between economic freedom and economic order. Compares the working of the "market" system with that of "central planning." The approach to these topics will utilize both the theoretical and the case study method. Prerequisite: ECO 201.

Education

EDU 201 Introduction to Education (3-0) 3 hrs.

Organization, structure and operation of schools in the United States, including elementary, secondary, college and adult education. Evaluation of each student's potential for this occupation.

EDU 202 Pre-Student Teaching Clinical Experience (0-2) 1 hr.

Provides an in-depth study of classroom practices in the subject and age category that each student is training to teach. Students will observe classrooms in their area of interest and will attend a seminar once weekly to discuss their experience.

EDU 211 Educational Psychology (3-0) 3 hrs.

Psychology principles as applied to education. Assessment of attitudes, capacities, interests and achievements. Educational implications of physical, emotional and social development. Student, teacher, school and home as factors in educative process. Prerequisite: PSY 101 or consent of instructor.

Electronics

ELT 101 Circuits I, Resistive Circuit Analysis (3-4) 5 hrs.

Resistive circuits with time-varying source voltage. Physics of electricity, plus units, definitions, symbols and notations for electrical quantities. Circuit properties and their applications to significant circuit configurations. Prerequisite: High school algebra or consent of instructor.

ELT 102 Circuits II, Single Time Constant Circuits (3-3) 4 hrs.

Examines R-C and R-L single time constant circuits. Treats these circuits with sinusoidal square wave and step voltages as sources. Prerequisite: ELT 101, MTH 106 or consent of instructor.

ELT 103 Circuits III, Networks (3-4) 5 hrs.

Covers resonance, factors affecting Q and bandwidth, RLC filters, power matching with pi, T and L networks. In addition, double tuned circuits, ringing and transient response of RLC circuits are discussed. Prerequisite: ELT 102 or consent of instructor.

ELT 105 Electro-Mechanical Drafting (1-6) 3 hrs.

Drafting fundamentals and techniques with introduction to electronic and mathematical symbols, basic circuitry, electronic devices and fabrication processes. This background culminates in the design and construction of an individual and a course project.

ELT 110 Introductory Electronics (0-6) 2 hrs.

Laboratory instruments, circuit components, basic measuring techniques and basic circuits used as building blocks in any electronics system.

ELT 111 Electronics I, Resistive (2-3) 3 hrs.

Resistive circuits involving electronic devices. Volt-ampere characteristics and physics of diodes, transistors and other semiconductor devices. The emphasis is upon biasing and the setting of DC levels to make the device function.

Prerequisite: ELT 110 or consent of instructor.

ELT 203 Electronics II, Digital (3-4) 5 hrs.

Examines the building blocks of digital circuits. These elements are then blended into topics and applications. A sampling of topics are Boolean algebra, Karnaugh mapping, counters and microprocessors.

Prerequisite: ELT 111.

ELT 204 Electronics II, Advanced Electronics (3-4) 5 hrs.

Examines electronic circuits which use non-linear devices. May apply linear equivalent circuits in this analysis. Studies power supplies, amplifiers, feedback circuits, oscillators, operation amplifiers, D-A converters and A-D converters.

Prerequisite: ELT 103 and ELT 111 or consent of instructor.

ELT 205 Electronic Instrumentation (3-4) 4 hrs.

Studies methods of sending and controlling physical industrial processes. Components involved are transducers, indicators, recorders and programmable controllers.

Prerequisite: ELT 215 or consent of instructor.

ELT 206 Electronic Computers (3-4) 5 hrs.

Studies computer architecture through the use of microprocessors, digital computer algorithms and software programming. The utilization of microprocessors is extensive.

Prerequisite: ELT 203 and ELT 210 or consent of instructor.

ELT 207 UHF Communications and Reception (3-4) 5 hrs.

Emphasizes design techniques in communication circuits, the relationship of modulation systems to bandwidth requirements and frequency spectrum. A design project is part of the course work.

Prerequisite: ELT 103 or consent of instructor.

ELT 210 Computer Programming (3-0) 3 hrs.

Presents the use of the computer and microprocessor as special tools and introduces the student to computer architecture, languages and programming.

ELT 215 Electrical Controls and Motors (3-4) 5 hrs.

Covers topics in the following areas: motor controls, switches (relays, thermostatic, limit and solenoid), relay logic, AC and universal

motors, residential and commercial service entrance, National Electrical Code, safety devices and shop safety practices.

Prerequisite: ELT 110 or consent of instructor.

ELT 216 Microprocessor Software Applications (3-4) 5 hrs.

Applies assembly language programming to practical software problems. Studies computational algorithms in depth. May develop monitor programs along with multi-programming examples. Stresses debugging and documentation.

Prerequisite: ELT 210 or consent of instructor.

Corequisite: ELT 206 or consent of instructor.

ELT 217 Microprocessor Peripheral Systems (3-4) 5 hrs.

Examines interfacing and operation of peripheral systems commonly used with microprocessor and minicomputers. Includes video displays, teleprinters, modems, codecs and smart terminals.

Prerequisite: ELT 206 or consent of instructor.

ELT 218 Principles of Microprocessor Systems Design (3-4) 5 hrs.

Examines central processor unit architecture, monitor program structure, system control timing, input-output control and data bus structures. Considers input-output hardware design, interrupts, hardware and software design.

Prerequisite: ELT 206 or consent of instructor.

Engineering**EGR 100 Introduction to Engineering (1-1) 1 hr.**

Introduces engineering techniques, methods and history. Explores career options and requirements for various engineering fields. Covers interrelationships within and between engineering, technology and science to allow differentiation between various career choices.

EGR 120 Engineering Graphics I (1-5) 3 hrs.

Covers lettering, orthographic projection, size and location, dimensioning, surface finishes, auxiliary view, sketching. Stresses basic conceptual design through working drawings, assembly views, intersections and developments.

EGR 121 Engineering Graphics II (1-5) 3 hrs.

Covers analysis of common geometric magnitudes of points, planes and curved surfaces. Includes rotations, auxiliary views, developments and nomography. Stresses applications of geometrical methods in projections, assemblies and details.

Prerequisite: EGR 120.

EGR 122 Introduction to CAD/Graphics (2-3) 3 hrs.

Surveys components and concepts of computer graphic systems. Applies principles of engineering graphics to create dimensional drawings using graphics, terminals, digitizers, plotters and related software. Emphasizes general applications on various computer systems.

Prerequisite: EGR 120 or consent of instructor.

EGR 150 Analytical Mechanics (Statics) (3-0) 3 hrs.

Covers resultants of force systems using vectors. Emphasizes analysis of forces acting on members of trusses, frames and machines. Includes forces due to friction, centroids and movements of inertia.

Prerequisite: PHY 201 or consent of instructor.

EGR 211 Analytical Mechanics (Dynamics) (3-0) 3 hrs.

Displacement, velocity, and acceleration of a particle, relation between forces acting on rigid bodies and changes in motion produced, translation, rotation, plane motion, solutions using principles of force, mass and acceleration, work and energy and impulse and momentum.

Prerequisite: EGR 150.

EGR 212 Mechanics of Deformable Bodies (3-0) 3 hrs.

Elastic and inelastic relationships between external forces (loads) acting on deformable bodies and stresses and deformations produced, tension and compression members, members subjected to torsion and to bending, buckling (columns), combined stresses, repeated loads (fatigue), energy loads, impact and influence of properties of materials.

Prerequisite: EGR 150.

EGR 260 Introduction to Circuit Analysis (3-0) 3 hrs.

Introduces electric circuits, electrical components, network theorems, phasor representation of signals and steady state response. For engineering transfer students.

Prerequisite: PHY 202 and concurrent registration in MTH 212 or consent of instructor.

EGR 262 Electrical Circuits Laboratory (1-2) 2 hrs.

Introduces standard electrical instruments and measurement techniques. Includes practical applications to topics of EGR 260. Covers circuit response, elementary filter response and resonance measurements. Includes basis measurements of transistors and operational amplifiers.

Prerequisite: EGR 260 or concurrent enrollment.

EGR 270 Introduction to Digital Systems (3-2) 4 hrs.

Introduces binary arithmetic and codes, logic gates, Boolean functions and minimization. Covers analysis and synthesis of combinatorial gates and sequential circuits using integrated circuit components. Introduces computer organization and microprocessors. For engineering transfer students.

Prerequisite: PHY 202 or consent of instructor.

English

ENG 098 Composition (3-0) 3 hrs.

Provides instruction in developing basic writing skills essential for effective written discourse by giving students the conceptual tools necessary for developing a basic framework for writing. Prepares students for entry into ENG 100. Carries no transfer credit. (Formerly CMN 099.)

Prerequisite: English Placement Exam.

Recommended corequisite: RDG 098.

ENG 100 Composition (3-0) 3 hrs.

Develops skills in writing and using clear, correct English. Includes sentence structure, paragraphs, mechanics and reading. Concludes with mastery of the well organized, literate essay. This course carries no transfer credit.

Prerequisite: English Placement Exam.

(NOTE: Cannot be used for Group I or V General Studies requirement for A.A. or A.S. degree.)

ENG 101 Composition (3-0) 3 hrs.

College composition emphasizing the organization and development of expository prose. Introduction to the critical reading of selected essays.

Prerequisite: Satisfactory score on a placement test or ENG 100.

ENG 102 Composition (3-0) 3 hrs.

Continues ENG 101. Reading and writing of various types of prose. Introduces methods used in writing investigative papers.

Prerequisite: ENG 101 or consent of dean.

ENG 103 Technical and Report Writing (3-0) 3 hrs.

Introduces the various types of writing and communication used in business and technology. Includes instructions, procedures, abstracts, proposals, visuals and reports.

Prerequisite: ENG 101 or consent of dean or instructor.

ENG 130 Business Writing I (3-0) 3 hrs.

Formal and psychological aspects of business correspondence. Introduction to various kinds of business letters, memoranda and reports. Improvement of grammar, spelling and word usage.

ESL 023 ESL: Basic Reading (2-0) 2 hrs.
Introduces ESL reading skills for high beginning English as a Second Language students who read proficiently in their native languages. Carries no transfer credit.
Corequisite: ESL 016 or ESL 020.

ESL 024 ESL: Basic Writing (2-0) 2 hrs.
Introduces kernel sentence patterns of written English for high beginning English as a Second Language students. Includes basic sentence transformations. Carries no transfer credit.
Corequisite: ESL 016 or ESL 020.

ESL 025 ESL: Conversation II (1-0) 1 hr.
Continues the development of basic American English conversation skills and pronunciation patterns for the high beginning English as a Second Language student. Carries no transfer credit.
Corequisite: ESL 020.

ESL 026 ESL: Grammar II (2-0) 2 hrs.
Continues to concentrate on basic grammatical structures and patterns of English for beginning English as a Second Language students. Emphasizes aural comprehension and speaking ability. Carries no transfer credit.
Prerequisite: Placement tests or ESL 016 with a grade of "C" or better.

ESL 030 ESL: Intermediate Language Skills I (1-0 to 6-0) 1-6 hrs.
Continues the development of increasingly complex grammatical structures and patterns of English within a communicative framework. Recycles previously presented patterns and functions using more complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.
Prerequisite: Placement tests or ESL 020 with a grade of "C" or better.

ESL 033 ESL: Intermediate Reading I (2-0) 2 hrs.
Develops reading skills for the low intermediate English as a Second Language student. Focuses on the reading of simple narratives. Carries no transfer credit.
Prerequisite: Placement tests or ESL 020 or ESL 023 with a grade of "C" or better.

ESL 034 ESL: Intermediate Reading II (2-0) 2 hrs.
Continues the development of reading skills for the intermediate English as a Second Language student. Focuses on the reading of more complex narrative materials. Carries no transfer credit.
Prerequisite: Placement tests or ESL 033 with a grade of "C" or better.

ESL 035 ESL: Conversation III (1-0) 1 hr.
Focuses on common conversation strategies used in American English for the intermediate student of English as a Second Language. Increases the student's awareness of American cultural patterns. Continues the development of pronunciation and listening skills. Carries no transfer credit.
Corequisite: ESL 030 or ESL 036.

ESL 036 ESL: Grammar III (2-0) 2 hrs.
Concentrates on increasingly complex grammatical structures and patterns of English for intermediate English as a Second Language students. Continues practice of previously presented patterns using more complex language. Emphasizes aural comprehension and speaking ability. Carries no transfer credit.
Prerequisite: Placement tests or ESL 026 with a grade of "C" or better.

ESL 040 ESL: Intermediate Language Skills II (1-0 to 4-0) 1-4 hrs.
Continues the development of increasingly complex grammatical structures and patterns of English within a communicative framework. Recycles previously presented patterns and functions using more complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.
Prerequisite: Placement tests or ESL 030 with a grade of "C" or better.

ESL 041 ESL: Intermediate Language Skills IIA (1-0) 1 hr.
Continues the development of increasingly complex grammatical structures and patterns of English within a communicative framework. Continues to recycle previously presented patterns and functions using more complex language. Continues to integrate conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.
Prerequisite: Placement tests or ESL 040 with a grade of "C" or better.

ESL 042 ESL: Intermediate Language Skills IIB (1-0) 1 hr.
Completes grammar at the mid-intermediate level within a communicative framework. Recycles previously presented patterns and functions using more complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.
Prerequisite: Placement tests or ESL 040 with a grade of "C" or better.

ESL 043 ESL: Intermediate Writing Skills I (2-0) 2 hrs.

Focuses on the development of sentence-level writing skills. Emphasizes English punctuation, capitalization and spelling for intermediate English as a Second Language students. Carries no transfer credit.

Prerequisite: Placement tests, ESL 016 or ESL 030 with a grade of "C" or better.

ESL 044 ESL: Intermediate Writing Skills II (2-0) 2 hrs.

Continues the development of sentence-level writing skills. Emphasizes English punctuation, capitalization and spelling for intermediate English as a Second Language students. Introduces English paragraph structure. Carries no transfer credit.

Prerequisite: Placement tests or ESL 043 with a grade of "C" or better.

ESL 045 ESL: Conversation IV (1-0) 1 hr.

Continues the development of conversation strategies used in American English for the intermediate student of English as a Second Language. Continues to increase the student's awareness of American cultural patterns and to develop pronunciation and listening skills. Carries no transfer credit.

Corequisite: ESL 040.

ESL 046 ESL: Grammar IV (2-0) 2 hrs.

Continues to concentrate on increasingly complex grammatical structures and patterns of English for intermediate English as a Second Language students. Continues practice of previously presented patterns using more complex language. Emphasizes aural comprehension and speaking ability. Carries no transfer credit.

Prerequisite: Placement test and ESL 036 with a grade of "C" or better.

ESL 050 ESL: Intermediate Language Skills III (1-0 to 4-0) 1-4 hrs.

Introduces complex grammatical structures and patterns of English at the high intermediate level within a communicative framework. Recycles previously presented patterns and functions using increasingly complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.

Prerequisite: Placement tests or ESL 040 with a grade of "C" or better.

ESL 051 ESL: Intermediate Language Skills IIIA (1-0) 1 hr.

Continues complex grammatical structures and patterns of English at the high intermediate level within a communicative framework. Recycles previously presented patterns and functions using increasingly complex language. Inte-

grates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.

Prerequisite: Placement tests or ESL 050 with a grade of "C" or better.

ESL 052 ESL: Intermediate Language Skills IIIB (1-0) 1 hr.

Completes complex grammatical structures and patterns of English at the high intermediate level within a communicative framework. Recycles previously presented patterns and functions using increasingly complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.

Prerequisite: Placement tests or ESL 050 with a grade of "C" or better.

ESL 053 ESL: Intermediate Reading III (2-0) 2 hrs.

Develops reading techniques for the high intermediate English as a Second Language student. Focuses on the reading of a variety of materials. Encourages students to read independently in English. Carries no transfer credit.

Prerequisite: Placement tests, ESL 036 or ESL 040 with a grade of "C" or better.

ESL 054 ESL: Intermediate Reading IV (2-0) 2 hrs.

Continues the development of reading techniques for the high intermediate English as a Second Language student. Focuses on the reading of a variety of materials. Encourages students to read independently in English. Carries no transfer credit.

Prerequisite: Placement tests, ESL 053 with a grade of "C" or better.

ESL 055 ESL: Conversation V (1-0) 1 hr.

Emphasizes conversation skills, pronunciation, vocabulary development, listening skills and American cultural awareness for the high intermediate student of English as a Second Language. Carries no transfer credit.

Corequisite: ESL 050 or ESL 056.

ESL 056 ESL: Grammar V (2-0) 2 hrs.

Focuses on complex grammatical structures and patterns for high intermediate English as a Second Language students. Continues practice of previously presented patterns using more complex language. Emphasizes aural comprehension and speaking ability. Carries no transfer credit.

Prerequisite: Placement tests or ESL 046 with a grade of "C" or better.

ESL 058 ESL: Spelling Strategies (2-0) 2 hrs.

Focuses on the spelling system of American English. Includes compensatory techniques. Intended for high intermediate English as a Second Language students having difficulty with the spelling of American English. Carries no transfer credit.

Prerequisite: Placement tests or ESL 044 with a grade of "C" or better.

ESL 060 ESL: Advanced Language Skills I (1-0 to 4-0) 1-4 hrs.

Introduces increasingly complex grammatical structures and patterns of English at the advanced level within a communicative framework. Recycles previously presented patterns and functions using more complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.

Prerequisite: Placement tests or ESL 050 with a grade of "C" or better.

ESL 061 ESL: Advanced Language Skills IA (1-0) 1 hr.

Continues the development of increasingly complex grammatical structures and patterns of English at the advanced level within a communicative framework. Recycles previously presented patterns and functions using more complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.

Prerequisite: Placement tests or ESL 060 with a grade of "C" or better.

ESL 062 ESL: Advanced Language Skills IB (1-0) 1 hr.

Completes the development of increasingly complex grammatical structures and patterns of English at the advanced level within a communicative framework. Recycles previously presented patterns and functions using more complex language. Integrates conversation, aural comprehension, pronunciation, reading comprehension and writing ability and develops these skills systematically within situational contexts. Carries no transfer credit.

Prerequisite: Placement tests or ESL 060 with a grade of "C" or better.

ESL 063 ESL: Advanced Writing Skills I (2-0) 2 hrs.

Develops writing of complex sentence structures with emphasis on sentence combination, transformation and transposition. Develops narrative and descriptive writing skills for advanced English as a Second Language students. Carries no transfer credit.

Prerequisite: Placement tests, ESL 036 or ESL 060 with a grade of "C" or better.

ESL 064 ESL: Advanced Writing Skills II (2-0) 2 hrs.

Continues the development of complex sentence structures with emphasis on sentence combination, transformation and transposition. Develops narrative and descriptive writing skills for advanced English as a Second Language students. Carries no transfer credit.

Prerequisite: Placement tests or ESL 063 with a grade of "C" or better.

ESL 065 ESL: Conversation VI (1-0) 1 hr.

Continues to emphasize conversation skills, pronunciation, vocabulary development, listening skills and American cultural awareness for the advanced student of English as a Second Language. Carries no transfer credit.

Corequisite: ESL 060 or ESL 076.

ESL 066 ESL: Grammar VI (2-0) 2 hrs.

Continues to focus on complex grammatical structures and patterns of English for high intermediate English as a Second Language students. Continues practice of previously presented patterns using complex language. Emphasizes aural comprehension and speaking ability. Carries no transfer credit.

Prerequisite: Placement tests or ESL 056 with a grade of "C" or better.

ESL 068 ESL: Cognitive Reading Skills (2-0) 2 hrs.

Develops cognitive reading processes necessary for the successful reading and comprehension of authentic material for the advanced English as a Second Language student. Carries no transfer credit.

Prerequisite: Placement tests, ESL 050 or ESL 056 with a grade of "C" or better.

ESL 069 ESL: Organization Skills for Writing (2-0) 2 hrs.

Focuses on paragraph development with emphasis on unity, coherence and sentence transitions for advanced English as a Second Language students. Includes contrastive rhetoric. Carries no transfer credit.

Prerequisite: Placement tests or ESL 064 with a grade of "C" or better.

ESL 073 ESL: Advanced Reading (2-0) 2 hrs.

Continues the development of reading techniques for the advanced English as a Second Language student. Focuses on cognitive reading processes. Develops the skills needed for independent reading of long, complex materials. Carries no transfer credit.

Prerequisite: Placement tests or ESL 068 with a grade of "C" or better.

ESL 074 ESL: Advanced 2 hrs.**Composition (2-0)**

Introduces essay styles with an emphasis on rhetorical patterns of development for advanced English as a Second Language students. Carries no transfer credit.

Prerequisite: Placement tests or ESL 069 with a grade of "C" or better.

ESL 075 ESL: Advanced 2 hrs.**Conversation and Pronunciation (2-0)**

Improves listening comprehension skills. Builds confidence in speaking ability and increases fluency. Refines pronunciation. Carries no transfer credit.

Prerequisite: Placement tests, ESL 060 or ESL 086 with a grade of "C" or better.

ESL 076 ESL: Advanced 2 hrs.**Grammar I (2-0)**

Emphasizes the grammar of formal American English writing. Focuses on the grammatical structures most troublesome for advanced English as a Second Language students. Carries no transfer credit.

Prerequisite: Placement tests, ESL 060 or ESL 066 with a grade of "C" or better.

ESL 077 ESL: Advanced 2 hrs.**Vocabulary I (2-0)**

Emphasizes the vocabulary of informal American English speech and writing. Focuses on the idiomatic expressions most troublesome for advanced English as a Second Language students. Carries no transfer credit.

Prerequisite: Placement tests, ESL 060 or ESL 086 with a grade of "C" or better.

ESL 078 Introduction to American 2 hrs.**Culture (2-0)**

Surveys American culture for nonnative speakers of English, highlighting those areas necessary for success in college courses. Student will be introduced to American nonverbal communication and to the cultural phenomena and values needed to understand the inferences and allusions presented in American classrooms. Carries no transfer credit.

Prerequisite: Placement tests, ESL 060 or ESL 086 with a grade of "C" or better.

ESL 079 Preparation for TOEFL (1-0) 1 hr.

Focuses on the specific vocabulary, listening comprehension, reading comprehension and English structure skills needed to pass the TOEFL (Test of English as a Foreign Language). Carries no transfer credit.

Prerequisite: Placement tests, ESL 060 or ESL 066 with a grade of "C" or better.

ESL 085 ESL: Advanced 2 hrs.**Conversation and Pronunciation II (2-0)**

Continues emphasis on listening comprehension skills, speaking ability and increased fluency. Refines intonation, stress and pronunciation. Carries no transfer credit.

Prerequisite: Placement tests, ESL 060 or ESL 086 with a grade of "C" or better.

