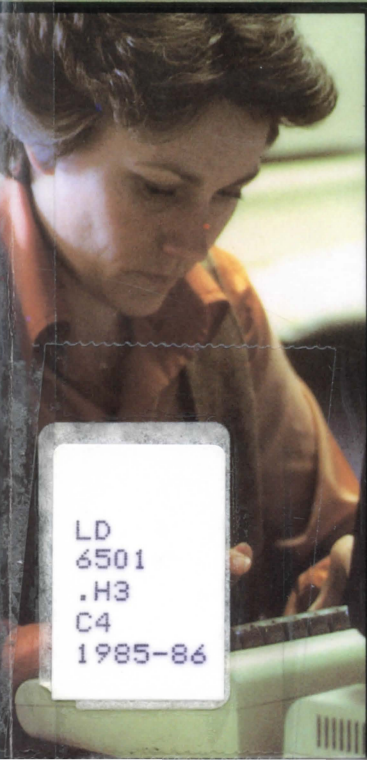


# William Rainey Harper College Bulletin 1985/86



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William Rainey Harper College (  
Bulletin 1973

William Rainey Harper College  
1985-86 Bulletin  
Volume 19  
January, 1985

#### 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

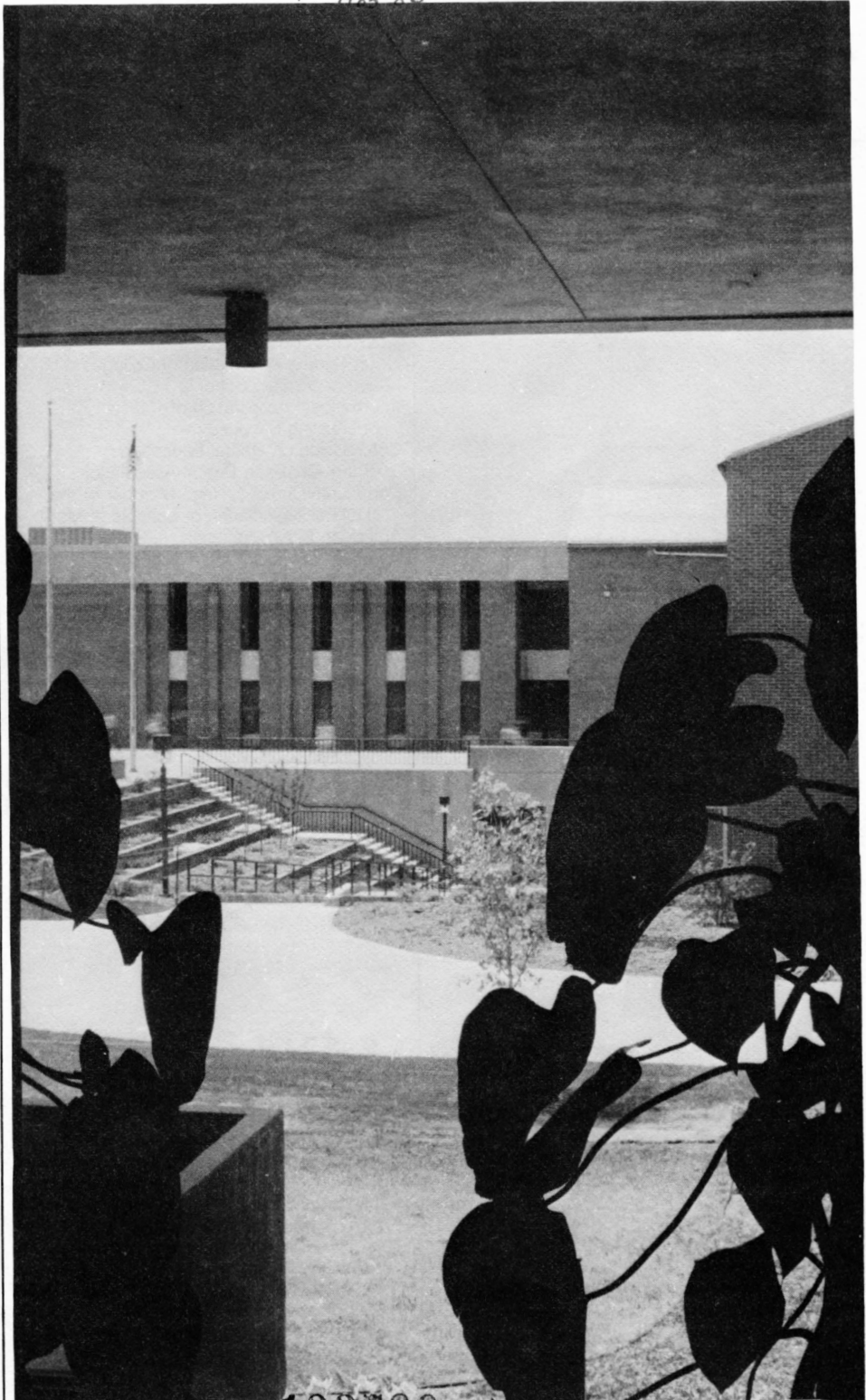
National League for Nursing

American Dietetic Association Approval

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or part of this catalog without prior notice.

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

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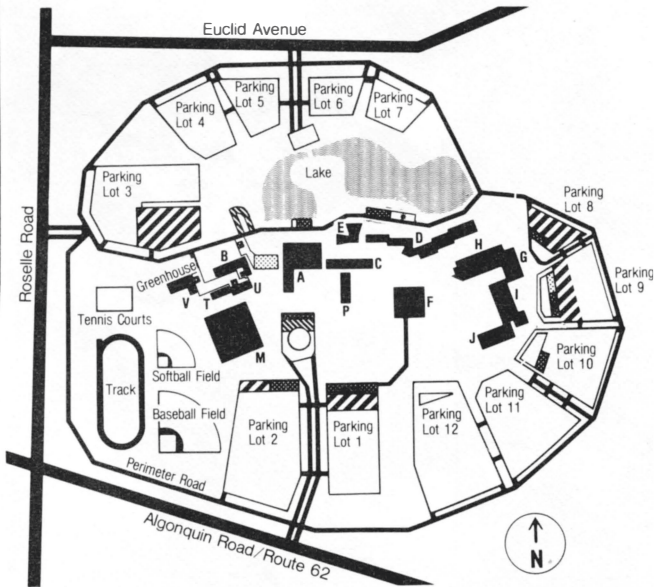
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# Campus Map

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- F Learning Resources Center
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- M Recreation, Athletics and Physical Education
- P Music Building, Women's Center
- T Grounds, Maintenance Shop, Park Management
- U Art Studio, Maintenance Storage
- V Park Management, Greenhouse