ESL 086 ESL: Advanced 2 hrs.**Grammar II (2-0)**

Emphasizes the syntactic constructions used in formal research papers and textbooks. Focuses on written mastery of these syntactic structures. Carries no transfer credit.

Prerequisite: Placement tests or ESL 076 with a grade of "C" or better.

ESL 087 ESL: Advanced 2 hrs.**Vocabulary II (2-0)**

Continues emphasis on the vocabulary of informal American English speech and writing. Focuses on expressions associated with particular styles and registers. Carries no transfer credit.

Prerequisite: Placement tests, ESL 060 or ESL 086 with a grade of "C" or better.

ESL 098 ESL: Listening and 2 hrs.**Speaking Skills for College (2-0)**

Develops in the advanced English as a Second Language student listening and speaking skills for adapting to instructional methods typical of American higher education. Carries no transfer credit.

Prerequisite: Placement tests or ESL 076 with a grade of "C" or better.

ESL 099 ESL: Writing Skills for 2 hrs.**College (2-0)**

Introduces research skills with emphasis on the paraphrasing and synthesizing of information for advanced English as a Second Language students. Reviews the development of paragraphs and essays. Carries no transfer credit.

Prerequisite: Placement tests or ESL 074 with a grade of "C" or better.

Fashion Design**FAS 101 Flat Pattern Design 3 hrs.****and Draping I (1-4)**

Introduces basic industrial techniques of pattern making and draping. Variety of slopers (bodices, skirts, sleeves, etc.) developed. Accuracy and professional standards stressed. Patterns tested in muslin for fit.

Prerequisite: Consent of coordinator.
Corequisite: FAS 103.

<p>FAS 102 Flat Pattern Design and Draping II (2-4) 4 hrs. Develops further basic sloper set. Patterns tested in muslin for fit. Prerequisite: FAS 101. Corequisite: FAS 104.</p>	<p>FAS 110 Costume History (2-0) 2 hrs. Introduces the elements of design and color in historical perspective. A survey of historical periods of design focusing on costumes. Examines the influences of social, political and economic forces on these periods. Prerequisite: Consent of coordinator.</p>
<p>FAS 103 Apparel Design and Construction I (1-4) 3 hrs. Introduces basic principles of using master basic sloper set to develop patterns for original designs. Professional design room techniques. Prerequisite: Consent of coordinator. Corequisite: FAS 101.</p>	<p>FAS 111 Twentieth Century Costume and Trends (3-0) 3 hrs. Presents an overview of fashion history and current trends in the 20th century. Includes fashion design, merchandising and factors which influence fashion from the merchandiser's point of view such as arts, technology and socioeconomic aspects. Students participate in video production. Prerequisite: Consent of coordinator.</p>
<p>FAS 104 Apparel Design and Construction II (2-4) 4 hrs. Develops patterns from basic sloper set. Actual construction of finished garments. Emphasis on styling, fit and professional finishing. Prerequisite: FAS 103. Corequisite: FAS 102.</p>	<p>FAS 112 Fashion Basics (3-0) 3 hrs. Presents fashion merchandise through evaluation of fashion products. Develops awareness of construction, as well as workmanship and design elements, such as fabric, color silhouette and taste.</p>
<p>FAS 105 Fashion Design Illustration I (0-2) 1 hr. Introduces basic fashion sketching — front, back and side views. Relationship of figure and garment. Sketching of original design. Prerequisite: Consent of coordinator.</p>	<p>FAS 114 Fashion Modeling (0-2) 1 hr. Introduces the art of modeling for career or personal enrichment. Provides practice to achieve grace, assurance, poise and polish. Studies the mood of showing clothes and fashion shows.</p>
<p>FAS 106 Fashion Design Illustration II (0-2) 1 hr. Focuses on advanced fashion sketching and fabric rendering. Emphasis on development of individual style. Basic layout and presentation. Prerequisite: FAS 105 or consent of coordinator.</p>	<p>FAS 116 Fashion Industries Career Practicum and Seminar (1-10) 3 hrs. Studies an overview of career and employment possibilities in the fashion businesses and industries. Places emphasis on individual career path selections through interest testing and career counseling. Prerequisite: Consent of coordinator.</p>
<p>FAS 107 Textiles I (1-2) 2 hrs. Studies basic design and color principles in development of creative fabrics. General analysis and identification of fabrics and employment of various methods such as weaving, printing and dyeing. Prerequisite: Consent of coordinator.</p>	<p>FAS 201 Advanced Flat Pattern Design and Draping I (2-4) 4 hrs. Continues advanced development of basic sloper set, including coat and suit slopers, basics of grading (sizing). Patterns tested in muslin for fit and accuracy. Prerequisite: FAS 101 and FAS 102. Corequisite: FAS 203.</p>
<p>FAS 108 Textiles II (1-2) 2 hrs. Continues FAS 107. Contemporary fabrics analyzed and studied. Prerequisite: FAS 107. Corequisite: FAS 109.</p>	<p>FAS 202 Advanced Flat Pattern Design and Draping II (2-4) 4 hrs. Continues FAS 201. Studies advanced technique of pattern making and draping, such as trend jacket and coat. Actual construction of jacket and coat will be involved. Prerequisite: FAS 201. Corequisite: FAS 204.</p>
<p>FAS 109 Fashion Arts and Design (2-0) 2 hrs. Focuses on theory and principles of design for fashion. The elements of design and color are covered. Develops the perception and awareness to judge good design and to analyze potential trends. Studies the influence of present-day cultural trends on the field of design. Corequisite: FAS 108.</p>	

FAS 203 Advanced Diversified Apparel Design I (2-4) 4 hrs.
Develops patterns for the translation of original designs into completed garments. Includes visits to manufacturers and speakers from industry.
Prerequisite: FAS 103 and FAS 104.
Corequisite: FAS 201.

FAS 204 Advanced Diversified Apparel Design II (2-4) 4 hrs.
Continues FAS 203. Works on collection of individual design and actual construction of coordinated garments.
Prerequisite: FAS 203.
Corequisite: FAS 202.

FAS 205 Tailoring Techniques I (0-4) 2 hrs.
Introduces professional assembling procedures, details and finishes. Particular emphasis on coats and suits.
Prerequisite: Consent of coordinator.

FAS 206 Tailoring Techniques II (0-4) 2 hrs.
Continues FAS 205. Tailoring of original garments.
Prerequisite: FAS 205.

FAS 209 Advanced Fashion Illustration I (0-2) 1 hr.
Emphasizes work on a professional studio level. Focuses on work sketches as well as finished art. Fashion illustration as advertising, publicity, promotion and display.
Prerequisite: FAS 106 or consent of coordinator.

FAS 210 Advanced Fashion Illustration II (0-2) 1 hr.
Continues FAS 209. Preparation of professional portfolio.
Prerequisite: FAS 209 or consent of coordinator.

FAS 212 Visual Fashion Merchandising (2-0) 2 hrs.
Studies the communications of design. Determining and interpreting consumer needs and motivations. Exploring the methods and techniques of educating the consumer and promoting good design through advertising, publicity, display, fashion shows, special events, employee development, etc.
Prerequisite: FAS 110 or consent of coordinator.

FAS 229 Promotion of Fashion (3-0) 3 hrs.
Introduces various techniques and media for methods to sell fashion. Emphasis on advertising: newspapers, magazines, direct mail, catalogs, radio and television. Includes sales promotion in window displays, interior displays, shops; special events, fashion shows and publicity. Analysis of practical creative assign-

ments developed by the students.
Prerequisite: FAS 102 or consent of coordinator.

FAS 230 Contemporary Living (3-0) 3 hrs.
Focuses on the social, economic, political and psychological forces that influence fashion. The shifting patterns and population profiles will be examined. The consumer point of view of fashion in contemporary living will be observed by studying characteristics of Chicago and suburban stores. Fashion presented by these stores and those accepted by customers in their lifestyles of today will also be analyzed.
Prerequisite: FAS 102 or consent of coordinator.

FAS 240 Fashion Projects (3-0) 3 hrs.
Studies the use of oral and written communication in a fashion career with special emphasis on preparing for and staging fashion shows. Also, practice in effective speaking in small groups or to individuals; effect of grooming and etiquette on communication; style and technique in getting a job; and performing effectively in the fashion industry.
Prerequisite: Consent of coordinator.

Fine Arts

FNA 111 History of Art I (3-0) 3 hrs.
History of art from 20,000 B.C. to 1400 A.D. A survey of the outstanding works of art produced by Western civilizations presented inseparably with the cultural backgrounds of civilizations from the prehistoric age to Gothic Italy. Recommended for art majors as a sequential course after ART 105.

FNA 112 History of Art II (3-0) 3 hrs.
History of art from 1400 to 1890. A survey of the outstanding works of art produced in the Renaissance tradition presented inseparably with the cultural backgrounds of Western Europe from the Renaissance to Art Nouveau. Recommended prerequisite: FNA 111.

FNA 113 History of Art III (3-0) 3 hrs.
History of art from 1900 to the present. An historical critical analysis of the "isms" of modern art both stylistically and ideologically as it relates to our own century.
Recommended prerequisite: FNA 112.

FNA 114 Introduction to Film (2-2) 3 hrs.
Examines different ways of looking at film to improve understanding and appreciation of the medium as an art form and social phenomenon as well as entertainment. Includes lecture/discussion and critical analysis of different directors, stars, film genres, historical trends, aesthetics and the technique and process of filmmaking. Approximately ten feature films will be screened each semester.

Fire Science

FIS 100 Introduction to Fire Science (3-0) 3 hrs.

Examines the basic fundamentals of fire protection. Studies briefly the many facets of fire protection.

FIS 101 Municipal Fire Administration I (3-0) 3 hrs.

Organization and function for fire protection, personnel management, distribution of equipment, records and fire safety problems.

FIS 103 Fire Fighting Tactics I (3-0) 3 hrs.

Examines the fire ground situation and the tactical deployment of manpower and equipment. Studies the leadership styles and techniques dictated by differing conditions.

FIS 112 Fire Alarm and Extinguishing Systems (3-0) 3 hrs.

The function, classification and operating principles of fixed extinguishing systems, detection systems, alarm systems, signaling systems and portable extinguishing equipment installed for fire protection and fire prevention purposes.

FIS 115 Construction Design and Fire Safety (3-0) 3 hrs.

Development of skills and competencies needed to recognize various types of building construction and materials. Emphasis on how materials react and their effects in fires; materials and techniques that provide a firesafe environment.

FIS 122 Fire Prevention Principles I (3-0) 3 hrs.

Introduces fire prevention, inspection, and investigation practices and procedures. Considers fire and building codes, fire protection systems and devices and the development and management of a fire prevention bureau.

FIS 123 Fire Prevention Principles II (3-0) 3 hrs.

Introduces principles of building construction as they relate to the fire officer, fire inspector and fire investigator. Demonstrates the plan review process, introduces N.F.P.A. Life Safety Code, and considers building occupancy requirements.
Prerequisite: FIS 122.

FIS 132 Hazardous Materials I (3-0) 3 hrs.

Review of basic chemistry, storage, handling, laws, standards and fire fighting practices pertaining to hazardous materials.

FIS 133 Hazardous Materials II (3-0) 3 hrs.

Second semester course in hazardous materials covering storage, handling, laws, standards

and fire fighting practices with emphasis on fire fighting and control at the company officer level.

Prerequisite: FIS 132.

FIS 145 Fire Instructor I (3-0) 3 hrs.

Introduces the fundamentals of developing, organizing and delivering training and instruction to fire service personnel. Emphasizes manual skills training and provides the fundamentals of fire service training necessary to meet the requirements for Fire Officer I certification.

FIS 201 Municipal Fire Administration II (3-0) 3 hrs.

Examines and defines management topics that involve fiscal budgeting, personnel management and labor relations, measuring and evaluating productivity. Also examines resource management such as fire station locations and design, fire apparatus, communication and data collection and processing systems.
Prerequisite: FIS 101.

FIS 203 Fire Fighting Tactics II (3-0) 3 hrs.

Examines the tactical deployment of manpower and equipment for extra alarm fires, high-rise fires and often extraordinary incidents. Studies manpower and equipment necessary for large-scale fire ground operations.
Prerequisite: FIS 103.

FIS 222 Fire Prevention Principles III (3-0) 3 hrs.

Considers advanced fire prevention, inspection and investigation practices and procedures. Emphasizes laws, codes and standards which dictate recognized fire prevention practices.
Prerequisite: FIS 123.

FIS 223 Fire Prevention Principles IV (3-0) 3 hrs.

Emphasizes advanced fire prevention, inspection, and investigation principles, procedures and techniques. Emphasizes practices which work toward a reduction in fire incidents.
Prerequisite: FIS 222.

FIS 224 Fire Prevention Principles V (3-0) 3 hrs.

Concentrates on advanced training in installed extinguishing systems, alarm systems, detection devices and portable fire extinguishers. Examines certain hazards requiring installed systems, and covers specific inspection techniques.
Prerequisite: FIS 222.

FIS 242 Fire Hydraulics (3-0) 3 hrs.
Review of basic mathematics, hydraulic laws and formulas as applied to the fire service, application of formulas and mental calculation to hydraulic problems, water supply problems, underwriter's requirements for pumps.

FIS 245 Fire Causes and Investigation (3-0) 3 hrs.
Introduction to arson and incendiarism, arson laws and types of incendiary fires. Methods of determining fire cause, recognizing and preserving evidence, interviewing and detaining witnesses. Procedures in handling juvenile court procedure and giving court testimony are covered.

FIS 252 Automatic Sprinkler Systems (3-0) 3 hrs.
Practical analysis of the various types of automatic sprinkler systems, codes governing installation, system devices and system design.

FIS 262 Water Supply Analysis (3-0) 3 hrs.
Study of municipal water supply requirements, system design and flow measurements for fire protection.

Food Service Management _____

FSM 107 Basic Quantity Bread and Pastry Arts (2-15) 5 hrs.
Introduces basic quantity baking of breads and pastries under the guidance of a master baker/instructor. Students will get theory and classroom discussion plus hands-on production experience as interns in the college bakeshop. (Formerly FSM 090.)
Prerequisite: Consent of coordinator or instructor.

FSM 108 Advanced Quantity Bread and Pastry Arts (2-15) 5 hrs.
Continues instruction in the finer arts of breads and pastry preparation, including emphasis on pastry arts work, pastries and breads as used in exclusive establishments and ornamental skills for culinary exhibits. Includes internship in the college bakeshop and classroom discussions. (Formerly FSM 091.)
Prerequisite: FSM 107.

FSM 109 Basic Quantity Culinary Arts (2-15) 5 hrs.
Introduces basic training by internship in the elements of quantity culinary production arts. The college kitchen, pantry, salad department, dishroom and other "back of the house" areas will be used to acquaint students with the production picture. Students will participate in direct production hands-on learning and culinary arts theory. (Formerly FSM 095.)
Prerequisite: Consent of instructor or coordinator.

FSM 110 Advanced Quantity Culinary Arts (2-15) 5 hrs.
Continues FSM 109 with special emphasis in fine dining experiences. Students will prepare meals for the college dining room, banquets, catered functions and special culinary arts events. Students will discuss theory as well as procedures in the "back of the house." (Formerly FSM 096.)
Prerequisite: FSM 109.

FSM 111 Introduction to Food Service (2-0) 2 hrs.
History and organization of food service hospitality industry including career opportunities in various food fields, organizational structures of food service establishments and operational considerations and problems.

FSM 112 Quantity Food Production (3-3) 4 hrs.
Basic training in the theory and practice of quantity food preparation with emphasis placed on actual food preparation in the College kitchens under the guidance of master chefs and bakers.

FSM 113 Quantity Food Service (1-6) 4 hrs.
Introduces theory and practice of quantity food serving including practical experience in dining rooms and catering service. Involves set-up, tableside preparation and presentation. Examines various roles of dining room personnel.

FSM 114 Food Standards and Sanitation (3-0) 3 hrs.
Function of food ingredients, evaluation of finished products including convenience food products and uses, food service sanitation standards and procedures.

FSM 115 Menu Planning (2-0) 2 hrs.
Practical applications of nutrition as related to food service operations. Menu planning theory and methods for all types of food operations and special events; menu planning as a determination of food cost.

FSM 130 Hospitality Law and Risk Management (4-0) 4 hrs.
Surveys our legal system as applied to the hospitality industry. Examines contracts, torts and various labor laws pertinent to the industry. Analyzes insurance costs, including fire, accident, worker's compensation and employee liability, and their effect on various types of facilities.

FSM 210 Hospitality Facility Maintenance (3-0) 3 hrs.

Focuses on the organization, duties and administration of a restaurant and lodging facility maintenance department. Discusses purchasing, furniture, carpeting, linens and supplies. Identifies and evaluates care and maintenance techniques of the areas serviced by a facility maintenance department.

FSM 211 Purchasing and Storage (3-0) 3 hrs.

Standards and identification of quality meats, dairy products, produce, groceries, frozen foods and supplies. Methods of purchasing, purveyor relations and proper storage techniques and purchase standards for convenience foods.

FSM 212 Food Service Supervision (4-0) 4 hrs.

Study of the theory and techniques of supervision as related to the food service industry.

FSM 213 Seminar and Internship (2-15) 4 hrs.

Part of the credit for this course will be given for participation in a supervised cooperative work experience program in a College approved training station. Enrollment is restricted to sophomores in the Food Service Management program.

Prerequisite: FSM 212 or consent of instructor.

FSM 214 Cost Control (3-0) 3 hrs.

Practical application and theory of various food and beverage cost control systems.

FSM 215 Restaurant Layout and Equipment (3-0) 3 hrs.

Maximizing employee productivity through various types of food equipment and proper equipment arrangement. Effects of use of convenience foods on equipment planning.

French

FRN 101 Elementary French I (4-0) 4 hrs.

Beginning course in the language skills of listening, understanding, speaking, reading and writing in their logical sequence. Designed for students with no previous experience in French.

FRN 102 Elementary French II (4-0) 4 hrs.

Continues FRN 101. Situational conversations in French; reading and writing stressed.

Prerequisite: FRN 101, one year of high school French or consent of instructor.

FRN 201 Intermediate French (4-0) 4 hrs.

Conversation with emphasis on pronunciation, intonation, stress and rhythm. Introduction to composition, reading of short stories and grammar review.

Prerequisite: FRN 102, two years of high school French or consent of instructor.

FRN 202 Intermediate French (4-0) 4 hrs.

Continues FRN 201. Accuracy and speed in reading, study of syntax and extensive composition.

Prerequisite: FRN 201, three years of high school French or consent of instructor.

FRN 205 Intensive Oral Practice (3-0) 3 hrs.

Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern French works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.

Prerequisite: FRN 202 or equivalent or consent of instructor.

FRN 210 Introduction to Modern French Literature (3-0) 3 hrs.

Reading of selected 20th century masterpieces. Introduction to poetry and "analyse de texte." Oral readings stressing pronunciation and diction. Speaking based on discussion works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels.

Prerequisite: FRN 202 or equivalent or consent of instructor.

Geography

GEG 101 World Geography (3-0) 3 hrs.

Economic, political and cultural geography of the modern world. Raw materials, industrial resources and trade connections related to war and peace.

Geology

GEO 101 Physical Geology (3-2) 4 hrs.

Materials, structure and sculpture of the earth's surface. One-day field trip required.

GEO 102 Historical Geology (3-2) 4 hrs.

Geological history of the earth including principles employed to reconstruct this history. One-day field trip required.

Prerequisite: GEO 101, high school earth science or consent of instructor.

GEO 201 Rocks and Minerals (3-2) 4 hrs.

Physical description of minerals and rocks. Introduction to crystallography, economic minerals, natural resources. Field trip required. Prerequisite: GEO 101, CHM 121 or consent of instructor.

GEO 202 Paleontology (3-2) 4 hrs.
Fossil record of life, principles of evolution and ecology. One-day field trip required.
Prerequisite: GEO 102, BIO 101, BIO 140 or consent of instructor.

German

GER 101 Elementary German I(4-0) 4 hrs.
Beginning course in the language skills of listening, understanding, speaking, reading and writing in their logical sequence. Designed for students with no previous experience in German.

GER 102 Elementary German II (4-0) 4 hrs.
Continues GER 101. Situational conversations in German; reading and writing stressed.
Prerequisite: GER 101, one year of high school German or consent of instructor.

GER 201 Intermediate German (4-0) 4 hrs.
Conversation with emphasis on pronunciation, intonation, stress and rhythm. Introduction to composition, reading of short stories and grammar review.
Prerequisite: GER 102, two years of high school German or consent of instructor.

GER 202 Intermediate German (4-0) 4 hrs.
Continues GER 201. Accuracy and speed in reading, study of syntax and extensive composition.
Prerequisite: GER 201, three years of high school German or consent of instructor.

GER 205 Intensive Oral Practice (3-0) 3 hrs.
Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern German works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: GER 202, or equivalent or consent of instructor.

GER 210 Introduction to Modern German Literature (3-0) 3 hrs.
Readings of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and diction. Speaking based on discussion of works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels.
Prerequisite: GER 202, or equivalent or consent of instructor.

Habilitation Aide

CHA 105 Habilitation Aide I (4-0) 4 hrs.
Introduces students to residential care for the developmentally disabled, functions of long-term care facilities, support services, the interdisciplinary team and job descriptions of the habilitation aide.

CHA 110 Habilitation Aide II (1-5) 2 hrs.
Places students in appropriate situations where they observe and participate in a residential facility, where they will utilize, under supervision, the skills and techniques which have been learned in the specialized methods course. The student will take part in scheduled seminar meetings with the instructor.
Corequisite: CHA 105.

CHA 140 Alternate Living Resident Supervisor I (4-0) 2 hrs.
Instructs the certified habilitation aide to supervise residents of small group homes and other residential facilities in ways to be more independent in the home, place of employment and community.
Prerequisite: Habilitation Aide certificate.

CHA 145 Alternate Living Resident Supervisor II (1-5) 2 hrs.
Places a student in appropriate situations in small group homes and other alternative living situations, where they will utilize, under supervision, the skills and techniques which have been learned in the specialized method courses. The student will also take part in scheduled seminar meetings with the instructor.
Prerequisite: CHA 140.

History

HST 111 The American Experience to 1877 (3-0) 3 hrs.
Survey of the American experience through the pre-revolutionary period, the expansion westward and the Civil War. Special stress is placed upon the social, economic, cultural, political and constitutional development of the United States.

HST 112 The American Experience Since 1877 (3-0) 3 hrs.
End of Reconstruction to the present, with primary stress on political and economic development. Also includes social, intellectual and cultural phases, expanded role of government in national affairs and the participation of the United States in international relations.

HST 121 History of Latin America (3-0) 3 hrs.
Surveys the political and constitutional history of the principal Latin American nations. The course will cover movements leading to independence and social and economic events which are pertinent to relationships with the United States.

HST 141 History of Western Civilization to 1650 (4-0) 4 hrs.

Stresses political, social, cultural, economic and technological developments from prehistoric times and concludes with the last manifestation of essentially medieval ideology, i.e., the Protestant Reformation.

HST 142 History of Western Civilization Since 1650 (4-0) 4 hrs.

Continues HST 141. Commences with the emergence of modern times, i.e., the development of royal absolutism and the beginnings of the modern nation state and concludes with the 20th century and the modern world.

HST 151 History of England: Norman Conquest to 1600 (3-0) 3 hrs.

Surveys the social, cultural, economic, political and religious history of England from the Norman Conquest through the age of Elizabeth I.

HST 152 History of England: 1600 to Present (3-0) 3 hrs.

Surveys the social, cultural, imperial, economic and political history of England from the Stuart Dynasty through the present era.

HST 153 British Culture and Society (3-0) 3 hrs.

Surveys the culture and society of England from the Norman Conquest to the present.

HST 210 Women: The American Experience (3-0) 3 hrs.

History of the status, roles and contributions of women in America, and a survey of the attitudes and movements that have affected the lives of women in America.

HST 214 The Afro-American and the American Experience (3-0) 3 hrs.

In-depth study of the American black from African slave trade through slavery, Reconstruction, years of neglect and Civil Rights Revolution in the United States and his contributions to American culture.

HST 218 Illinois and Local History (3-0) 3 hrs.

Surveys Illinois history from earliest times to the present day. Emphasizes the social and economic development of the prairie state. Gives special attention to the local setting. Projects in local history will be encouraged.

HST 243 The Far East in the Modern World (3-0) 3 hrs.

History of East Asia since 1800. The traditional cultures of China and Japan, the Western impact and the Asian response will be covered.

Humanities**HUM 101 Introduction to Western Culture I (3-0) 3 hrs.**

Surveys the humanities: architecture, art, history, literature, music, philosophy and theatre of Western culture from the beginnings to the Renaissance.

HUM 102 Introduction to Western Culture II (3-0) 3 hrs.

Surveys the humanities: architecture, art, dance, film, history, literature, music, philosophy and theatre of Western culture from the Renaissance to the present.

HUM 110 Women and Creativity (3-0) 3 hrs.

Explores the nature of female creativeness, focusing on women in the traditionally male arenas of art and literature and on areas in which the female creative impulse manifests itself under other names: the shaping of social attitudes, domestic arts and religious experiences.

HUM 115 International and Regional Studies in Humanities 1-4 hrs.

Students travel with faculty to international or regional locations which may vary from year to year to study the humanities. May emphasize the literature, language, philosophy or humane arts of the locale visited. Presentation by on-site individualized study, lectures, field trips. Classes held on campus prior to and following the off-campus learning experience. Travel expenses are paid for by the student.

One Credit: Students must attend all classes and field trips, submit a daily log covering one week of travel and write a personal essay of at least five typewritten pages.

Two Credits: Students must attend all classes and field trips, submit a log covering one-two weeks of travel and write a research paper of at least eight typewritten pages, plus bibliography and footnotes.

Three Credits: Students must attend all classes and field trips, submit a log covering three weeks of travel and write a research paper of at least ten typewritten pages, plus bibliography and footnotes.

Four Credits: Students must attend all classes and field trips, submit a log covering four weeks of travel and write a research paper of at least twelve typewritten pages, plus bibliography and footnotes.

HUM 120 Classical Mythology (3-0) 3 hrs.

Studies the myths of Greece and Rome. Focuses on the stories of gods and heroes in classical literature and art. Considers the influence of classical mythology on later Western culture.

Human Services

HSC 101 Introduction to the Health Care Field (3-0) 3 hrs.

Surveys many careers and career skills within the health care team. Emphasizes the health care professionals' responsibilities to the community, health care trends and professionalism. Introduces medical communications and records.

HSC 110 Emergency Medical Technician Training (4-2) 5 hrs.

Designed to train emergency medical technicians, covers all emergency care procedures short of those rendered by physicians or by allied medical personnel under direct supervision of a physician. Emphasizes the development of student skills in recognition of symptoms of illnesses and injuries and proper procedures of emergency care. Reliance is heavily placed on demonstration and practice as a teaching method. This course has special admission requirements. Contact the Admissions Office for details.

HSC 112 Medical Terminology (2-0) 2 hrs.

Emphasizes the basic structure of medical words and includes prefixes, suffixes, roots, combining forms and plurals. Pronunciation, spelling and definition of medical terms. Emphasis will be on rendering a professional vocabulary required for work in the medical field.

HSC 190 Clinical Procedures I (1-3) 2 hrs.

Introduces basic clinical procedures in the physician's examination room. Includes medical asepsis, communication, patient interrogation, assisting the physician with patient preparation and examination. Emphasis placed on demonstration of clinical office skills. Prerequisite: Prior or concurrent enrollment in BIO 135 or BIO 160, HSC 112 and SEC 101.

HSC 211 Clinical Procedures II (2-6) 4 hrs.

Offers advanced clinical techniques in the physician's examining room. Includes diagnostic testing, principles of medications and assisting the physician in specialty examinations and minor surgical procedures. Demonstration of clinical skills in the medical office is emphasized. Prerequisite: HSC 190 with a grade of "C" or better.

HSC 212 Clinical Laboratory Procedures (2-3) 3 hrs.

Offers basic medical laboratory procedures requested by the physician, including urinalysis, hematology, venapuncture, and blood chemistries. Emphasis placed on various

specimen collections, specimen handling, techniques and reports.

Prerequisite: Prior or concurrent enrollment in BIO 135 or BIO 136 and HSC 112.

HSC 213 Medical Law and Ethics (3-0) 3 hrs.

Acquaints the student with the legal and ethical responsibilities of the physician, patient, and allied health personnel in the health care team. Emphasis given to professional attitudes and behavior. Primarily for students in the medical office assistant, medical secretarial and medical transcriptionist programs.

HSC 220 Health, Nutrition and Safety (3-0) 3 hrs.

Focuses on common health problems of young children, principles of nutrition and elements of safety in early childhood education programs. Emphasis will be placed on prevention of health problems, the specifics of a healthy diet and the treatment of childhood accidents. As a part of this course, students will complete the American Red Cross Standard First Aid course.

Independent Study

IDS 290 Independent Study 1-4 hrs.

Designed to permit the student to pursue a course of study not typically available under traditional course structure. The student will contract with the appropriate faculty member for the objectives to be accomplished in the course. May be repeated up to a maximum of four credit hours.

Prerequisite: Sophomore standing, "C" average or consent of instructor.

Interior Design

IND 101 Basic Interior Design I (2-6) 5 hrs.

Surveys today's customer, elements in design of scale, balance and proportion, functional planning, visual sales presentation techniques, color, product sources and applied principles of planning.

Prerequisite: Consent of coordinator.

IND 102 Basic Interior Design II (2-6) 5 hrs.

Studies pattern and texture. Introduces window treatments, function room analysis and advanced planning. Continues application of color.

Prerequisite: IND 101 with a grade of "C" or better.

IND 103 Furniture History (3-0) 3 hrs.
Surveys furniture, design motifs and structures from antiquity to the present. Studies authentic designs and their relationship to contemporary applications. Emphasizes the basis for determining the taste level and quality of reproductions and adaptations on the market today. Includes current sources of other home furnishings products.
Corequisite: IND 101 or IND 102.

IND 104 Basic Color I CADD (2-2) 3 hrs.
Introduces color theories, analysis and visualization techniques for interior design. Emphasizes visualization through studio methods and computer aided design and drafting. Develops awareness of spatial planes and relationships of color for interiors.
Corequisite: IND 101 or IND 102, or previous graduate of Interior Design program.

IND 201 Advanced Interior Design I (3-6) 6 hrs.
Concentrates on textiles, furniture history review, mixing styles of furniture and stylizing. Introduces sales presentation techniques and manufacturing sources.
Prerequisite: IND 102, IND 103 with a grade of "C" or better and ART 121.

IND 202 Advanced Interior Design II (3-6) 6 hrs.
Continues advanced planning and color. Details budgeting, window, wallcovering and flooring estimating. Examines lighting, construction and client analysis. Includes preparation of advanced portfolio with professional critique.
Prerequisite: IND 201.
Corequisite: MKT 106 and MKT 140.

IND 204 Advanced Color II/CADD (2-2) 3 hrs.
Continues color analysis and visualization through studio methods and computer aided design and drafting. Introduces lighting and its effect on interior colors. Introduces color psychology and its interpretation in interiors. Develops further awareness of spatial planes and coordination of color relationships for interiors.
Prerequisite: IND 102 and IND 104.

Interpreter Training

ITP 110 Manual Interpreting/Transliterating I (3-0) 3 hrs.
Studies the continuum of signing styles used by hearing impaired persons with an emphasis on American Sign Language (ASL). Introduction to the grammar, semantics and pragmatics of ASL compared to those of English. Outlines various systems available to manually code English and discusses ways of determining what system is most appropriate in a given situation. Focuses on development of ability to use ASL expressively and to transliterate and interpret from English into a variety of signing systems.
Prerequisite: Sign language evaluation.

ITP 111 Voice Interpreting/Transliterating I (3-0) 3 hrs.
Studies techniques needed to render manually presented communication into appropriate spoken or written English. Develops ability to transliterate materials presented through finger-spelling, manually coded English and pidgin sign language.
Prerequisite: Sign language evaluation.

ITP 120 Manual Interpreting/Transliterating II (3-0) 3 hrs.
Focuses on the development of a working understanding of American Sign Language (ASL) and the expansion of the student's lexicon. Provides in-depth study of ASL's grammatical properties; continues development of skills needed to transliterate and interpret materials from English into ASL, pidgin sign language and manually coded English.
Prerequisite: ITP 110 with a grade of "C" or better.

ITP 121 Voice Interpreting/Transliterating II (3-0) 3 hrs.
Continues development of the ability to transliterate and interpret spoken and written English. Emphasizes presentation factors (voice quality, facial expression, body language) and maintaining accuracy of non-verbal components.
Prerequisite: ITP 111 with a grade of "C" or better.

ITP 201 Issues in Interpreting (3-2) 4 hrs.
Studies the Code of Ethics from the Registry of Interpreters for the Deaf, the history of interpreting/transliterating, and laws, agencies and professional organizations pertaining to the field. Includes the role-playing and interpreter observations in a variety of professional settings.
Prerequisite: PSY 150 or equivalent.

ITP 210 Special Areas of Interpreting (3-0) 3 hrs.

Presents specialized vocabulary for various settings — legal, medical, psychological, educational, vocational and artistic. Continues development of skills in areas of individual weakness.

Prerequisite: ITP 120 with a grade of "C" or better.

ITP 211 Voice Interpreting/ Transliterating III (3-0) 3 hrs.

Emphasizes the development of advanced skills in transliterating and interpreting from American Sign Language (ASL) and nonstandard forms of sign language into appropriate spoken and written English.

Prerequisite: ITP 121 with a grade of "C" or better.

ITP 220 Interpreting Practicum (1-5) 2 hrs.

Requires supervised interpreting/transliterating in a variety of educational settings, businesses and public agencies. In addition to field work, students will meet several times during the semester to discuss issues encountered during the practicum experience.

Prerequisite: ITP 210 and ITP 211 with a grade of "C" or better and consent of instructor.

Journalism

JNM 130 Fundamentals of Journalism (3-0) 3 hrs.

Focuses on the history and current role of the newspaper. Emphasizes grammar and writing skills through assignments and a major project.

JNM 131 News Reporting and Writing (3-0) 3 hrs.

Techniques of gathering and writing news in political, police, social and civic coverage. Prerequisite: JNM 130 or consent of coordinator.

JNM 133 Feature Writing (3-0) 3 hrs.

Stresses the feature approach to non-fiction writing for magazines and newspapers. Develops techniques for writing and selling freelance articles.

JNM 134 Media Adjuncts (2-4) 4 hrs.

Planning and production work in advertising, public relations and publication — business, industrial and consumer magazines.

JNM 135 Principles of Photography (0-2) 1 hr.

Introduces the basic procedures for taking pictures. The 35mm camera, the study television camera and the portable television camera are used.

Prerequisite: JNM 130.



JNM 234 Mass Communication(3-0) 3 hrs.
Impact of modern media, subtle and overt, on affairs of men. Influence of political, social and commercial campaigns and trends on human beings in international, national, regional and local settings.

JNM 235 Copy Reading and News Editing (2-4) 4 hrs.

Focuses on preparation of copy for newspaper publication. Incorporates headline writing, copy editing, treatment of story placement and effective display of typographically pleasing make-up. A newspaper is prepared by the class.
Prerequisite: JNM 130 and JNM 131 or consent of coordinator.

JNM 236 Radio and Television News (3-2) 4 hrs.

Studies reporting and writing of broadcast news. Emphasizes broadcast style in all phases of newswriting and editing. Radio and television newscasts are prepared.
Prerequisite: JNM 130 and JNM 131 or consent of coordinator.

JNM 237 Externship Study (2-15) 5 hrs.

Provides practical media experience through on-the-job assignments at print and broadcast newsrooms, advertising and public relations firms, cable television studios and others. Lecture sessions include preparation of the resume and portfolio and the complete job search.
Prerequisite: Successful completion of three program semesters and consent of coordinator.

Legal Technology _____

LTE 101 Introduction to Legal Technology (3-0) 3 hrs.

Survey of the functions of law; courts and lawyers in modern society; analysis of the origin, training and role of the legal technician; professional responsibilities of the lawyer; outline of the fields and specializations within the practice of law; and instruction in legal research and writing upon a review of the sources and works of law.

Prerequisite: Legal Technology entrance examination and consent of coordinator.

LTE 102 Fundamentals of Legal Research (3-0) 3 hrs.

Orients students to law library and a variety of legal publications, treatises and other legal writings encountered in day-to-day practice of law. Emphasizes developing student capability to analyze, interpret and communicate facts, ideas and law through comprehension of legal research techniques.

Prerequisite: LTE 101 or consent of coordinator.

LTE 103 Litigation (3-0) 3 hrs.

Analysis of civil procedure and instruction in preparation of documents used in lawsuits, covering pre- and post-trial matters, evidentiary problems and assistance during trials.

Prerequisite: LTE 101 or consent of coordinator.

LTE 105 Family Law (3-0) 3 hrs.

Examination of domestic relations law with emphasis on marriage, divorce, annulment, separation agreements, adoption and other legal matters involving the family.

Prerequisite: LTE 101 or consent of coordinator.

LTE 123 Real Property Law (3-0) 3 hrs.

Provides historical study of common law estates and interests, and statutes. Emphasizes the role of and relationship between the attorney and the paralegal in preparing the more common types of real property transactions and conveyances, such as deeds, contracts, leases; drafting problems involving these various instruments; special research projects related to the subject matter; and a study of the system of recording and search of public documents.

Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 200 Probate (3-0) 3 hrs.

Survey of principles, history and sources of probate law: examination of probate court forms and tax returns; and detailed instruction in gathering information and preparing documents for the paralegal assistant's supervising attorney.

Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 201 Tort and Insurance Law (3-0) 3 hrs.

Study of basic tort and insurance law principles; examination of insurance claim procedures and pleading forms used in litigation of various actions.

Prerequisite: Consent of coordinator.

LTE 202 Estate Planning (3-0) 3 hrs.

Examination of common forms of wills and trusts; survey of legal principles applicable thereto; and instruction in draftsmanship of documents by the paralegal assistant for the supervising attorney.

Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 203 Income Taxation I (3-0) 3 hrs.

Detailed examination of federal and state income taxation as applicable to individuals, and instruction in preparation of returns and forms; survey of administrative and judicial procedures relative thereto.

Prerequisite: Consent of coordinator or instructor.

LTE 204 Income Taxation II (3-0) 3 hrs.
Detailed examination of federal, state and local taxes with instruction in preparation of corporate, partnership, fiduciary and other returns and forms.

Prerequisite: Consent of coordinator or instructor.

LTE 206 Conference Course in Legal Technology (3-0) 3 hrs.

Personalized study designed to provide advanced training in the student's speciality area. Prerequisite: Legal Technology entrance examination or consent of coordinator.

LTE 210 Corporate and Securities Law (3-0) 3 hrs.

Prepares paralegal student to aid in incorporation, corporate recordkeeping and compliance with administrative regulations. This includes the understanding of statutes, rules, forms and releases pertaining to the principal acts administered by the Securities and Exchange Commission.

Prerequisite: Consent of coordinator.

LTE 212 Law Office Systems (3-0) 3 hrs.

Study of law office management relying on the systems analysis approach to examine design, method and processes necessary for integrating the paralegal into the hierarchy of the organization of a law office with emphasis on defining functions of the lawyer, paralegal and legal secretary.

Prerequisite: Consent of coordinator.

LTE 220 Community Law (3-0) 3 hrs.

Development of skills and competencies needed to recognize legal problems and comply with the procedures relating to various government agencies. Emphasis will be on federal housing and landlord-tenant law; mental and civil commitments; welfare laws; labor law; social security law; and consumer protection law.

Prerequisite: Consent of coordinator.

Linguistics

LNG 105 Introduction to General Linguistics (3-0) 3 hrs.

Introduces the nature and structure of language. Includes language universals and forms and functions of phonology, morphology and grammars.

Literature

LIT 105 Poetry (3-0) 3 hrs.

Emphasizes enjoyment, appreciation and understanding of poetry. The course may include the study of poets and their work from the time of Chaucer to the 20th century. Typical of the various areas which may be studied are the Romantic and Victorian periods as well as

schools of poetry such as the Imagist. Among the techniques presented to aid the student's understanding are diction, meter, rhythm, theme and symbol.

LIT 110 Drama (3-0) 3 hrs.

Presents a survey of drama from various countries and eras. The course will include representative selections from such modes as tragedy, comedy, melodrama, romance, satire and social commentary as well as absurdist drama. The selections would include such authors as Ibsen, Miller, Moliere and Shakespeare. (See SPE 111 for theatrical study of drama.)

LIT 112 Literature and Film (3-0) 3 hrs.

Introduces methods of reading, interpreting and analyzing literary works as well as examining methods used in translating those works to the media of film. Presents the short story, the novel and the drama in conjunction with their cinematic counterparts. Focuses on understanding and appreciating each form on its own and in relation to the others through reading, viewing and writing.

LIT 115 Fiction (3-0) 3 hrs.

Presents short stories and novels of high interest level. The selections typify authors and styles representative of major American and European literary movements and philosophies. Challenges the student to develop skills in literary analysis. Students will study characterization, narration, dialogue, plot and various other techniques of fiction. Individual sections may concentrate on particular periods, authors or topics.

LIT 206 World Literature to 1800 (3-0) 3 hrs.

Selected works of universal significance contributed by people and civilizations from ancient times to 1800.

LIT 207 World Literature Since 1800 (3-0) 3 hrs.

Continues LIT 206. Selected works of universal significance contributed by people and civilizations from 1800 to the present.

LIT 210 Introduction to Shakespeare (3-0) 3 hrs.

Introduces Shakespeare's acting company, theater and audience. Discusses his techniques in building scenes, developing characters, handling dialogue. Readings and interpretations will consist of representative comedies, tragedies, histories and problem plays.

LIT 216 Science Fiction (3-0) 3 hrs.

Surveys science fiction short stories and novels. Considers science fiction as popular literature and assesses its unique contribution to the history of ideas.

LIT 217 Detective and Mystery Fiction (3-0) 3 hrs.

Presents detective and mystery fiction from its beginning to the present. Includes long and short works representing the various types of mystery fiction. Examines the literature's contributions to, and influences upon, contemporary popular fiction.

LIT 219 Children's Literature (3-0) 3 hrs.

Introduces the various types of children's literature. Includes the history of children's literature, as well as the classic and current authors and illustrators. Covers such areas as picture and concept books, myths, poetry, fantasy and realism.

LIT 221 American Literature Colonial Days to Civil War (3-0) 3 hrs.

American literature as an expression of American life through early social and political documents, novels, short stories and poems.

LIT 222 American Literature the Civil War to 1914 (3-0) 3 hrs.

American prose and poetry to the turn of the century, including regional literature, literary journalism, criticism and social and historical novels. Established criteria for judging American literary output.

LIT 224 Women in Literature (3-0) 3 hrs.

Examines the many images, impressions and stereotypes of women presented in literature. Includes literature written about women and by women, encompassing many countries, eras, authors and genres. The student will read selections from such authors as Chekov, Chopin, Colette, Flaubert and Porter.

LIT 231 English Literature to 1800 (3-0) 3 hrs.

Survey of English writers from beginning English literature to 1800. Reading and interpretation of writers such as Boswell, Chaucer, Congreve, Donne, Dryden, Johnson, Jonson, Malory, Milton, Pope and Swift.

LIT 232 English Literature 1800-1914 (3-0) 3 hrs.

Survey of English writers from Romantic Period to World War I. Reading and interpretation of such writers as Austen, Browning, Byron, Conrad, Dickens, Hardy, Keats, Shaw, Tennyson and Wordsworth.

LIT 241 20th Century British and American Literature (3-0) 3 hrs.

Survey of important writers and writings in British and American literature since World War I.

Management**MGT 111 Introduction to Business Organization (3-0) 3 hrs.**

Nature of business and the environment in which it operates. Forms of business ownership, introduction to operative and facilitating facets of business operation, management, marketing, accounting, statistics, business law, finance, investments, insurance and labor-management relations.

MGT 150 Business Math (3-0) 3 hrs.

Introduces arithmetic as a tool of business. Topics include fractions, decimals and percentages, computations of interest, bank discounts, depreciation, commissions, compound interest, payrolls and taxes and graph and chart design.

Prerequisite: Students must score satisfactorily on a mathematics placement test.

MGT 154 Small Business Management (3-0) 3 hrs.

Organization and operation of the small-scale retail, trading, service or manufacturing business. Location, financing, marketing, labor, accounting, and in the case of manufacturing, production, plus related problems of stock control, taxes and insurance.

Prerequisite: MGT 111 or consent of instructor.

MGT 160 Principles of Supervision (3-0) 3 hrs.

Introduces the responsibilities of the first or second echelon supervisor in either the industrial or administrative environment. Leadership qualities, human relations skills, motivation, communications, training techniques and problems of the work group are discussed.

MGT 165 International Management (3-0) 3 hrs.

Analyzes the problems and practices in international business management activities. The issues include American management techniques in foreign settings, comparative management among different countries and the complexity introduced by the management of international companies. The course focuses on international organizational functioning to help the student gain a diversity of views.