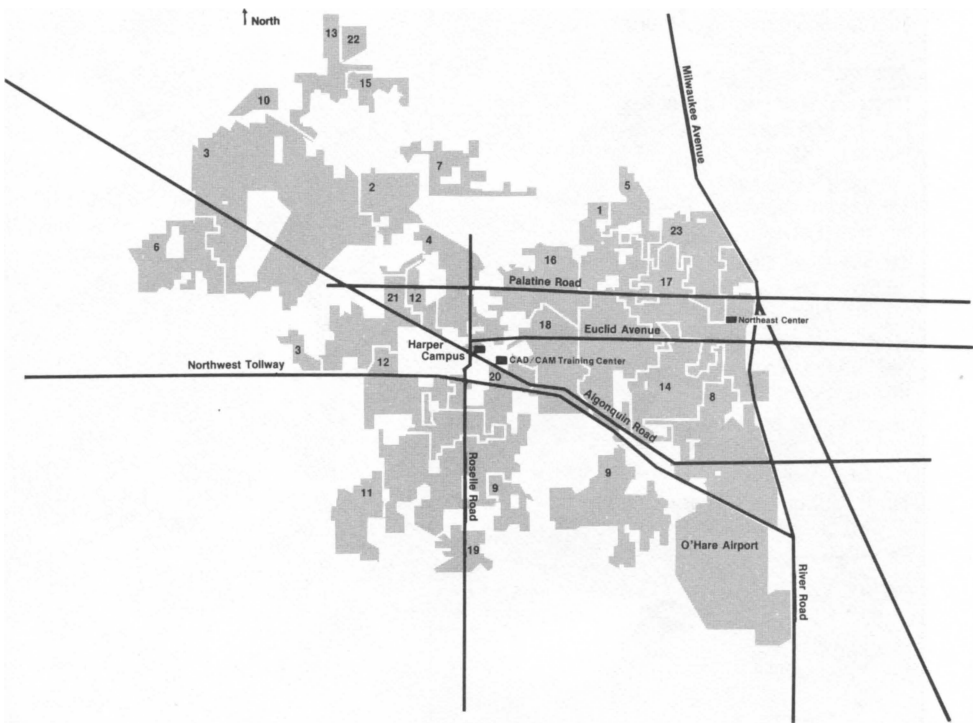


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|--|-------------------|---|---|
|  | Parking Student   |  | Building, Roads and Athletic Structures |
|  | Medical Permit    |   |   |
|  | Visitors          |   |   |
|  | Administrators    |   |   |
|  | Faculty and Staff |   |   |
|  | Dental Hygiene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

# 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**

**Alexian Brothers Medical Center**  
800 West Biesterfield Road  
Elk Grove Village

**Arlington Heights Memorial Library**  
500 North Duntun 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

**Good Shepherd Hospital**  
450 West Highway 22  
Barrington

**Grant Wood Senior Citizens Center**  
225 East Elk Grove Boulevard  
Elk Grove Village

**Harper College CAD/CAM Training Center**  
1002 East Algonquin Road  
Schaumburg

**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

**Northwest Community Hospital**  
800 West Central Road  
Arlington 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

Harper  
College  
Northeast  
Center





1984-85

William Rainey Harper College  
Academic Calendar

First Semester — Fall, 1984 \_\_\_\_\_

Early Registration as scheduled _____	April through August 13
Faculty Report _____	August 14
Open Registration _____	August 15, 16, 18
Classes Begin _____	August 20
Last Day for Late Registration _____	August 24
Last Day for Adding Classes _____	August 24
Last Day for Refunds* _____	September 1
Labor Day (Classes Not in Session) _____	September 3
Midterm _____	October 13
Last Day for Withdrawals _____	November 10
Veterans' Day (Classes Not in Session) _____	November 12
Thanksgiving Vacation (Classes Not in Session) _____	November 22-25
Classes Resume _____	November 26
Final Exams _____	December 10-15
Semester Break Begins _____	December 16

Second Semester — Spring, 1985 \_\_\_\_\_

Early Registration as scheduled _____	November through January 8
Faculty Report _____	January 9
Open Registration _____	January 9, 10, 12
Classes Begin _____	January 14
Last Day for Late Registration _____	January 18
Last Day for Adding Classes _____	January 18
Last Day for Refunds* _____	January 26
Lincoln's Birthday Observed (Classes Not in Session) _____	February 12
Midterm _____	March 9
Spring Vacation _____	April 5-14
Last Day for Withdrawals _____	April 6
Classes Resume _____	April 15
Final Exams _____	May 13-18
Graduation _____	May 19

Summer Session, 1985 \_\_\_\_\_

Registration _____	May 30, 31
Classes Begin _____	June 4
Last Day for Late Registration _____	June 4
Last Day for Adding Classes _____	June 4
Last Day for Refunds* _____	June 8
Midterm _____	July 1
Independence Day (Classes Not in Session) _____	July 4
Classes Resume _____	July 8
Last Day for Withdrawals _____	July 12
Final Exams _____	July 24, 25

\*See refund policy on page 21 of Bulletin

**First Semester — Fall, 1985**

Registration as scheduled	April through August 19
Faculty Report	August 20
Open Registration	August 21, 22, 24
Classes Begin	August 26
Last Day for Late Registration	August 30
Last Day for Adding Classes	August 30
Labor Day (Classes Not in Session)	September 2
Last Day for Refunds*	September 7
Midterm	October 19
Veterans' Day Observed (Classes Not in Session)	November 12
Last Day for Withdrawals	November 16
Thanksgiving Vacation (Classes Not in Session)	November 28-December 1
Classes Resume	December 2
Final Exam Week	December 16-20
Semester Break Begins	December 21

**Second Semester — Spring, 1986**

Registration as scheduled	November through January 7
Faculty Report	January 8
Open Registration	January 8, 9, 11
Classes Begin	January 13
Last Day for Late Registration	January 17
Last Day for Adding Classes	January 17
Martin Luther King's Birthday (Classes Not in Session)	January 20
Last Day for Refunds*	January 25
Lincoln's Birthday (Classes Not in Session)	February 12
Midterm	March 8
Spring Vacation	March 28-April 6
Classes Resume	April 7
Last Day for Withdrawals	April 11
Final Exams	May 12-17
Graduation	May 18

**Summer Session, 1986**

Open Registration	May 29, 30
Classes Begin	June 2
Last Day for Late Registration	June 3
Last Day for Adding Classes	June 3
Last Day for Refunds*	June 7
Midterm	July 1
Independence Day (Classes Not in Session)	July 4
Classes Resume	July 7
Last Day for Withdrawals	July 11
Final Exams	July 23-26

\*See refund policy on page 21 of Bulletin



## **The College: General Information**

William Rainey Harper

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The College

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The Harper Year

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Parking

Bookstore

Learning Resources Center

## William Rainey Harper

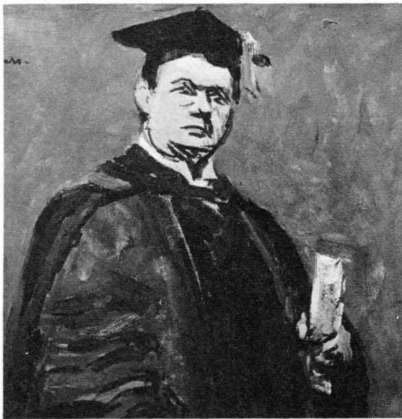
### Father of the Community College

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 315,000 citizens through a full range of transfer, career-vocational and continuing education programs on both a daytime and an evening basis.



## The President's Message

To most of us, education beyond high school used to have a single meaning—completion of a bachelor's degree. In recent years, we have come to realize that postsecondary education encompasses almost anything an adult needs to achieve an educational goal. This comprehensive definition of higher education has been accepted by community colleges

across the nation. It has also resulted in a new and unique role for community colleges as learning centers for adults as well as recent high school graduates. Harper College's courses reflect the diverse interests and educational needs expressed by the residents of this College district.

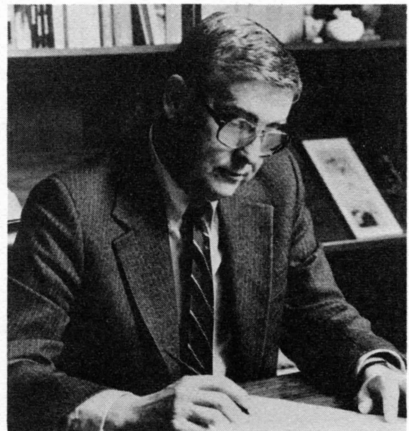
Young adults beginning work on a college degree find that Harper offers the first two years of courses required for a bachelor's degree at a fraction of the cost of attending a college or university away from home. Credits earned in these courses lead to an associate degree at Harper, and can be transferred to a senior institution for completion of baccalaureate studies. Other one and two year programs are designed for students who wish to prepare for immediate employment in engineering, technology, allied health and business fields.

Community residents are encouraged to take advantage of the course offerings and cultural events presented at the College. They may also wish to avail themselves of services in testing, counseling, and citizenship classes. Professionals in the district find management seminars, courses to update skills and information, and extension courses in which credits toward advanced degrees may be earned.

As you read through this course schedule, you will find that Harper offers courses to meet the needs of students with a variety of educational aims. I hope you will use this course schedule to get to know your community college and discover ways you can use its resources to accomplish your own goals. Harper is committed to helping you.

A handwritten signature in cursive script that reads "James J. McGrath".

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 comprised 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, religion, sex, age, national origin, 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 Director 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 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 thirty-four days after approving the referendum to elect seven citizens, from among forty-eight candidates, as the first board of the new college.

Two years later, Barrington High 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 to 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.

## 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 and 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 offer the first two years of *transfer or pre-professional education*, preparing students within their chosen field of study with a sound background commensurate with the first two years of education at a four-year college or university.
2. To offer two-year programs in *technical-vocational training*, providing students with the knowledge and skills required in a specific field.
3. To offer appropriate *general education* for all citizens, preparing them for more effective participation in a free society as well as for personal and cultural enrichment in an era which promises more and more leisure time.
4. To offer *opportunities for adults* in the community to initiate or to continue a collegiate education.
5. To provide *retraining and upgrading courses and programs* to facilitate adjustments to, or re-employment or advancement in, a work environment that is undergoing rapid technological changes.
6. To complement the educational programs with effective *counseling services*, including guidance and assistance to each individual student.
7. To encourage the use of its facilities and services for education and *cultural purposes* by all citizens of the community.

## 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 Friday from 8:15 am to 4:30 pm. The Registrar's Office and Bursar's Office will be open from 8:15 am until 9:00 pm Monday through Thursday, from 8:15 am until 4:30 pm on Friday, and from 8:15 am until 12:00 noon on Saturday.

Class hours are scheduled Monday through Friday from 7:00 am until 10:00 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

Completion of the Harper campus, which opened to 5,400 students in September, 1969, brought to the college district a complex of informal contemporary buildings nestled in the rolling terrain of 200 rural acres. On-time delivery of the buildings marks 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, "earth-tone" 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 purchases 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 110,000 volumes, more than 800 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.