Prerequisite: MGT 111.

MGT 167 Records Management (3-0) 3 hrs.

Includes the study and analysis of what records to keep, how to store them, how to find them quickly when needed and how to apply the criteria for determining their disposition or retention.

MGT 168 OSHA Standards and Compliance Procedures (3-0) 3 hrs.

Development of skills and competencies needed in instituting proper occupational safety and health environment in commercial and manufacturing business establishments for compliance with federal OSHA standards.

MGT 170 Principles of Individual Financial Planning (3-0) 3 hrs.

Introduces investment principles, methods and opportunities of personal investments. The course deals with the markets, stocks and bonds, investment funds and insurance with emphasis on starting a personal portfolio.

MGT 218 Introduction to Finance (3-0) 3 hrs.

Methods of financing business enterprises and their relationships to personal and company investment policies.

Prerequisite: ACC 101 and MGT 111.

MGT 225 Applied General Statistics (3-0) 3 hrs.

Introduces both descriptive and inductive statistics. Collection of data; frequency distributions and measures of data; frequency distributions and measures of location (mean, median, mode); measures of variation; probability, theoretical distributions including sampling distributions, estimation, tests of hypotheses; correlation, regression analysis and index numbers; and time series. Computer applications are included.

Prerequisite: MTH 124.

MGT 226 Elementary Quantitative Methods (3-0) 3 hrs.

Introduces quantitative methods as applied to business problems. The standard gamble, the payoff matrix and problems of uncertainty and risk; formulating and defining business problems for quantitative solutions.

MGT 265 Personnel Management (3-0) 3 hrs.

Personnel problems and labor relations. Employment techniques, wages and hours, job evaluation, training, rating, collective bargaining, pensions and fringe benefits will be examined.

Prerequisite: MGT 270 or consent of instructor.

MGT 267 Office and Administrative Management (3-0) 3 hrs.

Application of fundamental management practices to administrative type work both in the office and throughout the organization. Planning, organizing and controlling business services, systems and procedures, office automation, cost reduction and human relations practices.

Prerequisite: MGT 270 or consent of instructor.

MGT 270 Principles of Management (3-0) 3 hrs.

Presents the theory and major functions of management and describes the role of the manager. Major concepts in organization are developed along with an understanding of the decision-making process and consideration of the human factor in management.

Prerequisite: MGT 111.

MGT 274 Industrial Management (3-0) 3 hrs.

Introductory course in industrial management stressing operational problems. The characteristics of industrial enterprise, the problems of materials procurement, plant organization and layout, labor relations and personnel policies, efficiency techniques, automation and production development are considered. Related problems of inventory control, quality control, production control and budgetary control are included.

Prerequisite: MGT 270 or consent of instructor.

MGT 275 Labor-Management Relations (3-0) 3 hrs.

Deals with the processes and the framework that influence both the day-to-day and the long-run relationships between management and labor. The history of the union movement, collective bargaining, arbitration procedures, labor legislation, union organization and the characteristics of the labor market are discussed.

Prerequisite: MGT 270 or consent of instructor. (Prior or concurrent enrollment in ECO 201 recommended.)

MGT 280 Human Relations in Business (3-0) 3 hrs.

Emphasizes a managerial and interpersonal relations process approach to problem solving, communication and group dynamics. Specific treatment is given to managing change, appraisal and reward, solving communication problems, status needs of the work force, understanding individuals, group dynamics and reducing conflict.

Prerequisite: MGT 160 or MGT 270.

MGT 291 Problems in Management and Supervision (3-0) 3 hrs.

Provides the student with a logical integration of management principles with representative supervisory problems found in business firms. Emphasis is given to decision making. Case problems, simulation and directed reading.

Prerequisite: MGT 160 and MGT 270 or consent of the instructor. (Prior or concurrent enrollment in ECO 201 is recommended.)

Marketing

MKT 106 Merchandising of Furnishings and Softline Goods (3-0) 3 hrs.

Focuses upon retailing of furnishings, apparel and other softline merchandise including the role and qualifications of the buyer and the influence of consumer preference. Includes budgeting by dollars and assortment, pricing strategy, managing assortments, the selection and promotion of merchandise and the coordination of merchandising functions and processes.

MKT 140 Salesmanship (3-0) 3 hrs.

General salesmanship involving factors of successful selling of goods or ideas. Buying motives, sales psychology, customer approach and sales techniques.

MKT 141 Sales Management (3-0) 3 hrs.

Focuses on the responsibilities of the sales executive as he or she plans and evaluates sales activities as well as supervises a sales force. Attention is given to the administrative activities of sales managers at all levels with emphasis directed to the management of sales forces of manufacturers, service marketers and wholesaling middlemen.
Prerequisite: MKT 140 or consent of coordinator.

MKT 190 Export Documentation (3-0) 3 hrs.

Provides an understanding of the procedures and necessary documentation for exporting both goods and services. Course content will cover shipping documentation as well as insurance, banking and finance and governmental forms required for export marketing.
Prerequisite: MKT 260 or consent of instructor.

MKT 217 Advertising (3-0) 3 hrs.

Purposes of advertising, how advertisements are prepared and delivered in media, and how effectiveness of advertising is measured and evaluated in relation to the selling and marketing process.
Prerequisite: MKT 245 or consent of instructor.

MKT 240 Advanced Sales Skills (3-0) 3 hrs.

Develops and refines sales skills established in previous course work and/or on-the-job experience. Through role playing and simulated sales presentations, opportunities will be offered to apply specific selling skills to various situations and product categories.
Prerequisite: MKT 140 or consent of coordinator.

MKT 245 Principles of Marketing (3-0) 3 hrs.

Principles of methods involved in distribution of goods and services. Roles and functions of marketing institutions in business system. Product, price, promotion and distribution channel policies.
Prerequisite: MGT 111. (Prior or concurrent enrollment in ECO 200 or ECO 201 recommended.)

MKT 246 Industrial Marketing (3-0) 3 hrs.

Provides a comprehensive understanding of industrial marketing by analyzing concepts and techniques in each of the major functional areas of industrial marketing. Topics to be investigated would include market development, product planning, price competition, promotional strategies, customer relations and marketing logistics.
Prerequisite: MKT 245 or consent of coordinator.

MKT 247 Consumer Buying Behavior (3-0) 3 hrs.

Reviews and analyzes areas of consumer and organizational buying behavior that guide marketing management decisions. The focus of this course will be directed toward the application of concepts on buying behavior to specific functional areas of marketing management in both the industrial and consumer markets.
Prerequisite: MKT 245 or consent of coordinator.

MKT 250 Retailing (3-0) 3 hrs.

Survey of types of retail institutions, including consideration of store location and organizational procedures, buying and merchandising practices, promotional and personnel policies.
Prerequisite: MKT 245 or consent of coordinator.

MKT 251 Retail Merchandise Management (3-0) 3 hrs.

Emphasizes the nature and importance of retail merchandise management to the success of the retail firm. The buyer's role and activities are considered. Main thrust in the areas of merchandise assortment planning; models for merchandise management, retail pricing strategies and policies; and retail operating statement analysis.
Prerequisite: MKT 106 or MKT 250.

MKT 255 Marketing Research (3-0) 3 hrs.

Provides students with a basic overview of marketing research. Includes an understanding of how and why marketing research is conducted and how it interacts with marketing decision making.

MKT 260 International Marketing (3-0) 3 hrs.

Allows students to gain a broad understanding of the field of international marketing. It also provides insight into how international marketing is conducted, the requisites for effective performance and a knowledge of the special problems involved in language, finance and customs. Most importantly, it assists students in understanding international marketing problems and how marketing procedures apply to international business.

MKT 265 Marketing Planning and Decision Making (3-0) 3 hrs.

Centers around three major activity areas: managerial analysis of the marketing environment; marketing opportunity analysis; and design, implementation and control of marketing strategy — all consistent with the organizational framework of the mission of the organization.

MKT 280 Marketing Problems (3-0) 3 hrs.

Designed for the marketing mid-management major unable to participate in the sophomore internship phase of the curriculum. The focus of attention will be on the application of marketing skills and knowledge to marketing problems, case studies, projects, decision-making simulation, and independent study. This course should be one of the last courses taken in the sequence.

Prerequisite: Consent of coordinator.

MKT 290 Principles of Exporting (3-0) 3 hrs.

Provides a conceptual overview of the world market environment with emphasis on recognition of overseas marketing opportunities. Introduces students to marketing program strategy and procedures to capitalize on overseas business potential.

Prerequisite: MKT 260.

MKT 292 International Marketing Research (3-0) 3 hrs.

Provides the student with the concepts and procedures for successfully completing international marketing research studies. Specific marketing research subject areas studied will include marketing problem definition, international information source definition, utilizing governmental data, survey design, collection and analysis techniques.

Prerequisite: MKT 290.

MKT 293 International Marketing Channel Strategy (3-0) 3 hrs.

Provides a comprehensive understanding of the strategies for exporting both goods and services through alternative marketing channels of

distribution. Will address both cost and profit considerations in utilizing multi-level marketing channel intermediaries.

Prerequisite: MKT 290.

Material Management

MAT 101 Fundamentals of Material Management (3-0) 3 hrs.

Provides an introduction and overview of the field of material management. Topics covered include objectives, benefits, relationships with other functions, organization, planning, inventory control, production control, purchasing, receiving and stores, material handling, physical distribution, computer applications, implementation and pitfalls, measurement and control and finance.

MAT 120 Production Control Concepts (3-0) 3 hrs.

Describes the development, scope and objectives of production control. Specific attention will be given to scheduling, control, critical path, machine loading, materials requirements planning and other techniques, functions, and activities which are implicit in this aspect of material management operations.

Prerequisite: MAT 101 or consent of coordinator.

MAT 121 Principles of Physical Distribution (3-0) 3 hrs.

Movements of goods from production to delivery to distribution of channel intermediaries. Attention is focused upon distribution channels, traffic management, warehousing, inventories, organization, control and communication. Heavy emphasis is given to distribution system design and distribution system analysis.

Prerequisite: MAT 101 or consent of coordinator.

MAT 122 Inventory Control (3-0) 3 hrs.

Provides an overview of the dynamics of managing inventory in the constantly changing industrial and commercial environment. Topics include forecasting sales and inventory requirements, computer applications to inventory control problems, building inventory models, simulation and the relationships of inventory control to marketing management and production control.

MAT 123 Traffic and Transportation (3-0) 3 hrs.

Overview of transportation systems and the impact on cost and service that each system provides. Examines costs in various modes and routings. Reviews operational aspects of the transportation function.

MAT 124 Material Handling and Packaging (3-0) 3 hrs.

Presents material handling and packaging as tools for use in a total system of material management. Material handling concepts include palletization, containerization, conveyor systems, fully automated warehousing and integrated production lines. Packaging is treated as a function with ramifications far beyond the mere protection of a product. Prerequisite: MAT 101 or consent of coordinator.

MAT 125 Purchasing (3-0) 3 hrs.

Covers the nature and importance of the procurement function in modern business organizations. Principles, tools, methods and techniques employed for the acquisition of materials, supplies and equipment. Prerequisite: MAT 101 or MKT 245.

MAT 220 Advanced Production Control (3-0) 3 hrs.

Continues MAT 120. Production forecasting, shop loading, capacity planning, shop floor control techniques and short interval scheduling are considered, as well as job shop versus continuous flow systems. Further attention is devoted to materials requirements planning. Prerequisite: MAT 120 or consent of coordinator.

MAT 221 Distribution Center Operations (3-0) 3 hrs.

Continues MAT 121. Concepts of warehousing, location strategies and techniques. Administrative aspects, including order processing, recordkeeping, computerization and control will be covered. Includes a project on warehousing layout and design. Prerequisite: MAT 121 or consent of coordinator.

MAT 223 Legal Aspects of Material Management (3-0) 3 hrs.

Examines the law especially as it pertains to material management activities. Topics include purchasing, transportation, U.C.C., commercial laws, labor contracts and laws, torts, product liability, trade and supply agreements, international business, real estate, and S.E.C. and anti-trust laws.

MAT 224 Advanced Material Handling and Warehousing (3-0) 3 hrs.

Continues MAT 124. Material handling ramifications for warehousing, shipping and receiving operations are considered. Plan layout, facility layout, automated warehousing and equipment (mobile, racks, conveyors and other specialized types) are considered. Prerequisite: MAT 124 or consent of coordinator.

MAT 225 Practice of Regulatory Agencies (3-0) 3 hrs.

Describes the history and practices of regulatory agencies impacting upon the transportation field. The structuring of rates and tariffs is also considered. Recommended prerequisite: MAT 123.

MAT 226 Material Requirements Planning (MRP) (3-0) 3 hrs.

Covers computer based Material Requirements Planning (MRP) systems, important to modern material management. Focuses on using MRP systems to reduce inventories, set priorities, initiate orders, purchase requirements and develop master production schedules. Prerequisite: MAT 122 or consent of coordinator.

MAT 228 Finance for Material Managers (3-0) 3 hrs.

Blends managerial accounting concepts pertinent to material managers with distribution cost analysis techniques. Factors influencing capital outlay decisions such as ROI, present value, make or buy, depreciation and tax considerations are considered. Prerequisite: ACC 102.

MAT 230 International Material Management (3-0) 3 hrs.

Provides a comprehensive study of the material management function related to the international environment: business/cultural customs, legal considerations, purchasing strategies, financial aspects, international distribution and counter-trade. Prerequisite: MAT 101 or consent of instructor.

MAT 259 Advanced Purchasing (3-0) 3 hrs.

Continues MAT 125. Emphasis to be given to managerial aspects of purchasing, contract negotiation and administration and speculative purchasing. Prerequisite: MAT 125.

MAT 280 Material Management Policy (3-0) 3 hrs.

Seminar-type course designed to integrate material management concepts developed throughout the Material Management sequence. Broad higher-level management concerns and current topics relative to the material management function are developed. Should be one of the last courses taken by Material Management majors. Prerequisite: 11 credit hours in MAT course work or consent of coordinator.

Mathematics

MTH 051 Arithmetic of Whole Numbers (1-0) 1 hr.

Covers whole number operations. In addition to the four basic processes of addition, subtraction, multiplication and division, estimation is introduced as an aid to better computation. Factors of whole numbers are also included. Optional unit on use of hand-held calculators is available but not required. Course material will be individualized. Carries no transfer credit.

MTH 052 Arithmetic of Common Fractions (1-0) 1 hr.

Covers the operations associated with addition, subtraction, multiplication and division of common fractions and mixed numbers, and an introduction to ratio and proportion. Course material will be individualized. Carries no transfer credit.
Prerequisite: MTH 051 or equivalent.

MTH 053 Arithmetic of Decimals Percent and Metric Measurement (1-0) 1 hr.

Covers operations with decimals, percent and SI Metric Measurement System. Course material will be individualized. Carries no transfer credit.
Prerequisite: MTH 052 or equivalent.

MTH 061 Beginning Algebra: Basic Concepts and Components (1-0) 1 hr.

Introduces basic algebraic vocabulary and operations. Highly recommended for students who have not had high school algebra. Course material will be individualized. Can also be taken as part of a lecture course in beginning algebra that includes MTH 062 and MTH 063. Carries no transfer credit.

MTH 062 Beginning Algebra: Equations, Inequalities, and Applications (1-0) 1 hr.

Covers solution of linear equations and inequalities, solution of formulas and word problems. Recommended for students with no high school algebra. Course material will be individualized. Can also be taken as part of a lecture course that includes MTH 061 and MTH 063. Carries no transfer credit.
Prerequisite: MTH 061 or equivalent.

MTH 063 Beginning Algebra: Factoring Polynomials and Systems of Equations (1-0) 1 hr.

Introduces multiplication and factoring of polynomials, the rectangular coordinates and systems of equations. Recommended for students who have had no high school algebra. Course material will be individualized. Can also be taken as part of a lecture course that includes

MTH 061 and MTH 062. Carries no transfer credit.

Prerequisite: MTH 062 or equivalent.

MTH 096 Geometry (3-0) 3 hrs.

Concepts of Euclidean geometry, including lines, angles, polygons and circles. Offered through the Learning Skills Laboratory.
Prerequisite: One year of high school algebra with grade of "C" or better or MTH 063 or equivalent, with grade of "C" or better.

MTH 100 Basic Applied Mathematics (3-0) 3 hrs.

Introduces topics in arithmetic, algebra, trigonometry and problem solving with calculators. Intended for students in career-vocational programs.
(NOTE: Cannot be used for Group III or V General Studies requirement for A.A. or A.S. degree.)

MTH 102 Intermediate Algebra (4-0) 4 hrs.

Introduces roots of quadratic equations, complex numbers, rational exponents, radicals, logarithms, inequalities and the binomial theorem.
Prerequisite: MTH 063 and MTH 096 with a grade of "C" or better, or equivalent and placement test.

MTH 103 College Algebra (4-0) 4 hrs.

Studies equations and inequalities, polynomial, rational, exponential and logarithmic functions, inverse functions, systems of equations, determinants and matrices, sequences and series and theory of equations.
Prerequisite: MTH 102 with a grade of "C" or better, or equivalent and placement test.

MTH 104 Plane Trigonometry (3-0) 3 hrs.

Develops trigonometric functions and relations, solutions of triangles, complex numbers, identities, equations and applications.
Prerequisite: MTH 102 or equivalent with grade of "C" or better.

MTH 105 Analytic Geometry (4-0) 4 hrs.

Develops rectangular and polar coordinate systems, the straight line and conic sections. Introduces vectors, coordinate transformations, parametric equations and analytic geometry in three dimensions.
Prerequisite: MTH 103 and MTH 104 with grade of "C" or better, or equivalent and placement test.

MTH 106 Mathematics I (5-0) 5 hrs.

Introduces topics in algebra, vectors, trigonometry and problem solving by computer using FORTRAN or BASIC language. For students in Electronics Technology or Mechanical Engineering Technology.
Prerequisite: Two years of high school mathematics or consent of instructor.

MTH 107 Mathematics II (5-0) 5 hrs.

Continues MTH 106 with additional topics in trigonometry, analytic geometry, logarithms, differential and integral calculus.

Prerequisite: MTH 106 with grade of "C" or better or consent of instructor.

MTH 108 BASIC Computer Programming (1-2) 2 hrs.

Introduces computer programming in the BASIC language. Emphasizes applications in fields other than business data processing.

Prerequisite: MTH 103 or consent of instructor.

MTH 120 Introduction to Modern Mathematics (3-0) 3 hrs.

Introduces sets, logic, numeration systems and probability. Reviews selected topics in algebra and geometry. A general education course in mathematics.

Prerequisite: MTH 063 and MTH 096 or equivalent with grade of "C" or better.

MTH 124 Finite Mathematics (3-0) 3 hrs.

Develops the mathematics of simple models in behavioral, social and management sciences. Studies applications of set theory, vectors and matrices, linear programming, combinations, probability spaces, Markov chains and game theory with computer assistance.

Prerequisite: MTH 102 with grade of "C" or better or consent of instructor.

MTH 134 Calculus for Social Scientists (4-0) 4 hrs.

Develops an intuitive approach to concepts of differential and integral calculus. Applies these concepts to problems in social, behavioral and management sciences. Not for physical science or mathematics majors.

Prerequisite: MTH 103 with grade of "C" or better or consent of instructor.

MTH 165 Elementary Statistics (3-0) 3 hrs.

Introduces representation and analysis of data statistical inference, sampling distribution of means, regression and correlation analysis and probability. Demonstrates use of statistics in education, business, natural and social sciences.

Prerequisite: MTH 102 with grade of "C" or better or consent of instructor.

MTH 200 Calculus with Analytic Geometry I (5-0) 5 hrs.

Studies vectors, limits, the derivative and the definite integral with applications to geometry, science and engineering.

Prerequisite: MTH 103 and MTH 104 with a grade of "C" or better or high school equivalent and assessment test.

MTH 201 Calculus with Analytic Geometry II (5-0) 5 hrs.

Continues MTH 200. Studies differentiation of transcendental functions, techniques of integration, series, conics, polar coordinates and parametric equations with applications to science and engineering.

Prerequisite: MTH 200 with a grade of "C" or better.

MTH 202 Calculus with Analytic Geometry III (4-0) 4 hrs.

Continues MTH 201. Studies vector functions, multivariable functions, differentials, multiple integration and vector calculus with applications to science and engineering.

Prerequisite: MTH 201 with a grade of "C" or better.

MTH 203 Linear Algebra (3-0) 3 hrs.

Introduces vector spaces, linear dependence, bases and transformations using systems of linear equations, matrices and determinants. Studies geometric, physical and business applications.

Prerequisite: MTH 134 or MTH 200, or concurrent enrollment, or consent of instructor.

MTH 206 Mathematics III (3-0) 3 hrs.

Continues MTH 107. Introduces differential equations and Laplace transforms. For students in Electronics Technology.

Prerequisite: MTH 107 with a grade of "C" or better or consent of instructor.

MTH 208 FORTRAN Computer Programming (3-2) 4 hrs.

Develops working knowledge of FORTRAN 77. Includes problem formulation, data storage and retrieval techniques, algorithm analysis and development, flowchart and pseudocode construction. Introduces student to numerical methods and simulations. Intended for the computer science, engineering, mathematics or science student.

Prerequisite: MTH 103 or MTH 107 with a grade of "C" or better or consent of instructor.

MTH 209 PASCAL Computer Programming (3-2) 4 hrs.

Develops working knowledge in use of the computer in the PASCAL programming language. Includes problem formulation, data storage and retrieval, algorithms, flowcharts or pseudocode, numerical analysis and structured programming. Intended for the computer science, mathematics, science or engineering student.

Prerequisite: MTH 103 or MTH 107 with a grade of "C" or better or consent of instructor.

MTH 210 PL/1 Computer Programming (3-2) 4 hrs.

Develops a working knowledge in use of the computer in the PL/1 programming language. Includes problem formulation, data storage and retrieval, algorithms, flowcharts or pseudo-code, numerical analysis and structured programming. Intended for computer science, mathematics, science or engineering majors. Prerequisite: MTH 103 or MTH 107 with a grade of "C" or better or consent of instructor.

MTH 211 Introduction to "C" Programming and UNIX (3-2) 4 hrs.

Develops working knowledge in the use of the computer in the "C" programming language. Includes problem formulation, data storage and retrieval, algorithms, flowcharts and pseudo-code, numerical analysis and structured programming, lexical analysis and string manipulation. Introduces student to a UNIX-like operating system environment. Intended for the computer science or engineering major. Prerequisite: MTH 208, MTH 209 or MTH 210 with a grade of "C" or better, or consent of instructor.