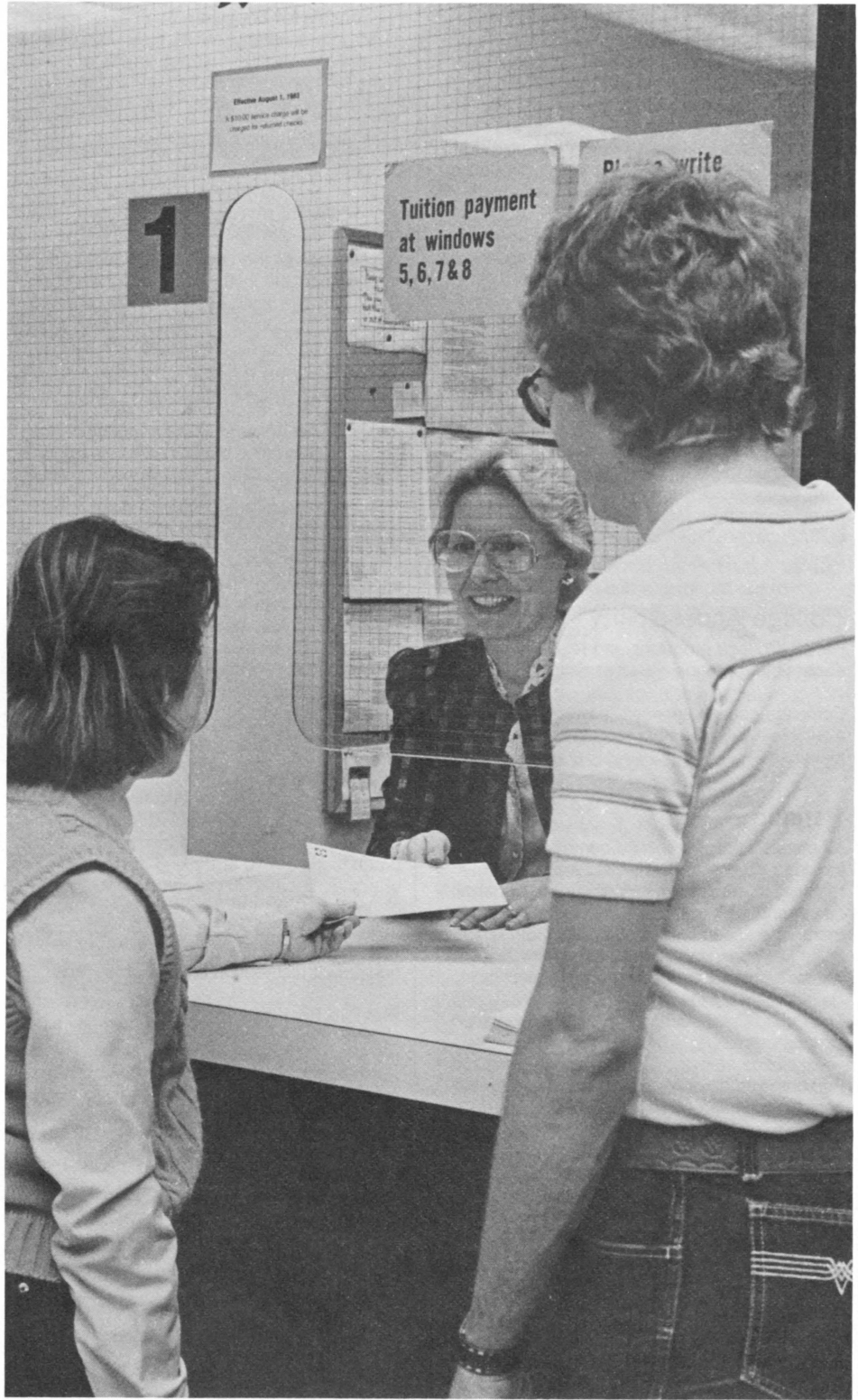
### LRC AV Media Services

The TV, photographic, duplicating 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 AV 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.



## **Admission Information, Tuition and Fees**

Admission

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Readmission

General Admission Requirements

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Withdrawals

Enrollment Verification

## **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 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 and the college dean of admissions. 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.

### **Admission Options**

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

#### **Transfer Program**

This option is available to those students interested in selecting courses transferable to institutions offering a baccalaureate degree. Applications for these programs are accepted at any time prior to the beginning of the semester or summer session. Students must comply with the procedures outlined in the General Admission Requirements section of this Bulletin.

#### **Career Programs**

These sequences of courses are designed for individuals who desire to pursue a specific curriculum to prepare them for a particular career. Applications for career programs other than Limited Enrollment Programs are accepted at any time prior to the beginning of the semester or summer session. Students must comply with the procedures outlined in the General Admission Requirements section of this Bulletin.

## **Limited Enrollment Programs**

The following career programs have been identified as limited enrollment programs: Cardiac Exercise Technology, Dental Hygiene, Dietetic Technician, Nursing, Operating Room Technician and Pharmacy 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 February 1 (December 1 for Nursing Program applicants) prior to the fall term in which they desire to enroll, will receive preferential consideration in the selection process. If, on February 1 (December 1 for Nursing Program applicants), more completed applications have been received than space available, those students with the highest qualifications will be selected.

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

#### **Program for Non-Degree Seeking Students**

This option is available to students who desire to enroll in courses and not pursue a degree or certificate. Applications are accepted at any time prior to the beginning of the semester or summer session. Students must comply with the procedures outlined in the General Admission Requirements section of this Bulletin.

#### **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.

## **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 \$89.93 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 must fulfill the International Student General Admission Requirements as listed in the General Admission Requirements section of the Bulletin.

## **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.) 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.

## **General Admission Requirements**

### **Full-Time Student Admission (Credit only)**

Full-time students (12 semester hours or more) are required to:

1. Complete all sections of the Harper application.
2. Forward to Harper College official transcripts from high school and from all colleges attended. An official copy of GED results must be submitted by all students who completed the GED.
3. Pay a \$15.00 nonrefundable application fee.

In addition to the above requirements, it is recommended that students who have completed less than twelve (12) semester hours of college credit complete the American College Test (ACT) or the Scholastic Aptitude Test (SAT) and submit their scores to the Harper College Admissions Office.

### **Part-Time Student Admission (Credit only)**

Part-time students (less than 12 semester hours) are required to:

1. Complete all sections of the Harper application.
2. Pay a \$15.00 nonrefundable application fee.

### **International Student Admission**

Before any action can be taken on their applications, international students must file 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 nonrefundable \$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.

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

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

## 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). Current regulations are on file in the Registrar's Office. Final determination is made by the dean of admissions and registrar.

### Non-Resident

A student residing in Illinois but outside Community College District 512.

### Out-of-State

A student whose residence is outside the state of Illinois.

### International

A student attending Harper College on a student visa.

## Tuition and Fees (subject to change without notice)

### Tuition

Resident Tuition—

\$27.00 per semester hour

Non-Resident Tuition (see Charge-Back)—

\$67.55 per semester hour

Out-of-State Tuition—

\$89.93 per semester hour

International Student Tuition—

\$89.93 per semester hour

Senior Citizen Tuition (Resident)—

(60—64) \$ 5.40 per semester hour

Senior Citizen (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 \$12.00 activity fee for each semester; students enrolled for less than 12 hours will pay a \$6.00 activity fee. Students enrolled for summer school credit hours will pay a \$5.00 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 \$64.00 per semester. This entitles the student to one private lesson per week. Major applied music students will pay \$128.00 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.

## Charge-Back Tuition

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

Students approved for charge-backs 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 charge-back 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 charge-back 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 charge-back 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 Registrar. The Vice President of Student Affairs shall make the final decision on such tuition refund requests.

## 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

\*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 or term is defined as the day when "classes begin" according to the official College calendar at the beginning of this Bulletin.

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.
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 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)