MTH 212 Differential Equations (3-0) 3 hrs.

Continues MTH 202. Emphasizes solutions of first order differential equations, linear differential equations, special second order equations and series solutions. Studies selections from these topics: Laplace transforms, Fourier series, numerical methods and applications of matrix algebra. Prerequisite: MTH 202 with a grade of "C" or better.

MTH 215 Introduction to Computer Science (3-0) 3 hrs.

Introduces computer arithmetic and error analysis, machine organization, storage and retrieval of data, numerical methods, data structures and problem analysis: numeric and non-numeric applications. Prerequisite: MTH 208, MTH 209 or MTH 210 with a grade of "C" or better.

MTH 216 Programming Structure and Techniques (2-2) 3 hrs.

Provides exposure to techniques for storing and manipulating data using bulk data storage devices. Includes discussions of addition, deletion and insertion algorithms for stacks, queues, deques, linked lists and trees. Intended for computer science majors. Prerequisite: MTH 209, MTH 210 or MTH 211 with a grade of "C" or better or consent of instructor.

MTH 217 Assembly Language Programming and Computer Organization (3-2) 4 hrs.

Introduces the organization of the VAX computer system from the hardware and software standpoint. Includes a review of internal data representation, how the various hardware units interact and an introduction to the VAX/MACRO assembly language. The assembly language portion will cover addressing modes, instruction format and usage in writing assembly language programs. Prerequisite: MTH 215 with a grade of "C" or better or consent of instructor.

MTH 265 Statistics (3-0) 3 hrs.

Includes the study of probability spaces, random variables and distributions, laws of large numbers and central limit theorem, joint probability distributions, sampling distributions, theory of estimation, simple linear regression and introduction to SPSS. Prerequisite: MTH 202.

Mechanical Engineering Technology

MET 101 Drafting for Air Conditioning and Heating (1-4) 3 hrs.

Introduces lettering, orthographic projection, dimensioning and auxiliary views. Emphasizes shop drawings, developments and piping drawings.

MET 102 Technical Drafting (1-5) 3 hrs.

Lettering, orthographic projection, size and location, dimensioning, surface finishes, auxiliary view, sketching, diazo printing techniques.

MET 103 Descriptive Geometry (0-6) 3 hrs.

Analysis of common geometrical magnitudes of points, planes and curved surfaces. Includes rotations, auxiliary views, developments and nomography. Applications of geometrical methods in projections, assemblies and details. Prerequisite: MET 102, MTH 106 or consent of instructor.

MET 105 Basic Machine Shop (1-5) 3 hrs.

Fundamentals of machine shop theory and practices. Familiarization with tools, equipment and practices of tool, die and precision metal working industries. Students make working tools and fixtures.

MET 108 Manufacturing Processes and Materials (3-0) 3 hrs.

Materials, principles, utilization, expectations and evaluation of principal manufacturing processes. Manufacture of metals and alloys. Iron and steel types and classification systems. Machinability, cutting fluids and power requirements. Elements of metrology. Production and facilities planning.

Prerequisite: MTH 106, or concurrent enrollment or consent of instructor.

MET 110 Basic Welding (1-5) 3 hrs.

Fundamentals of welding theory and practices. Includes equipment, set-up procedures and practice of oxyacetylene and electric arc welding techniques. Students will practice welding of various horizontal joints; butt; fillet; lap and tent.

MET 201 Mechanisms (3-3) 4 hrs.

Fundamentals of displacement, velocity and acceleration of rigid bodies as a basis for the study of the kinematics of mechanisms. Motion analysis of cams, gears and linkages. Study of conjugate shapes and gear tooth development. Prerequisite: MTH 107 or consent of instructor.

MET 205 Advanced Machine Shop (1-5) 3 hrs.

Advanced application of machine shop theory and practice. Use of equipment such as lathes; O.D. and I.D. grinders, tool grinder and mills; and study of production machining, feed and speed application and quality control techniques are included.

Prerequisite: MET 105 or consent of instructor.

MET 206 Metallurgy and Heat Treatment (1-3) 2 hrs.

Selected principles and concepts of physical metallurgy. Principles are applied to heat treatment of metals.

Prerequisite: MET 108 or consent of instructor.

MET 207 Machine Design (2-6) 4 hrs.

Design principles applied to machine elements with respect to size, shape, material, geometry, environment and economy. Clutches, brakes, belts, chains, fasteners, gear shafts and gears are examined. Emphasis on principles and calculations necessary to determine fits, stresses, loads, deformations, economy and finishes.

Prerequisite: MET 201, MET 204 and MET 206.

MET 210 Advanced Welding (1-5) 3 hrs.

Advanced welding theory and practice. Includes discussions of equipment, setup procedures and practice of unusual positions in welding using oxyacetylene, electric arc, MIG and TIG techniques. Students will practice welding in various unusual positions on joints such as butt and fillet; also practice welding pipe and Bearing Journal Surfaces.

Prerequisite: MET 110 or consent of instructor.

MET 211 Process Planning and Tool Design (3-3) 4 hrs.

Studies topics in mechanical and tooling systems. Drafting presentation of tooling details, jigs and fixtures and geometric tolerancing is included. Organization of manufacturing steps and process planning will be emphasized.

Prerequisite: MET 106 and MET 108 or consent of instructor.

MET 228 Automated Manufacturing and Robotics (2-2) 3 hrs.

Continues MET 108. Advanced concepts of manufacturing systems with automation techniques, robotics applications and flexible manufacturing systems. Introduces automation controls, robotic cell design, automatic storage/automatic retrieval and automated quality control. Includes the interdependent relationship of industrial robots, microprocessors and advanced numerical control.

Prerequisite: MET 108.

MET 235 Computer Graphics (3-4) 5 hrs.

Surveys components and concepts of computer graphic systems. Applies principles of engineering graphics to create dimensional drawings using graphics, terminals, digitizers, plotters and related software. Emphasizes application of various computer design systems. (Formerly MET 114 and MET 214.)

Prerequisite: MET 102.

MET 236 Special Problems in Three-Dimensional Graphics (1-4) 3 hrs.

Provides detailed study of wire-framing, detailing and graphical modeling. Examines methods and solutions to individual problems using 3-D computer graphics methods. (Formerly MET 224.)

Prerequisite: MET 235.

MET 237 3D/CAD Modeling (1-4) 3 hrs.

Examines methods and solutions to individualized problems using advanced computer graphics techniques. (Formerly MET 234.)

Prerequisite: MET 236.

MET 240 Strength of Materials and Statics (5-0) 5 hrs.

Introduces the concepts of force systems, equilibrium of force system, analysis of forces acting on members of trusses, frames, etc., forces due to friction. Includes elastic relationships between external forces acting on deformable bodies and stresses, and deformations produced, tension and compression members, members subjected to torsion and bending, buckling, combined stresses and influence of properties of materials. (Formerly MET 104 and MET 204.)

Prerequisite: MTH 106.

MET 245 Applied Digital Control (3-4) 5 hrs.

Studies the principles and techniques of controls applied to mechanical systems, electrical motors and electro-mechanical systems. Consists of topics in motors and controls, hydraulic and pneumatic components, open-closed loop systems, programmable micro-processor controllers, and robotic control devices (limit switches, relays, solenoids, end-of-arm sensors). Includes control logic and Boolean algebra. (Formerly MET 209.) Prerequisite: MTH 106 or consent of instructor.

Music

MUS 100 Introduction to Music Careers (1-0) 1 hr.

Issues relating to the successful pursuit of a career in music. Recommended for anyone pursuing a professional music career.

MUS 101 Fundamentals of Music Theory (3-0) 3 hrs.

Suitable for pre-teachers and non-music majors. Provides background to interpret and understand language of music through study of notation, rhythm, scales, intervals, triads, cadences, basic forms and musical terms. Students prepare for study of harmony and for practical music activity.

MUS 103 Music Appreciation (3-0) 3 hrs.

Surveys music from primitive to modern times through listening to outstanding examples of the various periods, with explanations of content and structure. Vocal and instrumental works, examples of folk music, church music and symphonic forms for non-music majors.

MUS 104 Introduction to American Music (3-0) 3 hrs.

For non-music majors. Develops a stylistic frame of reference for judging popular music. Surveys characteristic elements of jazz, rhythm and blues, popular music and their relation to western classical music.

MUS 111 Theory of Music I (3-0) 3 hrs.

Provides intensive training in the fundamentals of musicianship, dealing principally with mechanical aspects of music: clefs, notation, scales, intervals, meters, rhythm, etc. Analysis and composition procedures of the Common Practice period. Corequisite: MUS 115.

MUS 112 Theory of Music II (3-0) 3 hrs.

Provides harmony, counterpoint and analysis, with emphasis on the 18th and 19th century techniques; basic principles of art of musical composition. Written assignments, historical examples, individual research problems and complete process of writing, preparing and bringing to performance with voices and

instruments specific individual and group projects in musical composition.

Prerequisite: MUS 111.

Corequisite: MUS 116.

MUS 115 Aural Skills I (0-2) 1 hr.

Develops skills in melodic, harmonic and rhythmic dictation and sight singing. Corequisite: MUS 111.

MUS 116 Aural Skills II (0-2) 1 hr.

Develops skills in melodic, harmonic and rhythmic dictation and sight singing. Corequisite: MUS 112.

MUS 120 Introduction to Music Literature (3-0) 3 hrs.

A survey of the styles, periods, literature and personalities in each of the commonly accepted music periods, with primary emphasis on hearing music of each style.

MUS 130 Choir (0-3) 1 hr.

Mixed-voice chorus for average or above-average ability. Fundamentals of good choral diction and tone developed in choral works of various styles and types. May be repeated up to maximum of 4 credit hours. Prerequisite: Consent of instructor.

MUS 136 Community Chorus (0-3) 1 hr.

Variety of choral experience including larger choral works such as oratorios and cantatas, and selections from grand opera, comic opera and musical comedy. May be repeated up to a maximum of 4 credit hours.

MUS 140 Band (0-3) 1 hr.

Open to all students proficient in playing of band instruments. Band music of various types and styles. Sight reading and musicianship stressed. May be repeated up to a maximum of 4 credit hours.

Prerequisite: Consent of instructor.

MUS 145 Ensembles (0-3) 1 hr.

Ensembles such as string or vocal quartets, brass or voice ensembles, stage bands, madrigal groups or other combinations. For students with advanced proficiency on an instrument or in voice. To further skills, musical understanding and enjoyment. May be repeated up to a maximum of 4 credit hours. Prerequisite: Consent of instructor.

MUS 150 Orchestra (0-3) 1 hr.

Open to all students proficient in playing orchestral instruments. Orchestral music of various types and styles. Sight reading and musicianship stressed. May be repeated up to a maximum of 4 credit hours. Prerequisite: Consent of instructor.

MUS 161 **Woodwind Instrument** 2 hrs.
Class I (1-2)

For students who have had no experience playing an orchestral or band instrument and for instrumentalists already proficient but who desire to play several instruments. May be repeated up to a maximum of 4 credit hours.

MUS 162 **Brass Instrument** 2 hrs.
Class I (1-2)

For students who have had no experience playing an orchestral or band instrument and for instrumentalists already proficient but who desire to play several instruments. May be repeated up to a maximum of 4 credit hours.

MUS 163 **Percussion Instrument** 2 hrs.
Class I (1-2)

For students who have had no experience playing an orchestral or band instrument and for instrumentalists already proficient but who desire to play several instruments. May be repeated up to a maximum of 4 credit hours.

MUS 165 **Class Piano I (1-2)** 2 hrs.

Develops a rudimentary knowledge of the keyboard and playing skills sufficient to cope with simple, practical situations. Emphasis is on tonal notation, harmonization, transposition, sight reading, improvisation, ensemble playing and basic piano literature.

MUS 166 **Class Piano II (1-2)** 2 hrs.

Continues MUS 165.
Prerequisite: MUS 165 or proficiency examination.

MUS 167 **Class Guitar (1-2)** 2 hrs.

Similar to MUS 161. For students who desire to learn to play the guitar. May be repeated up to a maximum of 4 credit hours.

MUS 168 **String Instrument** 2 hrs.
Class I (1-2)

Similar to MUS 161. For students who desire to learn to play a string instrument. May be repeated up to a maximum of 4 credit hours.

MUS 169 **Class Voice (1-2)** 2 hrs.

For students who have no refined skills in vocal technique and who desire to sing.
Prerequisite: MUS 101.

MUS 180 - 199 **Minor Applied** 2 hrs.
Music Subject (1-6)

Instruction for those majoring in music education, musicology and for those desiring to improve their skills on a particular instrument. One half-hour lesson per week. Minimum of six hours of practice per week. Jury examination required. May be repeated up to a maximum of eight credit hours.

Flute and Piccolo, 180; Oboe and English Horn, 181; Clarinet, 182; Bassoon and Contra Bassoon, 183; Saxophone, 184; French Horn, 185; Trumpet, 186; Trombone, 187; Baritone, 188; Tuba, 189; Percussion, 190; Violin, 191; Viola, 192; Cello, 193; String Bass, 194; Harp, 195; Piano, 196; Organ, 197; Voice, 198; and Classical Guitar, 199.

MUS 211 **Theory of Music III (3-0)** 3 hrs.

Studies form, harmonic content and composition procedures common in works of the 19th century. Review of various analytical approaches that may be applied to this literature. A comprehensive musicianship approach to romantic music.

Prerequisite: MUS 112.

Corequisite: MUS 215.

MUS 212 **Theory of Music IV (3-0)** 3 hrs.

Introduces the multiple styles of the 20th century, beginning with the later works of Richard Wagner. An examination of representative works and possible analytical approaches, with particular emphasis on imitative writing. Comparison of the techniques with later medieval and proto-Renaissance writing.

Prerequisite: MUS 211.

Corequisite: MUS 216.

MUS 215 **Aural Skills III (0-2)** 1 hr.

Develops skills in melodic, harmonic and rhythmic dictation and sight singing.

Corequisite: MUS 211.

MUS 216 **Aural Skills IV (0-2)** 1 hr.

Develops skills in melodic, harmonic and rhythmic dictation and sight singing.

Corequisite: MUS 212.

MUS 223 **Instrumental** 3 hrs.
Literature (3-0)

A survey of the music literature available for performance by musical instruments, excluding keyboard instruments and voice.

MUS 224 **Keyboard and Vocal** 3 hrs.
Literature (3-0)

Survey of music literature available for performance by keyboard and voice, including opera.

MUS 265 **Class Piano III (1-2)** 2 hrs.

Continues MUS 166. Greater emphasis on keyboard harmony, ensemble playing and jazz improvisation.

Prerequisite: MUS 166 or proficiency examination.

MUS 266 **Class Piano IV (1-2)** 2 hrs.

Continues MUS 265.

Prerequisite: MUS 265 or proficiency examination.



MUS 271 Piano Pedagogy I (3-0) 3 hrs.
 Surveys the basic teaching philosophies, methods, materials and skills needed to teach the beginning piano student. Observation of individual and group instruction.
 Prerequisite: MUS 265 or consent of instructor.

MUS 272 Piano Pedagogy II (2-2) 3 hrs.
 Continues development of skills begun in MUS 271. Emphasis will be placed on methods and materials for teaching the intermediate piano student. Lab includes supervised student teaching to aid in individual development.
 Prerequisite: MUS 271.

MUS 280 - 299 Major Applied Music Subject (2-12) 4 hrs.
 Instruction for those desiring to become professional performers. One hour lesson per week. Minimum of 12 hours of practice per week. Jury examination required. May be repeated up to a maximum of 16 credit hours.
 Prerequisite: Successful audition.

Flute and Piccolo, 280; Oboe and English Horn, 281; Clarinet, 282; Bassoon and Contra Bassoon, 283; Saxophone, 284; French Horn, 285; Trumpet, 286; Trombone, 287; Baritone, 288; Tuba, 289; Percussion, 290; Violin, 291; Viola, 292; Cello, 293; String Bass, 294; Harp, 295; Piano, 296; Organ, 297; Voice, 298; and Classical Guitar, 299.

Numerical Control (CNC Technician)

NMC 101 Introduction to NC/CAM (3-0) 3 hrs.

Introduces information on numerical control, computer aided manufacturing and robotics applications; introduces manual and computer programming for numerical control; discusses the relationship of computer aided manufacturing (CAM) and robotics to modern manufacturing.

NMC 105 Part Programming I (2-2) 3 hrs.
 Manual programming of point-to-point and contouring systems. Discussion and practice in programming of various manufacturers' equipment. Includes running programs on N/C lathe and mill.
 Prerequisite: NMC 101.

NMC 215 Part Programming II (2-2) 3 hrs.
 Introduces use of APT programming languages for controlling metalcutting machines. Emphasizes PATTERN, COPY, TRACUT and LOOP features. Introduction to other interactive languages.

NMC 216 Computer Aided Manufacturing (1-3) 3 hrs.

Continues NMC 215. Advanced problems in APT and/or COMPACT II using computer graphic programming techniques of a total CAD/CAM system. Advanced features such as multi-axis contouring, tool design and planning, scheduling and efficient use of the languages will be included.

Prerequisite: NMC 101 and NMC 215.

NMC 220 Special Problems (0-6) 3 hrs.

Special projects in numerical control to strengthen specific areas of weakness. Projects to be arranged with instructor before registration.

Nursing

NUR 101 Nursing Fundamentals (4-15) 9 hrs.

Study and practice of principles and fundamentals of nursing skills basic to the nursing care of patients of all age groups. Human needs basic to all individuals will be identified and assessed. Accomplishment of these fundamental skills in the simulated setting will precede application in the clinical setting.

NUR 102 Nursing Care of Hospitalized Patients (4-15) 9 hrs.

Discusses the effects of parenting and common physical health interferences on basic physical and emotional needs. Includes theory and concurrent practice of nursing interventions for hospitalized patients of all ages. Emphasizes skills needed to identify the effects of the patient's physical condition on his or her physical and emotional needs and those of the patient's family, and to assure implementation of the plan of care.

Prerequisite: BIO 160, NUR 101, NUR 103, and PSY 101.

NUR 103 Nursing Survey I (1-0) 1 hr.

Surveys nursing roles including consideration of the following: evaluation of nursing; patterns of health care delivery; members of the nursing team, including students; the relationship of the nursing team to the health team; ethical and legal responsibilities of all levels of nurses and the organizations which represent them; legal implications of licensure for practical and registered nurses; current world health problems as compared to health problems in this community; the need for continued education to maintain competence; and the responsibility of all nurses to become involved in community activities as educated persons.

NUR 104 Nursing Field Experience (0-12) 4 hrs.

Application of knowledge and skills obtained through the study of nursing and supportive

courses to the direct care of patients with common physical health problems and emotional needs. Opportunity for experience as a member of a nursing care team, assuming the role and responsibilities of the practical nurse, under the supervision of an instructor, will be provided.

The student will have opportunity to develop the technical skills required of the practical nurse in providing care for patients of all age levels with common health problems and emotional needs. Prerequisite: NUR 102, NUR 103, BIO 161 and PSY 216.

NUR 200 Pharmacology (2-0) 2 hrs.

Examines the mechanism of action of the major drug groups and relates the action to use in physiological and psychological disorders. Identifies examples of drugs in each category, common dosage ranges, routes of administration and side effects.

Prerequisite: Sophomore standing in the Nursing Program.

NUR 201 Advanced Nursing I (4-12) 8 hrs.

Applies the nursing process to assist individuals with common health problems in the achievement of optimum wellness. Focuses on physical and emotional needs and problems common to the childbearing family, pediatric patients and adults with chronic physical problems. Concurrent practicum provides opportunity for the assessment of needs, formulation of a nursing diagnosis and the planning, provision and evaluation of direct patient care based upon that diagnosis.

Prerequisite: BIO 161, NUR 102 and PSY 216.

NUR 202 Advanced Nursing II (4-12) 8 hrs.

Provides theory and concurrent practice in caring for patients hospitalized for illnesses of body and mind. Focuses on the refinement of skills needed to effectively plan, deliver and evaluate care, and to communicate therapeutically with the patient and family.

Prerequisite: BIO 130 and NUR 201.

NUR 203 Nursing Survey II (1-0) 1 hr.

Surveys current issues and responsibilities in nursing. Content will include: current trends in nursing and the implications for the registered nurse; provisions of the Nurse Practice Act in the State of Illinois and other states; the legal implications of licensure as a registered nurse; ethical responsibility; self-development through continuing education and participation in nursing organization; the responsibility of the nurse as an educated member of a community; management principles; and adjustments expected in the work setting.

Prerequisite: NUR 103.

Office and Administrative Services

SEC 099 Typewriting Review (1-2) 2 hrs.

Reviews all the basics for office production work, i.e., setting up letters, centering, and typing tables, and will help improve speed and accuracy. Will also help those students interested in entering SEC 122 to reach the required entry rate of 45 wpm. Designed for those with knowledge of the touch system of the keyboard.

Prerequisite: Knowledge of touch system on the typewriter or approximately 25 words per minute typing skill.

SEC 100 Introduction to Secretarial Administration (2-0) 2 hrs.

Provides an insight into the role of the professional secretary in today's office. Emphasizes the office structure, duties and responsibilities, personal qualities, communication skills and career paths.

SEC 101 Introduction to the Health Care Field (3-0) 3 hrs.

Surveys many careers and career skills within the health care team. Emphasizes the health care professional's responsibilities to the community, health care trends and professionalism. Primarily for students in the medical office assistant, medical secretarial and medical transcriptionist programs. Introduces typing of medical communications and records.

Prerequisite: Typing speed of 25 words per minute, or prior or concurrent enrollment in SEC 099.

SEC 102 Survey of Law Office Practice (2-0) 2 hrs.

Introduces the student to numerous types of law practices and the skills and duties necessary for a legal secretary in each type of practice. Familiarizes the student with the legal secretary's role in the court process and ethical considerations in the legal field.

SEC 110 Basic Keyboarding (0-2) 1 hr.

Provides basic keyboarding skill for students desiring personal use or for vocational purposes other than secretarial. Includes alphabetic, symbols and top line numeric instruction.

SEC 121 Elementary Typing (1-3) 2 hrs.

Introduces the operation, use and care of typewriters. Typing by the touch system, emphasizing basic typing problems. Drills on speed and accuracy building will be used throughout the course.

SEC 122 Intermediate Typing (1-3) 2 hrs.

Development of production work in typing manuscripts, business letters, forms and tables.

Prerequisite: Typing speed of 45 words per minute.

SEC 125 Shorthand I (4-2) 5 hrs.

Introduces theory leading to development of skill in reading, fluency in writing shorthand, vocabulary development, mechanics of English, and transcription techniques.