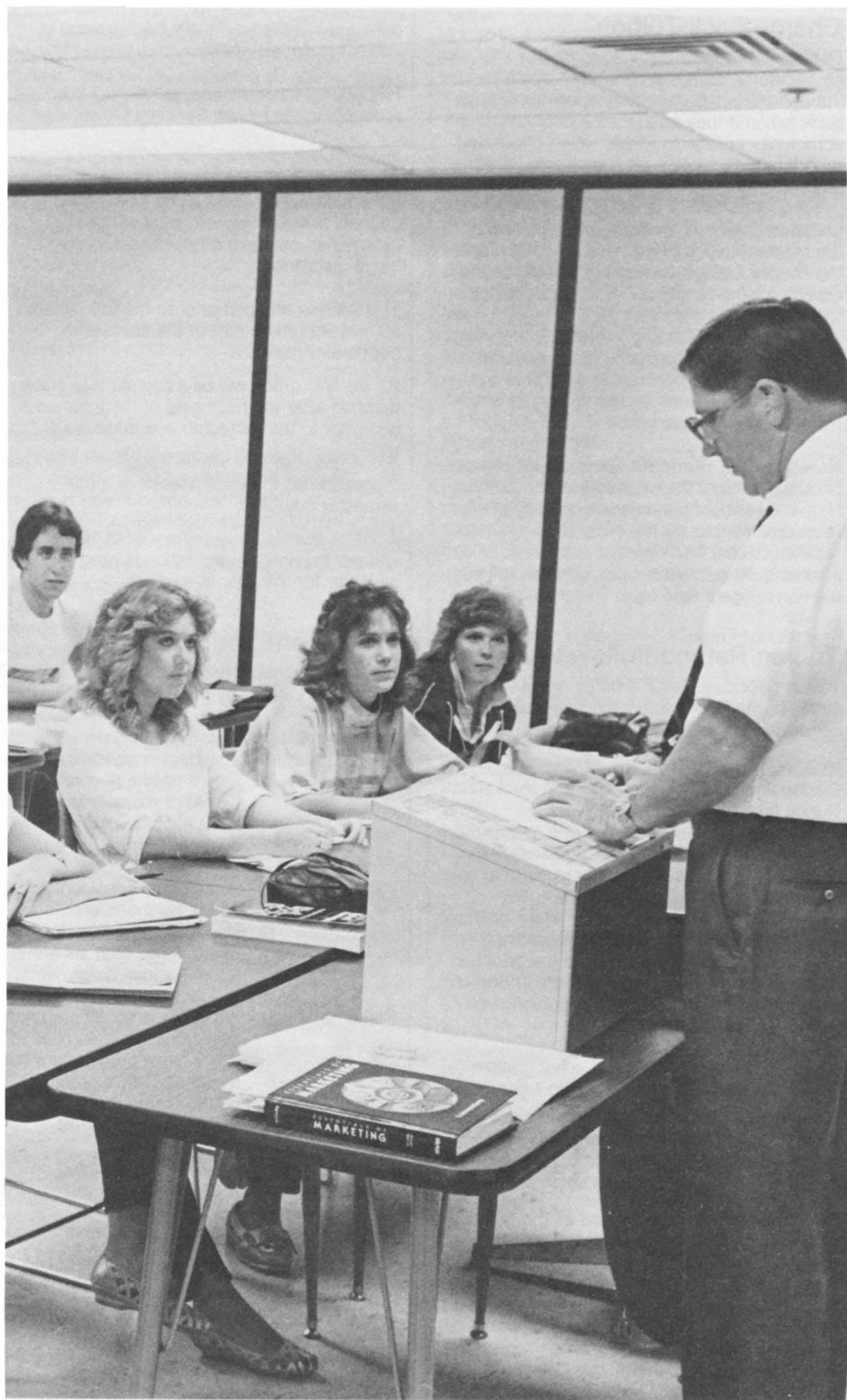
**Part-time Status**— a student is considered part-time if he/she is enrolled in less than twelve credit hours. (Less than six credit hours for loan deferments)

**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 day the verification request is received by the Registrar's Office. 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

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## Grading

At the end of each semester, the student will receive a grade for each class in which he 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

## 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 3.75 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 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.

## 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.

## 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 nearly every department to supplement regular programs with honors options. Whether in transfer or career areas, 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.)

## 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 or the instructor may assign a final 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. Each student is entitled to one transcript without charge. A fee of \$2.00 is charged for each additional copy. The College reserves the right to withhold transcripts of persons who have past due monetary obligations such as tuition, fees or materials.

## 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.

## 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 and/or approved 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 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 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 Services

New Student and Adult Services

Assessment and Orientation

Career and Life Planning

Vocational and Academic Testing Services

Open Test Center for CLEP

Open Test for GED

Alternative Credit Programs

Financial Aid

Veteran Services

Student Activities

Conduct

Athletics

Food Service

Student Senate

Child Learning Center

Health Services

## **Student Development Services**

Counseling is an important function of a comprehensive community college. Harper College recognizes this fact and has developed an extensive student development program. This program is designed to assist students in identifying, assessing and achieving their goals while at the College. A variety of professional services and related experiences, designed to maximize responsible student decisions relating to educational, vocational, social and personal issues are offered.

The Student Development staff can assist students with their educational planning by helping to identify courses needed for graduation, or for transfer to specific colleges or for some other more general goal. 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 to 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.

There are several Student Development centers on campus. Two, located in Buildings D and I, are available to students for general counseling purposes. Student Development staff members are available during normal College hours.

### **College Credit Courses**

Practical Psychology, a course which presents psychological principles that lead to efficiency of learning, is offered as PSY 106 for three credit hours. This course is available to students wishing to improve their learning strategies.

Humanistic Psychology, a course dealing with personal awareness, is offered as PSY 107 for two credit hours. Topics in Psychology, a course which focuses on a variety of topics including career exploration, dealing with feelings, and managing stress, is offered as PSY 108 for two credit hours. These classes meet as small groups taught by Student Development faculty members. Additional small group experiences are offered

throughout the year in areas of educational, vocational or personal concern.

## **New Student and Adult Services**

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

In addition, the center functions as a special counseling center 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.

## **Assessment and Orientation**

An assessment and orientation program for entering students is conducted prior to the beginning of each semester by the Harper Student Development staff. Students have an opportunity to assess their strengths and areas for improvement, as well as talk with Student Development faculty regarding their individual educational plans. The program is designed to assist new students in becoming familiar with Harper College students, staff, policies and procedures. Students begin setting goals and are assisted in the selection and registration of courses. Entering students are notified by mail about this program.

## **Career and Life Planning Center**

Another Student Development Center 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 and Life Planning Center. A variety of career information is available, including the DISCOVER and Microquest Computerized Guidance programs. 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.

A representative of the Illinois State Employment Services is available in the center. This person provides job placement services to Harper students at no charge.

The center, located in Building A, Room 347, may be visited with or without an appointment.

## Vocational and Academic Testing Services

A Student Development testing program is available without charge to students enrolled in at least six (6) credit hours (three credit hours in eight-week terms). Test results are interpreted by counselors and can give valuable information in making decisions about future plans and courses.

### Open Test Center for CLEP

The College Level Examination Program (CLEP) tests published by The College Board are administered monthly except February and December by the Office of Testing Services. This program offers a means of converting knowledge gained in a variety of ways into college credit. Students are urged to contact the college of their choice to determine if they will accept and act upon results of the examinations.

### 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.

### 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 would include Advanced Placement (AP) credit, College Level Examination Program (CLEP) credit, Harper College Proficiency Examination credit, and 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 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 "Proficiency Credit" bulletin available in the Office of 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 Testing Services. Information regarding CLEP examinations may be obtained by requesting a copy of the CLEP "Registration Guide" and Harper CLEP schedule from the Office of 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

A student who wishes to receive credit for a course not covered by the College Level Examination Program should secure an "Authorization to Apply for Departmental Proficiency Credit" from the Division responsible for the course. Additional forms must then be completed by the Office of Testing Services, and a fee of \$8.00 per credit hour paid before the test can be administered.

Applications for these examinations may be denied due to the nature of the course or because a suitable examination is not currently available.

### American Council on Education Credit Recommendations

Credit will be granted for extracurricular educational experience earned through formal military training and the Program on Noncollegiate Sponsored Instruction (PONSI) as 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 Educational 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.

## Disabled Student Services

Support services, advising and orientation are available to students with disabilities. These services may include counseling, specialized assessment testing, registration assistance, access to audio recorded textbooks, reader services, scribing, interpreting, tutoring and notetaking services.

Students interested in securing these services should contact the Coordinator of Disabled Student Services at the earliest possible date. Students should seek input about services needed from the office when they are planning their classes.