Prerequisite: Typing speed of 50 words per minute, or prior or concurrent enrollment in SEC 122.

SEC 131 Business Machines (1-2) 2 hrs.

Develops skills necessary to operate electronic business calculators with emphasis on business-related problems. A student must have a thorough basic math knowledge.

Prerequisite: Prior or concurrent enrollment in MGT 150 or consent of instructor.

SEC 133 Word Processing Equipment: IBM Personal Computer (0-2) 1 hr.

Introduces the features and operation of the IBM Personal Computer with the most popular word processing software programs to prepare business correspondence and reports with extensive editing. May be repeated up to a maximum of three credit hours utilizing different software programs for each unit of credit. Prerequisite: Typing speed of 50 words per minute.

SEC 137 Word Processing Equipment: Wangwriter (0-2) 1 hr.

Introduces the features and operation of the Wangwriter in preparing business correspondence and reports and in the revising, storage, retrieving, reformatting, moving and copying of data. Instruction is on a self-paced basis in a laboratory situation.

Prerequisite: Typing speed of 50 words per minute.

SEC 139 Word Processing Equipment: Advanced Wangwriter (0-2) 1 hr.

Introduces the more advanced functions of the Wangwriter that are used in preparing reports, manuals and other business documents. Instruction is on a self-paced basis in a laboratory setting.

Prerequisite: SEC 137.

SEC 170 Introduction to Word Processing (3-0) 3 hrs.

Introduces fundamentals of word processing. Emphasizes office practices, changes in organization structure, word processing work flow (origination, processing, reproducing, filing and distribution), equipment, role of management and secretary and career opportunities.

<p>SEC 220 Automated Office Practices (2-4) 4 hrs.</p> <p>Simulates an electronic office utilizing the personal computer for word processing, spreadsheet and data base software packages to produce materials found in executive, professional and technical offices. Emphasis includes office management, records control, telecommunications, networking and human relations.</p> <p>Prerequisite: SEC 122 with a grade of "C" or better or consent of the instructor.</p>	<p>supervised cooperative work experience where in an organized training plan will be followed in a College approved training station. One lecture hour per week for a seminar devoted to issues dealing with preparation for success in a secretarial career.</p> <p>Prerequisite: Consent of instructor and admission in either the Executive Secretarial or Legal Secretary programs.</p>
<p>SEC 225 Shorthand II (4-2) 5 hrs.</p> <p>Continues strengthening of dictation speed and developing competence in transcribing mailable letters. Drills to reinforce vocabulary, mechanics of English, and office style dictation will be extensively used.</p> <p>Prerequisite: SEC 125 with a grade of "C" or a writing speed of 80 words per minute and SEC 122.</p>	<p>SEC 238 Secretarial Seminar and Internship II (1-15) 3 hrs.</p> <p>Continues SEC 237.</p> <p>Prerequisite: Consent of instructor.</p>
<p>SEC 230 Executive Machine Transcription (1-2) 2 hrs.</p> <p>Provides training and extensive skill building in machine transcription, including the operation of machine transcribers and application of correct grammar, punctuation, spelling, and format in transcripts.</p> <p>Prerequisite: SEC 122 or a minimum typing speed of 40 words per minute.</p>	<p>SEC 240 Medical Transcription I (2-2) 3 hrs.</p> <p>Develops speed and accuracy in transcribing medical reports using a transcription machine and electronic/memory typewriter. Familiarizes student with typing various medical and insurance reports.</p> <p>Prerequisite: BIO 135 or BIO 160 with a grade of "C" or better, and typing speed of 50 words per minute and prior or concurrent enrollment in HSC 112, HSC 190 and SEC 101.</p>
<p>SEC 234 Legal Office Procedures (3-0) 3 hrs.</p> <p>Organization and operation of a law office, with emphasis on office management, records control and procedures used in the preparation of legal documents.</p>	<p>SEC 241 Medical Office Procedures (3-3) 4 hrs.</p> <p>Offers development of skills in patient reception, appointment scheduling, telephone techniques, mail handling, medical records management, written communications, billing and collections and insurance. Extensive use of transcriber and electronic/memory typewriter.</p> <p>Prerequisite: Typing speed of 50 words per minute and prior or concurrent enrollment in HSC 112 and SEC 101.</p>
<p>SEC 235 Legal Dictation and Transcription (2-2) 3 hrs.</p> <p>Development of speed and facility in taking dictation and transcribing legal documents.</p> <p>Prerequisite: SEC 225 or equivalent with grade of "C" or better. Shorthand speed of at least 100 wpm and typing speed of at least 60 wpm.</p>	<p>SEC 242 Medical Transcription II (2-2) 3 hrs.</p> <p>Offers advanced specialized dictation to improve skills and confidence in transcribing medical reports using a transcription machine and electronic/memory typewriter.</p> <p>Prerequisite: SEC 240 with a grade of "C" or better.</p>
<p>SEC 236 Secretarial Procedures (3-0) 3 hrs.</p> <p>Emphasizes secretarial responsibilities in the office, including office organization, mail handling, travel arrangements, records, management, telephone techniques, time management, knowledge of up-to-date office supplies and equipment, human relations, exploring job opportunities and interviewing techniques.</p>	<p>SEC 244 Medical Transcriptionist Seminar and Externship (1-15) 4 hrs.</p> <p>Provides supervised experience in a hospital, clinic, or group practice to enhance the student's technical skills of medical transcription. One-hour seminar each week devoted to medical issues.</p> <p>Prerequisite: HSC 211 and SEC 242 with a grade of "C" or better, and consent of program coordinator.</p>
<p>SEC 237 Secretarial Seminar and Internship I (1-15) 3 hrs.</p> <p>Preparation for, and cooperative work experience in, secretarial science. Part of the credit for this course will be given for participation in</p>	

SEC 245 Medical Secretarial Seminar and Externship (1-15) 4 hrs.

Provides supervised experience in a medical facility to enhance the student's technical skills. One-hour seminar each week devoted to medical issues.

Prerequisite: SEC 240 and SEC 241 with a grade of "C" or better, and consent of program coordinator.

SEC 246 Medical Office Assistant Seminar and Externship (1-15) 4 hrs.

Provides supervised administrative and clinical experience in medical offices to enhance the student's technical skills. One-hour seminar each week devoted to medical issues.

Prerequisite: HSC 211, HSC 212 and SEC 241 with a grade of "C" or better, and consent of program coordinator.

SEC 260 Behavioral Science in Business (1-0) 1 hr.

Offers an understanding of human relations, group dynamics and effective communications as they contribute to the success of the role and function of the secretary in dealing with people in the office environment. Emphasizes the relationship between the secretary or administrative assistant, the supervisor and people with whom the secretary comes in contact in the business setting.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 261 Business Law (1-0) 1 hr.

Emphasizes knowledge of business law as it applies in the secretary's work-a-day world and the implications of governmental controls as they impact upon business and office operations.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 262 Economics and Management (1-0) 1 hr.

Furnishes an understanding of the basic concepts of economics and management underlying the U.S. business system as they relate to the secretary's role in business.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 263 Accounting (1-0) 1 hr.

Stresses fundamental accounting principles that a secretary must possess in order to assist the supervisor in the preparation, summarization and interpretation of financial data.

Emphasizes the secretary's application of basic math to business situations.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 264 Office Administration and Communication (1-0) 1 hr.

Emphasizes office administration and communication skills including executive travel, office management, records management and reprographics as well as written business communication, editing, abstracting and preparing communications in final format.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

SEC 265 Office Technology (1-0) 1 hr.

Covers the secretary's responsibilities created by data processing, communications media, advances in office management, technological applications, records management, technology and office systems.

Prerequisite: One year of full-time secretarial experience or consent of instructor.

Operating Room Technician

ORT 101 Operating Room Techniques I (6-0) 6 hrs.

Fundamentals of operating room techniques involving the principles of sterile technique in relation to the pre-operative, operative and post-operative care of the surgical patient. Introductory principles of microbiology are included in relation to surgical asepsis.

Prerequisite: Admission into the Operating Room Technician Program.

ORT 102 Operating Room Techniques II (6-0) 6 hrs.

Continues ORT 101. Provides the student with the principles and techniques used to prepare for and assist with common operative procedures within various surgical specialties. Included is the use of anesthesia and its effects on the surgical patient.

Prerequisite: ORT 101, ORT 111, HSC 112 and BIO 135 or BIO 160.

ORT 103 Operating Room Techniques III (0-4) 2 hrs.

Continues ORT 102. Provides the student with the principles and techniques used to prepare for and assist with common operative procedures within the specialties of thoracic, cardiovascular and neurosurgery. An introduction to nursing procedures related to care of the surgical patient is also provided.

Prerequisite: ORT 102, ORT 112, BIO 136 or BIO 161, and PSY 101.

ORT 111 Clinical Hospital Practicum I (0-15) 5 hrs.

Students will actively participate as members of the surgical team in local hospitals. Under supervision, they will develop the fundamental skills required of the operating room technician in the care of the surgical patient before, during and immediately following surgery.

Prerequisite: Admission into the Operating Room Technician Program.

ORT 112 Clinical Hospital Practicum II (0-18) 6 hrs.

Continues ORT 111. Students will participate as members of the surgical team in preparing for and assisting with common operative procedures within various surgical specialties. Supervised experience will be provided in emergency and out-patient departments for the observation of out-patient care.

Prerequisite: ORT 101, ORT 111, HSC 112 and BIO 135 or BIO 160.

ORT 113 Clinical Hospital Practicum III (0-20) 7 hrs.

Continues ORT 112. Students will observe and participate as members of the surgical team in preparing for and assisting with common operative procedures within the specialties of thoracic and cardiovascular surgery, and neurosurgery. Supervised experience in performing certain basic nursing skills related to the surgical patient is provided.

Prerequisite: ORT 102, ORT 112, BIO 136 or BIO 161, and PSY 101.

Park and Grounds Operation Management

PKM 100 Introduction to Park Management (1-0) 1 hr.

Introduces the student to the field of park and grounds operation management. Major emphasis directed toward the history of park development and the past and present concepts of recreation.

PKM 101 Ornamental Plants (3-3) 4 hrs.

Identification, growth habits, cultural requirements and the use of ornamental shrubs, trees, vines, ground covers and herbaceous plants adapted to Illinois and the Midwestern area.

PKM 102 Plant Diseases and Pests (3-3) 4 hrs.

Identification, prevention and control of insects, diseases and pests significant to the turf, soils and plant materials found in parks and other landscape areas.

PKM 104 Floral Design (2-3) 3 hrs.

Presents basic principles of floral design including classic designs, centerpieces, corsages, boutonnières, dried flower arrangements, holiday and special occasion designs. Emphasis is placed on design elements of color, line and form utilizing foliage and flowers of different varieties. Attention is given to commercial floral piece arrangements and mechanics of construction.

PKM 106 Introductory Horticulture (2-0) 2 hrs.

Presents a general study of the fundamental knowledge essential for installation and maintenance of plants either as a hobby, as a necessity or as a cost saving measure. Emphasis is on the cultivation of certain plant varieties, techniques of improving established gardens, and methods of reducing expenses for landscaping and maintenance. Recommended corequisite: Concurrent enrollment in PKM 108.

PKM 108 Introductory Horticulture Laboratory (0-4) 2 hrs.

Complements and reinforces concepts developed in PKM 106, including actual hands-on planting and maintenance practices. Prerequisite: Successful completion of, or concurrent enrollment in, PKM 106.

PKM 110 Soil Science (3-3) 4 hrs.

Studies the properties and use of soils in relation to plant growth and development. Special emphasis on soil texture, structure, moisture relations, biological activity, organic matter content and plant nutrients as they relate to park management.

PKM 111 Basic Horticultural Skills (3-3) 4 hrs.

Develops specialized skills in ornamental horticulture including planting, transplanting, fertilizing, watering and pruning of trees, shrubs and herbaceous plants in both indoor and outdoor locations. Details and seed and vegetative plant propagation methods; causes of plant disorders; installation, care and maintenance of plants used in landscape.

Prerequisite: BIO 120 or concurrent enrollment.

PKM 121 Facilities Management (2-3) 3 hrs.
Details the management of park facilities, including buildings, swimming pools, play equipment, ice rinks, athletic fields and all surfaced areas within the jurisdiction of a park district. Fundamentals of plumbing, masonry and electricity in relation to the function of park structures and landscape installations.

PKM 140 Grounds Equipment and Shop Operation (1-6) 4 hrs.
Operation, maintenance, selection and care of equipment used in park management. Practical experience in the repair, adjustment and troubleshooting of engines and other specialized equipment.

PKM 150 Park Management Internship (0-35) 5 hrs.
Internship whereby the first-year student can receive field training under the supervision of an experienced park administrator. First-year students should receive training in several areas of park and grounds operation management in order to gain practical knowledge and experience in the field.
Prerequisite: Consent of instructor.

PKM 204 Advanced Floral Design (2-3) 3 hrs.
Presents advanced principles of floral design including wedding flowers, funeral arrangements, home interiors and current trends of floral art. Emphasis on design qualities, salesmanship and commercial floral accounts.
Prerequisite: PKM 104 or consent of instructor.

PKM 210 Drainage and Irrigation (2-3) 3 hrs.
Study of the design and installation of drainage and irrigation systems. Particular attention toward types of systems, materials and costs.

PKM 212 Turfgrass Science (3-3) 4 hrs.
Basic characteristics, soil requirements, environmental adaptation, propagation and uses of turfgrass. Special emphasis on the establishment of grasses and their identification. The management of established turfgrasses, emphasizing the essential maintenance practices of fertilization, weeds and their control, mowing, aerification, vericutting, renovation, and spraying for disease and insect control. A study of business procedures essential to turfgrass managers, including budgeting, recordkeeping, purchasing and time studies.
Prerequisite: PKM 110.

PKM 214 Principles of Landscape Design and Construction (3-3) 4 hrs.
Presents the fundamentals of construction as applied to landscape projects, the use of materials, installation techniques, tools, equipment, structures, surveying and grading used in landscape construction. Emphasizes basic

drafting techniques and principles of landscape design.
Prerequisite: PKM 101 and PKM 110.

PKM 220 Arboriculture (1-6) 4 hrs.
Care and management of ornamental trees. Techniques and demonstration of planting, staking, pruning, spraying, fertilizing and general care of shade and specimen trees. Instruction in the techniques of climbing and use of safety equipment, methods of bracing, cabling and guying of trees, cavity repair and surgical practices and the organization and management of municipal street tree departments.
Prerequisite: PKM 111.

PKM 230 Contracts, Specifications, Estimating (2-3) 3 hrs.
Emphasizes interpretation of maps, grading plans, construction drawings and landscape design plans, especially specifications, cost estimates and client relationships. Additional topics which deal with land use, land acquisition, park planning and the legal aspects of park and landscape contracting.
Prerequisite: PKM 214.

PKM 240 Grounds Equipment Power Units (1-6) 4 hrs.
Explains the operation, servicing and preventive maintenance of power units, electrical systems, power trains, hydraulic systems, power trains, hydraulic systems and associated components commonly found on grounds equipment. Gives special attention to applied mechanical learning experiences similar to those a student can expect to encounter in a grounds equipment service operation.
Prerequisite: PKM 140.

PKM 241 Management of Ice Rink Facilities (2-3) 3 hrs.
Techniques and procedures in managing ice rink facilities. Presents supervisory role in managing ice rink personnel, scheduling of facilities, budgetary responsibilities and maintenance.

PKM 242 Golf Course Management (3-3) 4 hrs.
Surveys daily activities and maintenance practices utilized in the operation of both public and private golf courses including associated elements of planning, design and construction.

PKM 244 Nursery Management (2-3) 3 hrs.
Studies operation fundamental to the nursery business including the propagation, planting, culture, harvesting and handling of nursery crops. Emphasis is placed on equipment, materials, procedures and ornamental plant dissemination through production and care of nursery plant materials.
Prerequisite: PKM 111.

PKM 245 Management of Aquatic Facilities (3-3) 4 hrs.

Provides practical experience and management skills essential to the operation of swimming pools, ponds, lakes and similar bodies of water utilized in the recreation and park industry.

PKM 247 Floral Shop and Garden Center Operations (2-3) 3 hrs.

Details the fundamentals of facility planning, designing, establishing and operating floral shops and garden centers including finance, material supplies, daily activities and business considerations.

Prerequisite: PKM 111.

PKM 250 Park Management Seminar (1-0) 1 hr.

Discussions by representatives of the park, landscaping, turf and related fields to provide the student with new management concepts and practices.

Prerequisite: 30 hours credit in PKM courses.

Pharmacy Technician

PHT 101 Introduction to Pharmacy Technology (1-0) 1 hr.

Introduces the student to the field of pharmacy technology. Includes an overview of the program, definition of the pharmacy technician's role and a review of opportunities open to the certified pharmacy technician.

PHT 102 Pharmacy Law (1-0) 1 hr.

Presents an overview of legal aspects of pharmacy practice, including a review of the Federal Controlled Substances Act and Illinois statutes, rules and regulations.

PHT 110 Pharmacology I (4-0) 4 hrs.

Presents a general overview of commonly used medications as to their classification, mechanism of action and administration routes.

Prerequisite: Admission into the Pharmacy Technician Program.

PHT 111 Pharmacy Operations I (3-3) 4 hrs.

Presents fundamentals of drug distribution in hospital and retail pharmacies, including bulk compounding, packaging, quality control, inventory control, drug storage and a variety of drug delivery systems. Includes necessary mathematical calculations for basic pharmacy operations.

Prerequisite: Admission into the Pharmacy Technician Program.

PHT 112 Pharmacy Operations II (3-6) 5 hrs.

Provides continuing information on pharmacy operations. Clinical experience will provide opportunities to apply principles and participate in pharmacy operations under the supervision of registered pharmacists.

Prerequisite: PHT 111.

PHT 113 Pharmacy Technician Practicum (1-15) 6 hrs.

Provides clinical experience as a member of the pharmacy team in hospital and community pharmacies. Applies principles to all practical aspects of pharmacy operations under the supervision of registered pharmacists.

Prerequisite: Consent of coordinator or dean.

PHT 120 Pharmacology II (4-0) 4 hrs.

Provides continuing general overview of commonly used medications as to their classification, mechanism of action and administration routes.

Prerequisite: PHT 110.

PHT 140 Sterile Products and Aseptic Techniques (2-3) 3 hrs.

Introduces major routes and types of parental drug administration. Presents equipment, supplies and technical skills used in preparing various intravenous solutions and other medications.

Prerequisite: PHT 112 and PHT 120 or concurrent enrollment.

Philosophy

PHI 105 Introduction to Philosophy (3-0) 3 hrs.

Principles and problems of philosophy as seen in different schools of thought. Topics: validity of human knowledge; nature of reality; mind and body; free will and determination; moral and aesthetic values; and religious belief.

PHI 110 Logic (3-0) 3 hrs.

Formal reasoning, including language and meaning, deduction and induction, evidence and the detection of fallacies. Traditional as well as modern modes of analysis.

PHI 115 Ethics (3-0) 3 hrs.

Consideration of problems of value and conduct, including the question of the "good life" or happiness; and contemporary moral issues such as war, violence, drugs, racism, crime and punishment.

PHI 120 Social and Political Philosophy (3-0) 3 hrs.

Conceptual and historical analysis of the ideas of justice, liberty, equality, authority, power, law, order, rights and privileges.

PHI 150 Business Ethics (3-0) 3 hrs.

Introduces philosophical ethical theory and its application to business decisions. Considers theories of economic justice, social responsibility of corporations, regulation, conflicts of interest and obligation, ethics of advertising, product quality and safety, environmental responsibility, hiring practices and rights of employees and employers.

PHI 180 Biomedical Ethics (3-0) 3 hrs.

Considers the ethics of the professional-patient relationship (confidentiality, informed consent, paternalism, truth-telling), the ethics of life and death (abortion, euthanasia, suicide), and the ethics of medicine on a social scale (the right to health care, the distribution of medical resources).

PHI 205 Religions of the World (3-0) 3 hrs.

Introduces the teachings, practices, social structures and histories of the religions of India (mainly Buddhism and Hinduism), and China and Japan (mainly Confuciansim, Shinto and Taoism), and of the Middle East (mainly Christianity, Islam and Judaism).

PHI 210 Death and Dying (3-0) 3 hrs.

Presents an interdisciplinary approach to the meaning of death. Focuses on biological psychological, legal, philosophical and religious aspects of the phenomena of death and dying.

PHI 220 Philosophy of Religion (3-0) 3 hrs.

Examines the nature and presuppositions of Western religions, especially the reasons which can be given for and against the existence of God. Selected further topics: the problem of evil, life after death, the nature of religious experience, language, knowledge, and authority, religion and science, major philosophical theories on the nature of religion.

**PHI 231 History of Philosophy —
Ancient and Medieval (3-0) 3 hrs.**

Surveys the major figures and schools in Western philosophical tradition from the pre-Socratic Greeks through the 14th century. Emphasis on interpreting philosophical reflection in light of the social, political, religious and cultural context from which it arises. Prerequisite: A course in philosophy or consent of instructor.

**PHI 232 History of Philosophy —
Modern (3-0) 3 hrs.**

Surveys the major figures and schools in Western philosophical tradition from the 15th to the 20th century. Emphasizes interpreting philosophical reflection in light of the social, political, religious and cultural context from which it arises. Prerequisite: A course in philosophy or consent of instructor.

Physical Education

**PED 100 Diet and Exercise
for the Adult (0-2) 1 hr.**

Includes human performance laboratory physical fitness tests with individualized exercise program and methods for controlling weight through diet and exercise. May be repeated up to a maximum of 2 credit hours.

**PED 101 Selected Exercises for
Occupations (0-2) 1 hr.**

Provides instruction in a program of exercises to increase the physical fitness levels necessary to meet the physical demands of various occupations. May be repeated up to a maximum of 2 credit hours.

PED 104 Weight Training (0-2) 1 hr.

Utilizes modern Nautilus and Universal health equipment for development and maintenance of strength and endurance for individual physical fitness needs. May be repeated up to a maximum of 2 credit hours.

PED 105 Basketball (0-1) .50 hr.

Provides instruction in the basic skills, rules, scoring and terminology. May be repeated up to a maximum of 1 credit hour.

**PED 106 Weight Lifting —
Olympic and Power (0-2) 1 hr.**

Provides instruction in olympic and power lifts. May be repeated up to a maximum of 2 credit hours.

PED 108 Jogging (0-1) .50 hr.

Provides instruction in easy slow-to-moderate pace running to improve cardiovascular fitness and control body weight. May be repeated up to a maximum of 1 credit hour.

PED 109 Volleyball (0-1) .50 hr.

Provides instruction in basic skills, rules, scoring and terminology. May be repeated up to a maximum of 1 credit hour.

PED 111 Gymnastics (0-2) 1 hr.

Provides instruction in apparatus stunts, floor exercise and tumbling stunts. May be repeated up to a maximum of 2 credit hours.

PED 117 Personal Defense (0-1) .50 hr.

Provides instruction in the development of personal defense skills. May be repeated up to a maximum of 1 credit hour.

PED 118 Archery (0-1) .50 hr.

Provides instruction in basic archery techniques, rules and scoring. May be repeated up to a maximum of 1 credit hour.

PED 120 Team Sports (0-2) 1 hr.

Includes instruction in team sports, fundamental skills, offensive tactics of play, strategy, rules, terms selected from one or two of the following sports: touch football, floor hockey, soccer, softball. May be repeated up to a maximum of 2 credit hours.

PED 130 Individual Sports (0-2) 1 hr.

Provides instruction in individual sports, fundamental skills, offensive and defensive tactics of play, strategy, rules, terminology and practice in one or two of the following sports: cross-country skiing, fencing, horseback riding, ice skating, judo, snow skiing. May be repeated up to a maximum of 2 credit hours.

PED 131 Advanced Lifesaving (0-2) 1 hr.

Provides instruction in the skills, methods and techniques involved in lifesaving and water safety. The American Red Cross Lifesaving certificate is awarded upon completion of the course.

Prerequisite: Ability to swim 500 yards continuously using the following strokes: back, breast, crawl and side.

PED 133 Advanced Scuba Diving (0-2) 1 hr.

Provides advanced instruction in scuba, emergency lifesaving skills, navigation, search and recovery, deep diving and night diving procedures. Advanced national certification is provided to those who qualify.

Prerequisite: Certified diver from national certifying agency.

PED 135 Skin Diving (0-2) 1 hr.

Provides basic instruction in the principles, safety procedures and techniques of skin diving. Included will be the practical use of the mask, fins, snorkel, weight belt and buoyancy compensator.

PED 136 Wrestling (0-1) .50 hr.

Introduces basic skills, knowledge, attitudes and conditions of wrestling; offensive and defensive maneuvers, pinning combinations and rules. May be repeated up to a maximum of 1 credit hour.

PED 139 Aquasize (0-1) .50 hr.

Provides an in-water exercise program which emphasizes the total conditioning of the body. Improvements in muscle strength, toning and cardiopulmonary efficiency are the goals of this course. One need not be able to swim to participate.

PED 140 Firm and Fit to Music (0-1) .50 hr.

Provides students with the opportunity to firm and trim the body through strength, endurance

and flexibility exercises. Choreographed exercises to music focusing on firming various muscle groups is the emphasis of this class.

PED 148 Recreational Water Sports and Games (0-1) .50 hr.

Provides instruction in the skills and techniques of various water sports and games including water volleyball, water basketball, skin diving and underwater hockey. May be repeated up to a maximum of 1 credit hour.

Prerequisite: Ability to swim 50 yards.

PED 149 Prescribed Exercises (0-2) 1 hr.

Provides specialized therapeutic programs of prescribed exercises and sports activities to meet individual needs. May be repeated up to a maximum of 2 credit hours.

PED 150 Bowling (0-2) 1 hr.

All-levels class with beginners grouped separately for special attention. Etiquette, scoring and techniques according to present ability. Intramural competition afforded. May be repeated up to a maximum of 2 credit hours.

PED 151 Synchronized Swimming (0-2) 1 hr.

Teaches the aquatic skills and forms of swimming necessary to develop creative synchronized water performances.

Prerequisite: Ability to swim 100 yards.

PED 152 Golf (0-1) .50 hr.

Introduces golf fundamentals of grip, stance and swing using irons and woods; terminology, etiquette, scoring and safety standards. May be repeated up to a maximum of 1 credit hour.

PED 153 Swimming-Beginning (0-2) 1 hr.

Provides instruction for students who have never learned to swim or cannot swim one length of the pool. Instruction in basic swimming skills with emphasis on achievement and confidence in the water. May be repeated up to a maximum of 2 credit hours.

PED 154 Swimming-Intermediate and Advanced (0-2) 1 hr.

Provides instruction in front crawl, back crawl, side stroke, breast stroke, the butterfly, spring-board diving, skin diving skills and some racing techniques. May be repeated up to a maximum of 2 credit hours.

Prerequisite: Ability to swim 50 yards.

PED 155 Water Polo (0-1) .50 hr.

Provides instruction in the basic skills, rules, scoring and terminology. May be repeated up to a maximum of 1 credit hour.

Prerequisite: Ability to swim a minimum of 50 yards.

PED 156 Badminton (0-1) .50 hr.
Provides recreational and conditioning activity with singles and doubles play, strategy, serving, rules and interclass competition. May be repeated up to a maximum of 1 credit hour.

PED 157 Scuba (0-1) .50 hr.
Provides instruction in the basic principles and techniques of scuba diving. May be repeated up to a maximum of 1 credit hour.

PED 158 Tennis (0-1) .50 hr.
Provides theory and practice, rules and scoring, development of serve, forehand drive, backhand drive, lob, volley and footwork. Singles and doubles play and interclass competition. May be repeated up to a maximum of 1 credit hour.

PED 159 Competitive Tennis (0-1) .50 hr.
Provides rules, scoring, theory and practice of the skills of competitive tennis. Emphasizes game strategy in singles and doubles play. May be repeated up to a maximum of 1 credit hour.

PED 160 Modern Dance I (0-2) 1 hr.
Opportunity to explore movement potential, increase technical proficiency and broaden rhythm background; skills in technique and composition stressed. May be repeated up to a maximum of 2 credit hours.

PED 162 Introduction to Ballet (0-2) 1 hr.
Provides instruction for students with little or no previous training in ballet. May be repeated up to a maximum of 2 credit hours.

PED 163 Aerobic Dancing (0-1) .50 hr.
Provides an aerobic style fitness program structured to tone and trim the body. Vigorous exercise routines are choreographed to music to increase flexibility, cardiovascular endurance and movement efficiency. May be repeated up to a maximum of 1 credit hour.

PED 165 Contemporary Dance (0-2) 1 hr.
Orientation to contemporary dance and instruction in executing the technique and composition of today's most popular dances. May be repeated up to a maximum of 2 credit hours.

PED 166 Advanced Aerobic Dancing (0-1) .50 hr.
Provides an accelerated aerobic conditioning program for the student with a higher degree of physical fitness. Vigorous exercise routines choreographed to music further increase student's present cardiovascular endurance, muscular strength and endurance and flexibility.
Prerequisite: PED 163 or consent of instructor.

PED 167 Jazz Dance I (0-2) 1 hr.
Provides students with the elements of ballet, modern dance and Afro-Haitian to combine them into a dance form that is idiomatic, syn-copated and fast paced. May be repeated up to a maximum of 2 credit hours.

PED 168 Racquetball (0-1) .50 hr.
Offers theory and practice, rules and scoring, methods of serve, forehand drive, backhand drive, lob, volley and footwork. May be repeated up to a maximum of 1 credit hour.

PED 169 Competitive Racquetball (0-1) .50 hr.
Provides rules, scoring, theory and practice of the skills of competitive racquetball. Emphasis is on the strategy of singles and doubles play. May be repeated up to a maximum of 1 credit hour.

PED 173 Social, Folk and Square Dance (0-2) 1 hr.
Provides an introduction to beginning principles and techniques of social, folk and square dance. Includes teaching methods and skill assessment.

PED 178 Judo and Self-Defense/ Beginning (0-2) 1 hr.
Provides a basic understanding and practical application of judo and self-defense techniques. Includes proper training methods, physical conditioning, techniques and rules and regulations for contests.

PED 179 Judo and Self-Defense/ Advanced (0-2) 1 hr.
Orientation and instruction in all aspects of judo and self-defense. Provides greater emphasis on Randori and preparation for competition.
Prerequisite: PED 178 or consent of instructor.

Physical Education Courses — Theory — for Major and Minor Students

PED 200 Introduction to Physical Education (2-0) 2 hrs.
Provides orientation and history of physical education in the United States. Pre-sents aims and objectives and new approaches to physical education as an academic discipline.

PED 201 First Aid (2-0) 2 hrs.
Regulation American Red Cross instruction in first aid; immediate care given to a person who has been injured or has been suddenly taken ill. Includes self-help and home care if medical assistance is not available or is delayed. The Standard Red Cross Card is issued to those students who qualify.

- PED 203 Health (3-0)** 3 hrs.
Provides an in-depth look at the physical, mental and social dimensions as they relate to the following topics: mental health, nutrition, fitness, communicable diseases, killer diseases, human sexuality, family living (marriage, divorce, parenting), middle and old age crises and death and dying.
- PED 204 Selected Physical Education Activities (0-4)** 2 hrs.
Provides analysis of techniques and develops special drills used in teaching weight training, team sports, aerobic exercises and aqua exercises.
- PED 205 Drugs in Our Culture (2-0)** 2 hrs.
Deals with material about which many individuals have strong and sometimes unfounded beliefs. The intent of this course is to provide a potpourri of the facts, attitudes and opinions necessary to understand what psychoactive drugs do, how they do it, who uses them and why.
- PED 206 Athletic Training Techniques (2-2)** 3 hrs.
Presents an introduction to the duties and responsibilities of an athletic trainer including: fundamental principles and techniques, injury prevention, recognition, emergency care, supportive taping and wrapping techniques, budgeting, ordering supplies and the general operation of a training room facility.
- PED 207 Human Sexuality (2-0)** 2 hrs.
Acquaints students with the familial, sociological, biological and emotional implications of human sexuality. Attention is also given to such pathological conditions as venereal diseases.
- PED 208 Bioscientific Foundations of Human Movement** 3 hrs.
Provides analysis of basic human movement skills as they relate to exercise and physical fitness. Emphasis is on human anatomy, cardio-respiratory development, muscular strength and endurance. Guidelines for training an dphysical fitness are provided through laboratory experiences.
- PED 209 Principles of Teaching Aerobic Dance/Exercise (1-2)** 2 hrs.
Provides prospective aerobics instructors both with a knowledge base which will enable them to plan and teach safe exercise programs and the opportunity to practice teach and put the theory into practical application in the laboratory portion of this class.
- PED 210 Sports Officiating (2-0)** 2 hrs.
Provides comprehensive instruction on rules and officiating techniques in interscholastic sports in preparation for Illinois High School Athletic Association certification. Officiating experience opportunities provided in college intramural and intercollegiate athletic programs.
- PED 220 Track and Field Techniques (2-0)** 2 hrs.
Development and understanding of strategy and rules of track and field. Basic skills of running, jumping and throwing as performed in track and field; emphasis on knowledge and techniques essential to teaching track and field.
- PED 222 Football Techniques (2-0)** 2 hrs.
Fundamental and organizational techniques of game skills, strategy, practice drills, conditioning, safety standards and officiating techniques.
- PED 224 Basketball Techniques (2-0)** 2 hrs.
Knowledge and skill in fundamentals and in techniques of team organization; skills of each position, offensive and defensive skills and team play, strategy and officiating.
- PED 226 Baseball Techniques (2-0)** 2 hrs.
Analysis, instruction and demonstration of fundamental skills, strategy, practice drills, conditioning, safety standards and officiating techniques in teaching and coaching baseball.
- PED 228 Aquatics (2-0)** 2 hrs.
Provides instruction in the theory and practice of fundamental skills and approaches to various phases of swimming. Planning, organization, development and management of aquatic programs.
Prerequisite: Ability to swim 50 yards.
- PED 230 Water Safety Instructor (0-2)** 1 hr.
Follows the standards established by the American Red Cross for teaching authorized swimming courses.
Prerequisite: Senior lifesaving certificate.
- PED 240 Dance Composition (0-4)** 2 hrs.
Provides instruction in basic dance composition. Includes the study of dance experience and offers opportunities to improvise and create compositions utilizing a variety of motivational and innovative techniques.
Prerequisite: 100 or 200 level dance technique course or consent of instructor.
- PED 241 Jazz Dance II (0-2)** 1 hr.
Provides a study of advanced techniques in jazz dance. Includes basic barre exercises, center floor exercises, dance combinations and choreographical techniques.
Prerequisite: PED 167 or consent of instructor.

PED 242 Ballet II (0-2) 1 hr.

Provides a study of advanced techniques of the art of ballet. Includes basic barre exercises, center floor exercises, dance combinations, terminology, movement patterns, allegro combinations and performing experience.

Prerequisite: PED 162 or consent of instructor.

PED 243 Modern Dance II (0-2) 1 hr.

Provides students with an opportunity to explore modern dance techniques in great depth. Emphasizes dance techniques, exploration and composition development.

Prerequisite: PED 160, PED 162 or consent of instructor.

PED 244 Folk Dance II (1-2) 2 hrs.

Provides an expanded repertoire of folk dances of varying difficulty from diverse cultures with emphasis on interrelationships with other folk arts, geography and history.

Prerequisite: PED 173 or consent of instructor.

PED 246 Tap Dance (0-2) 1 hr.

Provides instruction in basic techniques of tap dance. Emphasizes the development of tap dance routines.

PED 270 Community Health (2-0) 2 hrs.

Presents basic principles of community living and examines scientific methods applied to environmental health in urban and rural communities. Focuses on the functions of community health organizations and the way they relate to individual health needs.

Physical Science**PHS 101 Physical Science Survey (3-0) 3 hrs.**

Designed to give the non-science major an understanding and appreciation of the universe, earth, energy and matter.

PHS 105 Energy and Society (3-0) 3 hrs.

Introduces non-science majors to topics from various sciences as they relate to energy resources and energy consumption. Connects the theory of energy to its practical applications. Examines the connection between science and economics, politics and other social issues, using energy as a focus.

PHS 111 Physical Science I (3-2) 4 hrs.

Motion, structure of matter, electricity and magnetism, waves and particles and the atom. Course for non-science majors fulfilling laboratory science requirements.

PHS 112 Physical Science II (3-2) 4 hrs.

Examines topics from basic chemistry, materials of the earth, earth forms and history, weather, the sun, stars and the universe. Course for non-science majors fulfilling laboratory science requirements.



Physics

PHY 101 Technical Physics I — 4 hrs.

Mechanics, Heat and Sound (3-2)

Statics, dynamics, energy, calorimetry, gas laws, waves and sound. Primarily for students in career programs. Other students see PHY 121 or PHY 201.

Prerequisite: MTH 106 or concurrent enrollment.

PHY 102 Technical Physics II — 4 hrs.

Electricity and Magnetism, Light (3-2)

Introduces theory of electricity and magnetism including fields, induction, capacitance, direct and alternating current theory, circuits and elements of electronics. Also covers theory of light including reflection, interference, resonance, lenses, diffraction, polarization and Doppler effect. Primarily for students in career programs.

Prerequisite: PHY 101.

Corequisite: MTH 107.

PHY 121 Introductory Physics I (4-3) 5 hrs.

Covers mechanics, heat and sound. For students in arts, sciences and architecture. Other students see PHY 201.

Prerequisite: MTH 103 and MTH 104 with a grade of "C" or better.

PHY 122 Introductory Physics II (4-3) 5 hrs.

Continues PHY 121. Electricity, magnetism and light.

Prerequisite: PHY 121 with a grade of "C" or better or consent of instructor.

PHY 201 General Physics I — 4 hrs.

Mechanics (3-2)

Introduces foundations of kinematics, statics, dynamics and hydraulics. For students in engineering, mathematics, physics and chemistry.

Prerequisite: MTH 200 with a grade of "C" or better or concurrent enrollment.

PHY 202 General Physics II — Heat 4 hrs.

Electricity and Magnetism (3-2)

Continues PHY 201. Covers foundations of heat, thermodynamics, electricity and magnetism.

Prerequisite: MTH 202 with a grade of "C" or better or concurrent enrollment and PHY 201 with a grade of "C" or better.

PHY 203 General Physics III — Wave 4 hrs.

Motion, Sound, Light and Modern Physics (3-2)

Continues PHY 202. Covers foundations of wave motion, sound, geometrical and physical optics and modern physics.

Prerequisite: MTH 212 with a grade of "C" or better or concurrent enrollment and PHY 202 with a grade of "C" or better.

Political Science

PSC 101 American Politics 3 hrs.

and Government (3-0)

Focuses on political involvement, elections, campaigns, interest groups, Congress courts, the presidency and the constitution. Discusses how our government runs, as well as current political controversies. Utilizes political figures as guest speakers and offers opportunities for political participation, especially in election year.

PSC 210 Topics in Political Science 1-6 hrs.

Studies selected problems or topics in political science. The exact content and instructional methodology will vary from semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with pre-registration materials each time that the course is offered. This course may be taken from one to six credit hours.

PSC 220 Suburban, Urban and State Politics (3-0) 3 hrs.

Emphasizes politics in Illinois, Chicago and the suburbs. Delves into machine politics, taxes, housing and other issues. Provides opportunities for involvement in community politics and draws on elected officials and speakers.

PSC 250 Comparative Politics (3-0) 3 hrs.

Explores the politics of selected countries in Africa, Asia, Europe, Latin America and/or the Middle East. Examines economic, social and political patterns and problems in different nations.

PSC 260 Middle Eastern Politics (3-0) 3 hrs.

Examines political, social, economic, military, religious and terrorist forces in the Middle East. Investigates the politics of specific countries in the area.

PSC 270 Global Politics (3-0) 3 hrs.

Uses role playing to study how foreign policy is made. Explores human problems such as population, food and energy on a global dimension. Examines international bodies, including the United Nations, and explores how nations interact.

Psychology

PSY 101 Introduction to Psychology (3-0) 3 hrs.

Human behavior with reference to perception, learning, individual differences, intelligence and personality. Developmental method stressed rather than experimental. Reference made to daily life and everyday problems.

PSY 106 Practical Psychology (3-0) 3 hrs.

Presents a practical application of the psychological principles that lead to efficiency of learning, adjustment, motivation, communication and attitudes in everyday life and classroom situations. This course does not meet Social Science requirements.

PSY 107 Humanistic Psychology (2-0) 2 hrs.

Provides an understanding of human behavior and personality. Emphasis is on emotional adjustment, social adequacies and the development of maturity. Various theories of personality development and psychosocial adjustment of human beings, including those of Ellis, Freud, Maslow and Perls will be studied. In addition to these theories of development, students will investigate the physical, mental and aesthetic aspects of human behavior.

PSY 108 Topics in Psychology (2-0) 2 hrs.

Provides special topic seminars which allow each student the opportunity to personally examine current issues.

PSY 145 Psychology in Business and Industry (3-0) 3 hrs.

Human behavior and its practical applications in business. Psychological applications in personnel and marketing problems, employee selection, morale and supervisory practices. Prerequisite: PSY 101.

PSY 150 Psychology of Deafness (3-0) 3 hrs.

Considers the effects of prelingual and postlingual hearing impairment on the psychological and emotional development or adaptation of the individual. Study of cognitive and linguistic functioning, personality and interpersonal behavior.

Prerequisite: PSY 101.

PSY 210 Introduction to Research in Psychology (3-0) 3 hrs.

Introduction to the logic and theory of the scientific method. Emphasis on the basic statistical procedures and principles of experimental design. The purpose is to promote critical interpretations of behavioral data through an understanding of methods used in psychology.

Prerequisite: PSY 101.

PSY 216 Child Psychology I (3-0) 3 hrs.

Individual child from conception to fetal development, infancy and latency. emphasis placed on child rearing practices and techniques that appear beneficial in creation of independent and well-adjusted personality. Child's interaction with parents, siblings, peers and greater community considered in the formation of the integrated self.

Prerequisite: PSY 101.

PSY 217 Adolescent Psychology (3-0) 3 hrs.

Psychological study of the human organism from pubescence through adolescence and the beginnings of adulthood. Adolescence is studied as a time of rapid change resulting from increased drive state, physical maturity and changed social expectation. Emphasis is on how these changes are influenced by social institutions such as the family, the schools and the world of work, as well as by the divisions and conflicts taking place in society generally. Prerequisite: PSY 101.

PSY 218 Psychology of Adulthood and Aging (3-0) 3 hrs.

Focuses on human psychological development from young adulthood to old age and adult psychological processes of personality. Emphasizes identity and intimacy of young adults and changing male and female roles with maturity; the family; work; personality and psychopathology; aging and death.

Prerequisite: PSY 101 or consent of instructor.

PSY 220 Biological Basis of Behavior (3-0) 3 hrs.

Studies the physiological aspects of behavior. Emphasizes the physiological foundations of motivation, consciousness, learning, emotion, aggression and stress. Clarifies the interaction between physiology, behavior and environment. Prerequisite: PSY 101.

PSY 225 Psychology of Personality (3-0) 3 hrs.

Investigates the determining factors and dynamics of human personality. Studies major contemporary approaches such as psychoanalytic, humanistic learning as well as trait and factor theories. Also considers methods of personality assessment.

Prerequisite: PSY 101.

PSY 230 Psychology of Human Adjustment and Abnormal Behavior (3-0) 3 hrs.

Studies scientifically the research and theories of psychology relevant to the dynamics of human adjustment. Emphasizes the meaning and concept of adjustment applied to motivation, frustration, conflict, stress, anxiety, learning, personality, psychological diagnosis and psychotherapy.

Prerequisite: PSY 101.

Reading

RDG 098 Fundamentals of Reading (2-2) 3 hrs.

Presents group and individualized instruction in the fundamental skills of reading. Designed for students whose linguistic and reading skills are insufficient for successful college work. Enrollment is determined by a score below the 30 percentile on a standardized test. Carries no transfer credit.

Prerequisite: Concurrent enrollment in CMN 099 is highly recommended.

RDG 099 Developmental Reading (2-2) 3 hrs.

Provides classroom instruction and laboratory practice in comprehension, vocabulary and rate for the student who needs assistance in bringing his reading skills to college level. Carries no transfer credit.

Prerequisite: RDG 098 or a demonstrated proficiency on standardized placement test above 30 percentile.

RDG 105 College Reading (2-0) 2 hrs.

Increases reading rate and flexibility and improves ability to interpret written materials critically. Emphasis is on improving rate while maintaining comprehension.

Prerequisite: 10th-grade reading level or above.

RDG 106 Critical College Reading Skills (3-0) 3 hrs.

Develops the full array of mature, fluent reading skills, including critical and analytical comprehension, content area reading, predictive reading, vocabulary development, speed and flexibility. Also covers theories of comprehension and language development.

Real Estate

RES 101 Real Estate Transactions (3-0) 3 hrs.

Provides instruction in basic real estate fundamentals for those who wish to qualify for a real estate license. Applies to both the salesperson's and broker's licenses. Surveys real estate law, interests in real estate, ownership, the real estate business, financing and appraisal.