## 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, F123, extension 539.

## 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)  
National Direct Student Loans  
Nursing Loans  
Armed Forces Tuition Assistance  
Supplemental Educational Opportunity Grants  
Pell Grant

### State-Sponsored Aid Programs

Illinois State Scholarships and Monetary Awards  
Illinois Guaranteed Loans  
Illinois Military Scholarships  
Division of Vocational Rehabilitation Programs  
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 \$2500 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 under the Vietnam G.I. Bill 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 in World War I or any term after September 16, 1940 are eligible for the Illinois State Veterans Scholarship.

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 Serviceman's Opportunity College by meeting or exceeding the following criteria:

uncomplicated and non-restrictive admission policies; providing for servicemen and 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 lecture, concerts, films, art exhibits and theater productions sponsored by a student-faculty Cultural Arts Committee; social programs of concerts, films, special events, mini-courses 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, Chess Club, Data Processing Club, Engineering Club, Freshman Nurses 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, Martial Arts Club, Operating Room Technicians Club, Phi Theta Kappa (Honorary Scholastic Society), Physical Education Majors Club, Phi Theta Epsilon (Law Enforcement), Political Science Club, Pom Pon Squad, Program Board, Seekers, Sophomore Nurses Club, Spread Eagle Ski Club, Student Investment 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 ice skating.



## Food Service

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

Monday through Friday . . . . . 7:30 am-2:00 pm

A snack bar is located on the second floor of Building A near the student lounge. Hours are posted at the snack bar.

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 571.

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 those parents who are on campus attending a class or workshop.

Preschool program for children of students, faculty and from 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 262.

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 those parents on campus attending a class or workshop. Morning preschool for the community is also available. For more information call 537-8660.

## 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 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 during fall and spring semesters. There are also medications available for treating minor illnesses, as well as testing for strep throat, mononucleosis, pregnancy, tuberculosis and venereal disease. Students are encouraged to use health service facilities when ill or injured as well as for confidential counseling and care regarding personal health problems. A rest area is available to students, faculty and staff. Community health resources are utilized for referral when necessary.



## Continuing Education and Community Services

Continuing Education

Northwest Training Center for Vocational,  
Technical and Professional Skills

Northeast Center

Employer Based Program

University Extension Courses

Community Counseling Center—A Service for  
Non-Harper Clients

## 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 seeks to provide 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.

### Community Program

Continuing Education courses are offered in the general areas of business management, personal finance, certified financial planning, real estate, insurance, secretarial science, microprocessors, personal computing, photography, fine arts, homemaking arts, law, airline services, foreign languages, dance, physical education, and the CLEP (College Level Exam Program) seminar.

About 300 community program class sections are offered each semester. Enrollment generally exceeds 5,000 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 who serve as members of the Harper College Business-Industrial Steering Committee.

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, improving employee performance, the art and skill of delegation, motivation, efficient communication, team building, employee relations, 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. Special rates are available to organizations sending groups of employees to the training sessions. As an additional service, management training seminars and workshops can be brought to local businesses as a component of in-plant training.

### CAD/CAM Center

The Computer Aided Design and Computer Aided Manufacture (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, provide a professional forum and resource center for the examination of trends and new concepts in the field of high technology, 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.

#### **Community Development Education Center**

The purpose of the center is to promote a better-informed citizenry in the areas of government and leadership. The center's objectives are to provide information and skills to public officials and professional staff, to increase their efficiency, to interest citizens in becoming more informed and active in all phases of the community, and to bring together citizens, officials and staff to facilitate greater interaction and understanding between these groups. Seminars, workshops and special conferences are planned to meet these objectives. Offerings to municipal employees and government officials are provided in cooperation with the Northwest Municipal Conference.

#### **The Center for 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.

#### **Center for 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 training and enriching educational experiences for those entering or increasing their professionalism in the real estate business. Offerings include courses to meet educational requirements for the salesman's and broker's licenses, exam review workshops prior to every monthly state licensure examination, and other activities developed in cooperation with an advisory committee of practicing real estate professionals.

#### **Small Business Preparation and Development**

This program 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 and how to plan for retirement, as well as accounting procedures for the small business owner and sales techniques. Seminars are changed as the needs of the small business community change.

#### **The Center for 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 word processing and 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.

#### **Organization Facilitator Training**

Organization Facilitator Training is a series of seminars and practical workshops designed to enhance the planning ability and strengthen the functional capacity of public and private organizations in the Harper district.

Organization Facilitator Training (OFT) is a two-day seminar including contextual lectures and social analysis workshops. Participants come from a variety of organizations which have completed Harper's strategic planning workshops and now wish to develop in-house capacity to facilitate consensus building, team leading, and a variety of participatory group processes. Further application of the OFT training is provided through an internship in which participants join Harper staff in facilitating two events. In the monthly OFT lab, participants discuss facilitation efforts—what is working, what is not and why. The lab also provides opportunities to develop OFT skills and methods and to research and discuss literature in this field.

#### **The Northwest Cardiac Rehabilitation Center**

The Northwest Cardiac Rehabilitation Center (NCRC) is a new facility on Harper's campus 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 included 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 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 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 281 or 486 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 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 406.

### **Health Care Program**

The purpose of continuing education at Harper College directed toward health care professionals and allied health care personnel is to improve health care in the community. The program has been designed to meet the needs of the individual health care worker and the employer of health care personnel for continuing education. It has also been set up to work cooperatively with other health agencies in the community to determine and provide for learning needs of those providing health care.

The Health Care Program functions within the guidelines of each professional association. Course offerings, seminars, workshops and conferences carry professional association continuing education credit when indicated.

The Health Care Program offers basic courses for beginning health workers in the continuing education mode and learning experiences beyond basic educational programs for professionals. These are designed to promote the development of sound health care practices, thus improving health care to the public.

For further information, please contact the Coordinator of Continuing Education, Life Science and Human Services Division, 397-3000, extension 406.

### **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 560.

### **Northwest Training Center for Vocational, Technical and Professional Skills**

Harper College recognizes the need to provide short-term intensive job training to meet local labor market needs. Courses will be offered both on campus and at off-campus sites. Instruction will be provided by professionals in the 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, a second career, or for those who wish to enhance their job skills.

### **Northeast Center**

For some years, Harper College has offered classes in facilities in Wheeling. Residents of the surrounding area have enjoyed the convenience of attending college credit and continuing education classes offered near their homes. Through a new lease agreement, Harper will occupy the Stevenson School, 1375 South Wolf Road in Prospect Heights, and will be offering a greater number and variety of day and evening classes to residents in the northeastern section of the College district.