RES 105 Real Estate Math Applications (1-0) 2 hrs.

Explains use of mathematics in the real estate business and drills in land area and volume, capitalization rates, computing valuations and prorations. Emphasizes logical approach to arithmetic situations.

Recommended prerequisite: RES 101.

RES 108 Brokers Licensure Preparation I (2-0) 2 hrs.

Designed to meet the State of Illinois requirements toward obtaining a real estate broker's license and contains lecture and discussion of skills and competence needed in the operation of a real estate brokerage business. The advanced principles of real estate, as well as the sales and brokerage aspects of this career are the main topics, as are legal and ethical obligations.

Prerequisite: RES 101.

RES 109 Brokers Licensure Preparation II (2-0) 2 hrs.

Real estate conveyancing and finance are discussed in order to give a clear understanding of the movement of real property from owner to owner and the sources, types and effects of borrowed money. Also covered are the legal forms of contracts, etc., now used in the many types of ownership of real estate.

Prerequisite: RES 101.

RES 121 Advanced Principles, Marketing and Brokerage (3-0) 3 hrs.

Marketing applied to the real estate business. Sales planning, obtaining the qualifying prospects, securing listings, showing properties and motivation are considered. Procedural matters pertaining to the business such as office location, staffing and office systems are discussed, as well as the laws, regulations and ethics of the business. Samples of currently used forms are integrated into the course.

Prerequisite: RES 101 or consent of coordinator.

RES 122 Real Estate Appraisal I (3-0) 3 hrs.

Covers the functions and purposes of appraisal and has been designed to examine the nature of real property value and the various functions and methods of estimating values, with emphasis on the residential market.

Prerequisite: RES 101 or consent of coordinator.

RES 123 Real Estate Law (3-0) 3 hrs.

Examines legal aspects of the real estate business, including contracts, interests in land, transactions, brokerage, leasing, closings, zoning, taxation and the legal forms and remedies relative thereto.

Prerequisite: RES 101 or consent of coordinator.

RES 124 Real Estate Finance (3-0) 3 hrs.

Analysis of the various financial aspects of owning, buying and marketing all types of real estate, including mortgages, construction loans, leasing, sale and leaseback, foreclosure, trading, governmental programs and contracts and taxation.

Prerequisite: RES 101 or consent of coordinator.

RES 230 Property Management Methods (3-0) 3 hrs.

Covers property analysis, rental scheduling, collection and budgeting; maintenance and repair; insurance; advertising; techniques of handling tenants; executive and management control techniques. Course emphasizes procedures and methodology.

Prerequisite: RES 123 or consent of coordinator.

RES 231 Income Properties (3-0) 3 hrs.

Basic concern of the course lies in the concept of real estate as an investment. Investment aspects of property management including vacant properties are considered. Other topics include: ground leases, sale and leaseback arrangements, highest and best use of property, distressed properties, characteristics and industrial properties as investment, and the role of syndicates, developers, builders and financial institutions in promoting and managing income properties.

Prerequisite: Nine credit hours of real estate or consent of coordinator.

RES 232 Real Estate Appraisal II (3-0) 3 hrs.

Depreciation factors, interest rates, capitalization rates and techniques, lease-hold interest values; use and application of compound interest tables in the appraisal process; operating statements in the appraisal of income property, net income estimates, and correlation of final value estimates pertaining to income producing properties and industrial development; professional appraisal standards.

Prerequisite: RES 122.

RES 233 Real Estate Problems Seminar (3-0) 3 hrs.

Contemporary issues in the real estate industry possibly including tax foreclosures, tax deeds, tax titles, special assessments, assessing methods and practices, legislative and judicial influences upon the industry and effects of the current economic situation upon the real estate industry. Directed readings and analysis of case studies will be used extensively.

Prerequisite: Previously completed nine credit hours of real estate course work.

Recreation

REC 200 Leisure: Its Uses and Resources (2-0) 2 hrs.

Orients students in the field of leisure studies by providing each student with opportunities to formulate a philosophy and some basic concepts regarding leisure, leisure delivery service systems and leisure service as a profession.

REC 202 Foundations for Recreation and Park Services (2-0) 2 hrs.

Introduces the recreation student to legislation, fiscal concerns, standards for planning, problems of cities and the relationship of professional organizations to recreation and park services.

REC 204 Introduction to Therapeutic Recreation (2-0) 2 hrs.

Introduction to concepts and principles of therapeutic recreation, types of illnesses and disabilities, programming and services and role of the therapeutic recreator.

REC 206 Principles of Camping Management (3-0) 3 hrs.

Presents objectives, organization, techniques, counseling, activities and evaluation of outdoor camping.

REC 208 Outdoor Recreation Planning (2-0) 2 hrs.

Presents the planning process for designing and managing outdoor recreational areas and examines factors affecting the planning process.

REC 210 Performing Arts as Leisure Opportunities (2-0) 2 hrs.

Instruction in leadership skills in such program areas as recreational dance, drama, music, arts and crafts, and social recreation.

REC 214 Basic Field Experience (1-2) 2 hrs.

Directed field experience in public and private recreational agencies gives students majoring in recreation an introduction to working in actual field situation. Students work in College approved agencies of their own choice four or more hours per week.

Prerequisite: REC 200 and REC 202.

Refrigeration and Air Conditioning

RAC 101 Refrigeration Fundamentals (3-3) 4 hrs.

Introduces vocabulary, concepts and scientific principles used in the refrigeration industry. Develops skills in pipe fitting, use of hand tools and operation of instruments used in the refrigeration trade.

RAC 102 Refrigeration Systems (3-3) 4 hrs.

Continues to develop principles and concepts learned in RAC 101. Familiarizes students with components and accessories added to basic refrigeration systems for special applications. Develops trouble diagnosing procedures. Prerequisite: RAC 101.

RAC 103 Heating Principles (3-3) 4 hrs.

Describes sources and methods of producing heat for residential, commercial and industrial systems. Develops skills in testing, adjusting and replacing heating system components.

RAC 104 Residential Comfort Systems (3-3) 4 hrs.

Integrates concepts, principles and knowledge of equipment available for residential comfort systems including solar heat. Describes several residential systems and places emphasis on diagnosing system malfunctions. Prerequisite: RAC 101 and RAC 103.

RAC 105 Heating and Cooling Controls (3-3) 4 hrs.

Describes the purposes and principles of operation and causes of failure in electrical components common to residential and small commercial systems. Emphasizes wiring schematics and diagrams.

RAC 106 Advanced Controls (3-3) 4 hrs.

Continues RAC 105. Includes electrical components. Emphasizes control systems, system malfunctions and proper repair procedures.

RAC 201 Refrigeration System Design I (3-3) 4 hrs.

Considers the factors in the selection of refrigeration compressors, evaporators, condensers and compressor oil, as well as the accessories used in commercial refrigeration. Examines the thermo-dynamic properties of the common refrigerants. Prerequisite: RAC 102 or consent of instructor.

RAC 202 Refrigeration System Design II (3-3) 4 hrs.

Continues consideration of factors in the selection of metering devices, pipe sizing, motors and controls. Develops concepts of lubrication, multi-staging and cascade freezer systems. Prerequisite: RAC 201 or consent of instructor.

RAC 203 Air Conditioning Principles (3-3) 4 hrs.

Examines the properties of air through the use of the psychometric chart and tables. Studies methods of computing heat gains and losses for residential and light commercial systems. Prerequisite: RAC 104 or consent of instructor.

RAC 204 Air Distribution (2-3) 3 hrs.

Considers the factors in the selection of a duct system for efficient air distribution. Studies fan laws and pressure drops for proper fan and duct size selection. Describes types of registers and their location for optimum performance. Prerequisite: RAC 104 or consent of instructor.

RAC 208 Industrial Controls (3-0) 3 hrs.

Describes the controls found in industrial HVAC and refrigeration systems. Emphasizes energy efficient systems. Prerequisite: RAC 106 or consent of instructor.

RAC 211 Residential Solar Heating (3-0) 3 hrs.

Examines the nature of solar radiation and collections of solar energy. Studies existing systems for heating and cooling residential space and water. Prerequisite: RAC 101 or consent of program coordinator.

RAC 290 Independent Study (3-0) 3 hrs.

For students with some experience who do not wish to duplicate their present knowledge, or who cannot attend classes regularly. Study plan to be worked out by instructor and student.

Secretarial Science

See: Office and Administrative Services

Sign Language

SGN 101 Basic Sign Language (3-0) 3 hrs.

Introduces American Sign Language and deaf culture with emphasis on vocabulary building, fingerspelling, linguistic sign principles and development of expressive and receptive signing skills. This course is designed for students with no previous (or minimal) experience in sign language.

SGN 102 Intermediate Sign Language (3-0) 3 hrs.

Provides a review of the basic American Sign Language material covered in SGN 101 and continues vocabulary building, fingerspelling and linguistic information with an emphasis on conceptual accuracy and development of conversational expressive and receptive skills. Prerequisite: SGN 101 or consent of department chairperson.

SGN 201 Advanced Sign Language (3-0) 3 hrs.

Provides a historical overview of American Sign Language and an in-depth examination of the linguistic structure of the language, English and sign idioms, ASL principles and their application in building expressive and receptive ASL signing skills.

Prerequisite: SGN 102 or consent of department chairperson.

Sociology

SOC 101 Introduction to Sociology (3-0) 3 hrs.

Analysis and description of the structure and dynamics of human society. Application of scientific methods to the observation and analysis of social norms, groups, intergroup relations, social change, social stratification and institutions.

SOC 120 The Family in Contemporary Society (3-0) 3 hrs.

Examines the family as a social institution and as a dynamic interactive system. Topics include courtship, marriage, family systems, parenting, non-traditional forms of the family. Prerequisite: SOC 101 or consent of instructor.

SOC 205 Social Problems (3-0) 3 hrs.

Analysis of contemporary social problems. Investigation of theories dealing with conformity and deviance, racial and minority group prejudice, crime and delinquency, personality problems, urbanization and fundamental institutional problems due to social change. Prerequisite: SOC 101.

SOC 210 Social Institutions (3-0) 3 hrs.

Primary social institutions, including family, religious, educational, economic and political. Questions considered: who participates, what are the functions, what are the consequences, and an evaluation of the effects of the institutions on the society.

Prerequisite: SOC 101 and sophomore standing.

SOC 215 Introductory Social Psychology (3-0) 3 hrs.

Introduces the methods used to understand, explain and predict how the thoughts, feelings and actions of individuals are influenced by the thoughts and actions of social groups. Investigates how attitudes, beliefs and behaviors are influenced by others within society and how society is influenced by the individual.

Prerequisite: PSY 101 or SOC 101.

SOC 220 Topics in Social Science 1-6 hrs.

Studies selected problems or topics in social science. The exact content and instructional methodology will vary from semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with pre-registration materials each time that the course is offered. This course may be taken from one to six credit hours.

Spanish

SPA 101 Elementary Spanish I (4-0) 4 hrs.

Beginning course in the language skills of listening, understanding, speaking, reading and writing in their logical sequence. Designed for students with no previous experience in Spanish.

SPA 102 Elementary Spanish II (4-0) 4 hrs.

Continues SPA 101. Situational conversations in Spanish; reading and writing stressed. Prerequisite: SPA 101, two years of high school Spanish or consent of instructor.

SPA 201 Intermediate Spanish (4-0) 4 hrs.

Conversation with emphasis on pronunciation, intonation, stress and rhythm. Introduction to composition, reading of short stories and grammar review. Prerequisite: SPA 102, two years of high school Spanish or consent of instructor.

SPA 202 Intermediate Spanish (4-0) 4 hrs.

Continues SPA 201. Accuracy and speed in reading, study or syntax and extensive composition. Prerequisite: SPA 201, three years of high school Spanish or consent of instructor.

SPA 205 Intensive Oral Practice (3-0) 3 hrs.

Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern Spanish works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels. Prerequisite: SPA 202, or equivalent or consent of instructor.

SPA 210 Introduction to Modern Spanish Literature (3-0) 3 hrs.

Reading of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and diction. Speaking based on discussion works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels. Prerequisite: SPA 202, or equivalent or consent of instructor.

Speech

SPE 101 Fundamentals of Speech 3 hrs.
Communication (3-0)

Theory and practice of oral communications. Development of poise, confidence and skill in speech organization and delivery. Emphasis on frequent speaking, development of standards of criticism and selection and organization of material.

SPE 102 Public Speaking and 3 hrs.
Communication Theory (3-0)

Examination of communications principles underlying successful platform behavior. Development of proficiency in the logic of argument and skill of speaking. Consideration of forms of public address; analysis and delivery of one such form as a semester assignment. Prerequisite: SPE 101 or consent of instructor.

SPE 107 Oral Interpretation (3-0) 3 hrs.

Provides the student an opportunity to select, prepare and perform various types of literature. Emphasizes the use of body and voice in oral reading.

SPE 111 Introduction to the 3 hrs.
Theatre (3-0)

Introduction to theatrical and dramatic art. Emphasis on providing the student with the tools of analysis which give him insight into the total imaginative process that makes up the art of the theatre.

SPE 115 Interviewing (1-0) 1 hr.

Focuses on the unique demand of dyadic communication. The student will examine interview types, participate in model interview situations and complete a programmed course in cognitive listening skills.

SPE 205 Discussion and Debate (3-0) 3 hrs.

Principles, techniques and types of discussion and debate; experience in various types of discussion and debate activities. Prerequisite: SPE 101.

SPE 212 Acting (3-0) 3 hrs.

Methods used in the art of acting; stress on practical acting situations.

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Index

Index

A	
Academic Calendar	6, 7
Academic Honors	24
Academic Performance	24
Accounting Aide Curriculum	52, 94
Accounting Clerk Curriculum	94
Accounting Courses	110
Accounting Payroll Curriculum	94
Accreditation	11
Administrative Assistant	94
Admission	18
Admission Requirements	18
Adult Educational Development	49
Adult Educational Development Courses	111
Affirmative Action	11
Air Conditioning Courses (see Refrigeration and Air Conditioning)	
Anthropology Courses	113
Approved Elective Courses	44
Architectural Technology Courses	113
Architectural Technology Curriculum	53, 95
Art Courses	114
Art Curriculum	53
Assessment and Placement	19
Associate Degree Requirements	40
Astronomy Courses	115
Athletics	32
Attendance Policy	25
Auditing a Course	25
B	
Banking, Finance and Credit Courses	115
Banking, Finance and Credit Curriculum	95
Banking and Savings and Loan Education	35
Banking and Savings Association Management	54
Biological Sciences	55
Biology Courses	117
Board of Trustees	11, 181
Bookstore	15
Bread and Pastry Arts Curriculum	95
Building Codes and Enforcement Courses	118
Building Codes and Enforcement Curriculum	96
Business Administration Curriculum	55
C	
CAD/CAM Center	34
CAD Technician	96
Calendar	6, 7
Campus Facilities	14
Campus Map	2
Cardiac Exercise Technology Courses	119
Cardiac Exercise Technology Curriculum	56
Career Programs	45
Center for Real Estate Education	35
Certificate Programs	93
Certified Professional Secretary Curriculum	96
Chargeback Tuition	20
Chemistry Courses	119
Child Development Courses	120
Child Development Curriculum	57, 97
Child Learning Center	32
Citizenship Training	49
CLEP Testing	29
CNC Technician Curriculum	97
College Accessibility	15
College Community Programs	13
College District No. 512 — Map	3
College Hours	14
Commercial Credit Management Curriculum	58
Communication Skill Courses	122
Communications Curriculum	58
Community Counseling Center	38
Community Orientation and Involvement	12
Compact Agreements	41
Compliance Actions	11
Computer Science Curriculum	58
Conduct	32
Continuing Education	34
Cooperative Programs	47
Counseling (see Student Development Services)	
Course Numbering System	110
Course Outlines	110
Criminal Justice Courses	123
Criminal Justice Curriculum	59, 97
Culinary Arts Curriculum	97
D	
Data Processing-Computer Operator Curriculum	98
Data Processing Courses	125
Data Processing — Microcomputers in Business	98
Data Processing — Technical Curriculum	98
Data Processing Technology Curriculum	60
Degrees	14
Dental Hygiene Courses	127
Dental Hygiene Curriculum	61
Dietetic Technician Courses	129
Dietetic Technician Curriculum	62
Digital Electronics and Microprocessor Technology Curriculum	63, 99
Disabled Student Services	30
District Map	3

E	
Economics Courses	129
Economic Development Services	35
Education Courses	130
Education Transfer Curriculum	63
Electronics Courses	130
Electronics Curriculum	99
Electronics Technology Curriculum	64
Employer Based Program	37
Engineering Courses	131
Engineering Curriculum	65
English as a Second Language	49
English as a Second Language Courses	133
English Courses	132
Enrollment Status Verification	21
Executive Secretarial Development Curriculum	66
F	
Faculty	184
Fashion Design Courses	137
Fashion Design Curriculum	67, 99
Fashion Merchandising Curriculum	68
Fees	20
Financial Aid	30
Financial Management Curriculum	69
Fine Arts Courses	139
Fire Science Courses	140
Fire Science Technology Curriculum	70, 99
Food Service	32
Food Service Management Courses	141
Food Service Management Curriculum	71, 100
Forgiveness Policy	24
French Courses	142
G	
General Education	13
General Office Assistant Curriculum	107
General Studies Certificate Requirements	38
Geography Courses	142
Geology Courses	142
German Courses	143
Grading	24
Graduation Requirements	40
H	
Habilitation Aide Courses	143
Habilitation Aide Curriculum	100
Harper College	
Campus	14
History	11
Mission	13
Objectives	14
Philosophy	13
Harper, William Rainey	10
Harper Year	14
Health Care Program	36

Health Education Curriculum	72
Health Services	28
History Courses	143
Honors Program	50
Horticulture Curriculum	73, 98
Humanities Courses	144
Human Services Courses	145
I	
Incomplete Grades	25
Independent Study	145
Industrial and Retail Security Curriculum	100
Industrial Sales Management and Development Curriculum	100
Industry Services Center	35
Institute for Management Development	34
Interior Design Courses	145
Interior Design Curriculum	74
International Students	19
International Studies Program	50
Interpreter Training Courses	146
Interpreter Training Curriculum	101
J	
Journalism Courses	147
Journalism Curriculum	74
L	
Landscape, Garden and Floral Program	37
Learning Assistance Center	30
Learning Resources Center (LRC)	16
Media Services	16
Library Services	16
Legal Secretary Curriculum	75, 101
Legal Technology Courses	148
Legal Technology Curriculum	76
Liberal Arts Curriculum	77
Limited Enrollment Programs	18
Linguistics Courses	149
Literature Courses	149
M	
Machinist Curriculum	102
Management Courses	150
Marketing Courses	152
Marketing/Management Curriculum	78
Material Management Courses	153
Material Management Curriculum	79, 102
Material Management Education	35
Mathematics Courses	155
Mathematics Curriculum	91
Mechanical Drafting Curriculum	102
Mechanical Engineering Technology Courses	157
Mechanical Engineering Technology Curriculum	80
Medical Office Assistant Curriculum	82, 102
Medical Secretary Curriculum	83, 103
Medical Transcriptionist Curriculum	103
Music Courses	159
Music Curriculum	84

N			
Northeast Center	37	Repeat Policy	24
Northwest Cardiac		Requirements for AA Degree	42
Rehabilitation Center	35	Requirements for AAS Degree	46
Numerical Control (CNC) Courses	161	Requirements for AS Degree	43
Numerical Control (CNC) Technician		Residency	20
Curriculum	97	Retail Merchandising Curriculum	106
Nursing Courses	162	Retired Faculty	196
Nursing Curriculum	86		
O		S	
Objectives	14	Scholarships	30
Off-Campus Course Locations	4	Science and Mathematics Curriculum	91
Office and Administrative		Secretarial and General Office	
Services Courses	163	Certificates	107
Office and Administrative Services		Secretarial Science Courses	163
Education	35	Senior Citizen Program	36
Officers of the College	183	Sign Language Courses	178
Operating Room Technician Courses	165	Small Business Preparation	
Operating Room Technician		and Development	35
Curriculum	104	Social Science Transfer Curriculum	92
Organization and Community		Sociology Courses	179
Development Center	34	Spanish Courses	179
		Special Programs and Services	30
P		Speech Courses	180
Park and Grounds Operation		Statement of Completion	38
Management Courses	166	Student Activities	31
Park and Grounds Operation		Student Development Services	28
Management Curriculum	87, 104	Student Grievance Policy	25
Parking	15	Student Records Policy	25
Personal Banking	104	Student Senate	32
Pharmacy Technician Courses	168	Summer School Students	19
Pharmacy Technician Curriculum	105	Supervisory and Administrative	
Philosophy, College	13	Management Curriculum	92, 108
Philosophy Courses	168		
Physical Education Courses	169	T	
Physical Education Curriculum	88	Telecourses	52
Physical Science Courses	173	Testing Services, Vocational and	
Physics Courses	174	Academic	29
Placement Center	28	Transcripts	25
Plagiarism	25	Transfer of Credit to Harper College	25
Political Science Courses	174	Transfer of Credit to a Senior Institution	41
Practical Nursing Courses (see Nursing)		Transfer Programs	40
President's Message	10	Tuition and Fees	20
Probation	24	Tuition Refund Policy	21
Production Engineering Technician		Tutoring Services	30
Curriculum	105		
Production Welding Curriculum	105	U	
Proficiency Credit Program	29	University Extension Courses	37
Program Offerings	18		
Psychology Courses	174	V	
		Veteran Services	31
R		Vocational and Academic Testing	
Reading Courses	176	Services	29
Readmission	19	Vocational Skills Certificate	38
Real Estate Courses	176	Vocational and Technical Skills	37
Real Estate Curriculum	89, 106		
Recreation Courses	177	W	
Recreation Curriculum	89	Withdrawals	21
Refrigeration and Air Conditioning		Women's Program	37
Courses	178	Word Processing Operator Curriculum	108
Refrigeration and Air Conditioning			
Curriculum	106		
Refrigeration and Air Conditioning			
Technology Curriculum	90		



This Is Harper College (USPS 668-870) is published by William Rainey Harper College, with 7 issues in January; 3 in February, March, April and July; 2 in May, June, October and November; 8 in August; 5 in September; and 6 in December. Second-class postage paid at Palatine, IL.

Second-class
postage paid
Palatine, IL

POSTMASTER: Send change of address to This Is Harper College, William Rainey Harper College, Algonquin and Roselle Roads, Palatine, Illinois 60067.

March, 1988 — Volume VII, No. 11

This Is Harper College BULLETIN 1988/89



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Algonquin and Roselle Roads
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