### **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.

### **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.

## **Programs of Study and Requirements**

General Education Requirements

Graduation Requirements

General Studies Certificate Requirements

Career Programs

Cooperative Programs

Transfer Programs

Associate Degree Curricula

Certificate Programs

English as a Second Language

General Educational Development

# Associate Degree Requirements

## General Education Requirements:

	Associate in Arts	Associate in Science	Associate in Applied Science
<b>I. Communication Skills</b> ENG 101, ENG 102, ENG 201, ENG 220	6 hours	6 hours	6 hours <sup>1</sup>
<b>II. Social Sciences</b> anthropology, economics, geography, history, political science, psychol- ogy, sociology	6 hours	6 hours	6 hours
<b>III. Science or Mathematics</b> astronomy, biology, chemistry, engineering <sup>2</sup> , geology, mathematics, physical science, physics	8 hours	20 hours	6 hours <sup>3</sup>
<b>IV. Humanities</b> art, foreign language, humanities, literature, music, philosophy, fine arts, SPE 107, SPE 111, SPE 212	6 hours	6 hours	3 hours
<b>V. Twelve hours to be taken in at least two of the following areas: communication<sup>4</sup>, social sciences, science or mathematics, humanities, PED 203, PSY 106</b>	12 hours		
<b>Total General Education Requirements</b>	38 hours	38 hours	21 hours

## Other Degree Requirements:

<b>A.A. Electives</b>	22 hours		
<b>A.S. Electives</b>		22 hours	
<b>A.A.S. Technical Requirements and Electives</b>			39 hours
<b>TOTAL</b>	60 hours	60 hours	60 hours minimum <sup>5</sup>

<sup>1</sup>The following courses may be used to satisfy this requirement if a part of the approved career program: ENG 100, ENG 103, ENG 130, JNM 130, JNM 131, JNM 133.

<sup>2</sup>Courses in engineering may apply to the general education requirements in Group III in the Associate in Science and Associate in Applied Science degrees.

<sup>3</sup>Students majoring in a career program may count courses in their major toward fulfillment of this requirement.

<sup>4</sup>In addition to the listed courses in Group I, the following can be used to fulfill the Group V requirement: SPE 101, SPE 102, SPE 115, SPE 205, RDG 105, RDG 106, ENG 103 and ENG 130.

<sup>5</sup>See item 7 in Graduation Requirements.

## 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 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 taken 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.
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) successfully 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.
5. Enrollment in Harper College during the semester in which graduation requirements are completed. Waiver of enrollment requirement may be made by the vice president of academic affairs where exceptional circumstances warrant.
6. Fulfillment of the degree requirements.
7. 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.
8. A student must apply 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 complete their petition for graduation when registering for the semester in which their graduation requirements will be fulfilled.

## 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 Director 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.

## Career Programs

Harper College offers the following career/vocational programs. Both associate in applied science 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.

Accounting Aide  
Accounting Clerk<sup>1</sup>  
Accounting—Payroll<sup>1</sup>  
Agricultural Business Technology<sup>2</sup>  
Agricultural Production Management Technology<sup>2</sup>  
Architectural Technology  
Auto Body Repair and Painting<sup>2</sup>  
Automotive Service Excellence<sup>2</sup>  
Automotive Technology<sup>2</sup>  
Aviation Maintenance Technology  
Baking<sup>1</sup>  
Banking, Finance and Credit<sup>1</sup>  
Banking and Savings Association Management<sup>3</sup>  
Brokers License Certification<sup>1</sup>  
Building Codes and Enforcement<sup>1</sup>  
Building Construction Technology<sup>2</sup>  
    Construction Layout  
    Construction Management  
Business Machine Repair<sup>2</sup>  
\*Cardiac Exercise Technology<sup>3</sup>  
Certified Professional Secretary<sup>1</sup>  
Child Development  
Civil Technology<sup>2</sup>  
    Materials Testing and Inspections  
    Project Inspector  
Clerical<sup>1</sup>  
Clerk-Typist<sup>1</sup>  
Commercial Art<sup>2</sup>  
Commercial Credit Management<sup>3</sup>  
Commodity Futures<sup>2</sup>  
Cooking<sup>1</sup>  
Criminal Justice  
Data Processing—Computer Operator<sup>1</sup>  
Data Processing—Microcomputers in Business<sup>1</sup>  
Data Processing Technology  
Dental Assisting<sup>2</sup>  
\*Dental Hygiene<sup>3</sup>  
Dental Laboratory Technology<sup>2</sup>  
\*Dietetic Technician<sup>3</sup>  
Digital Electronics and Microprocessor Technology  
Electronic Servicing<sup>2</sup>  
Electronics Technology  
Executive Secretarial Development

\*Fashion Design  
\*Fashion Merchandising<sup>3</sup>  
Fire Science Technology  
Fluid Power Technology<sup>2</sup>  
Food Manufacturing Technology<sup>2</sup>  
Food Service Management  
General Office Assistant<sup>1</sup>  
Gerontology<sup>2</sup>  
Graphic Arts<sup>2</sup>  
Graphic Design<sup>2</sup>  
Heating Service<sup>1</sup>  
Horticulture  
Hotel/Motel Management<sup>2</sup>  
\*Human Services Technology<sup>2</sup>  
Industrial and Retail Security<sup>1</sup>  
Industrial Sales Management and Development<sup>1</sup>  
Industrial Skilled Craft Training<sup>2</sup>  
    Industrial Building Construction  
    Industrial Electrician  
    Industrial Heating, Ventilating, Air Conditioning  
    Industrial Mechanical Maintenance  
    Industrial Welder  
    Machine Repair  
    Maintenance Machinist  
    Millwright  
    Moldmaker  
    Pipefitter  
    Tool and Die  
    Tool Grinder  
Industrial Supervision<sup>2</sup>  
Industrial Work Measurement<sup>2</sup>  
\*Interior Design<sup>3</sup>  
\*Interpreter Training<sup>1,2</sup>  
Journalism<sup>3</sup>  
Legal Secretary  
\*Legal Technology<sup>3</sup>  
Library Technical Assistant<sup>2</sup>  
Machine Apprenticeship<sup>2</sup>  
Machine Tool, Career Advanced Program<sup>2</sup>  
Machine Tool Operation<sup>2</sup>  
Machine Tool Technology<sup>2</sup>  
Machinist<sup>1</sup>  
Marketing/Management  
Material Management  
Mechanical Drafting<sup>1</sup>  
Mechanical Engineering Technology:  
    Computer Aided Design option<sup>3</sup>  
    Manufacturing/Production option<sup>3</sup>  
    Mechanical Engineering option<sup>3</sup>  
Mechanical Technician<sup>1</sup>  
Media<sup>2</sup>  
Medical Laboratory Technology<sup>2</sup>  
Medical Office Assistant  
Medical Records Technology<sup>2</sup>  
Medical Transcriptionist<sup>1</sup>

Numerical Control Technician<sup>1</sup>  
 \*Nursing  
 \*Operating Room Technician<sup>1</sup>  
 Park and Grounds Operation  
 Management  
 Personal Banking<sup>1</sup>  
 \*Pharmacy Technician<sup>1</sup>  
 Photography<sup>2</sup>  
 Physical Therapy Assistant<sup>2</sup>  
 Plant Maintenance/Engineering<sup>2</sup>  
 Plastics<sup>2</sup>  
 Plastics Processing and Fabricating<sup>2</sup>  
 Production Engineering Technician<sup>1</sup>  
 Production Welding<sup>1</sup>  
 Radiography<sup>2</sup>  
 Radiologic Technology<sup>2</sup>  
 Real Estate  
 Refrigeration and Air Conditioning  
 Refrigeration Service<sup>1</sup>  
 Residential Comfort Systems<sup>1</sup>  
 Respiratory Care<sup>2</sup>  
 Retail Merchandising<sup>1</sup>  
 Stenographer<sup>1</sup>  
 Supermarket Management<sup>2</sup>  
 Supervisory and Administrative  
 Management  
 Transportation and Traffic<sup>2</sup>  
 Travel and Transportation<sup>2</sup>  
 Vending Machine Repair<sup>1</sup>  
 Water-Wastewater<sup>2</sup>  
 Welding<sup>2</sup>  
 Welder—Industrial<sup>2</sup>  
 Welder—Advanced<sup>2</sup>  
 Word Processing<sup>1</sup>  
 Word Processing Operator<sup>1</sup>

## 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.

\*Enrollment in program is limited. See Admissions Options section of this Bulletin for guidelines.

<sup>1</sup>Certificate program only.

<sup>2</sup>See Cooperative Program section of this Bulletin.

<sup>3</sup>Associate degree program only.



## 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.

## 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 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  
Building Construction  
Technology  
Commercial Art  
Graphic Arts  
Hotel/Motel Management  
Human Services  
Library Technical Assistant  
Media  
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  
Civil Technology  
Materials Testing and Inspections  
Project Inspector  
Dental Assisting  
Fluid Power Technology  
Human Services Technology  
Industrial Skilled Craft Training  
Industrial Building Construction  
Industrial Electrician  
Industrial Heating, Ventilating,  
Air Conditioning  
Industrial Mechanical Maintenance  
Industrial Welder  
Machine Repair  
Maintenance Machinist  
Millwright  
Moldmaker  
Pipefitter  
Tool and Die  
Tool Grinder  
Welder—Industrial  
Industrial Supervision  
Library Technology  
Medical Laboratory Technology  
Medical Records Technology  
Radiography  
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  
Industrial Supervision  
Technology  
Industrial Work Measurement  
Machine Apprenticeship  
Photography<sup>1</sup>

<sup>1</sup>courses only

**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  
 Medical Laboratory Technology  
 Medical Records Technology  
 Photography<sup>1</sup>  
 Physical Therapy Assistant  
 Plant Maintenance/Engineering  
 Radiologic Technology  
 Transportation and Traffic

**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:

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

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

Fashion Merchandising . . . . . McHenry County and Oakton districts.

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

Brokers License Certification . . . . . DuPage district.

Horticulture . . . . . Oakton district.

Industrial Sales Management and Development . . . . . DuPage district.

Supervisory and Administrative Management . . . . . DuPage district.

Cardiac Exercise Technology . . . . . Lake County district.  
 Legal Secretary

Pharmacy Technician . . . . . Lake County, McHenry and Oakton districts.

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

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

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

Baking . . . . . Lake County, McHenry County and Oakton districts.

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

Cooking . . . . . Lake County, McHenry County and Oakton districts.

Food Service Management . . . . . Lake County and McHenry County districts.

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

Journalism . . . . . DuPage, Lake County and McHenry County districts.

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

Digital Electronics and Microprocessor Technology . . . . . DuPage and McHenry County districts.

<sup>1</sup>courses only

Fire Science	
Technology . . . . .	McHenry County district.
Medical Transcriptionist	DuPage and
Numerical Control Technician	McHenry County districts.
Real Estate . . . . .	McHenry County district.
Vending Machine Repair	
Banking, Finance and Credit . . . . .	DuPage and Lake
Banking and Savings Association Management	County districts.
Commercial Credit 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. Courses are offered at beginning, intermediate and advanced levels in one or more of the language skills (listening, speaking, reading and writing).

The ESL Department serves students from any language background. The department also serves those with little or no educational background through those who are graduates of professional programs. Students are tested during the registration process and counseled for appropriate placement. The department offers both part-time and full-time programs. For more information, contact the English as a Second Language student advisor.

### Full-Time Program

This is an intensive program for beginning, intermediate, and advanced students who want to improve their English language skills as quickly as possible. Emphasis is on the language skills and cultural knowledge needed for functioning in college and university courses in the United States. This program is also beneficial for non-native individuals employed in business and the professions. Students must have completed a minimum of tenth grade in their native countries with completion of twelve grades or more preferred.

### Part-Time Academic 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 placed at Level 7 may take special advanced courses in grammar, conversation, reading, composition, vocabulary, American culture and TOEFL Test preparation.

### Part-Time Practical Program

This program is for those students with little or no previous formal education. Emphasis is on basic English reading, writing and conversation for everyday practical use.

## General Educational Development (GED)

The GED program provides instruction for persons sixteen years old and over who have not completed a secondary education program in the United States, who have not passed the General Educational Development (GED) high school equivalency tests, and who are not currently enrolled in a secondary school.

Daytime and evening courses are offered at the Palatine campus and other locations. Courses include Reading Development, Basic English Skills, Basic Mathematical Skills, Pre-GED Reading Skills, Pre-GED English Skills, Pre-GED Mathematical Skills, GED Social Studies and Science (includes Constitution review), GED English Grammar Review, GED Intermediate Mathematical Skills, and Citizenship Training. Training in preemployment skills is also an option for some students.

Small group instruction is emphasized at lower skills levels. Students are tested during registration for placement in classes. Students advising services are also available.

Persons under nineteen years of age should contact the GED Coordinator for other test eligibility requirements.

## **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 <sup>1</sup> _____	3
MGT 111 Introduction to Business Organization _____	3
Mathematics elective <sup>2</sup> _____	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 <sup>1</sup> _____	3
Humanities elective _____	3
	<u>15</u>

### Second Year \_\_\_\_\_

#### First Semester

Accounting or Data Processing elective <sup>3</sup> _____	3
ACC 201 Intermediate Accounting I _____	3
ACC 211 Business Law I _____	3
DPR 108 Computer Programming (COBOL) _____	5
Social Science elective _____	3
	<u>17</u>

## Second Semester

ACC 202 Intermediate Accounting II _____	3
ACC 203 Introductory Cost Accounting _____	3
Business electives <sup>4</sup> _____	6
DPR 215 System Communications _____	3
	<u>15</u>

## Air Conditioning

See: Refrigeration and Air Conditioning

<sup>1</sup>Students 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.

<sup>2</sup>Students 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.

<sup>3</sup>Elective: ACC 155, DPR 203.

<sup>4</sup>Elective: ACC 212, BFC 215, MGT 218, MGT 270.

## 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 aide, engineering aide in building construction, building materials and equipment salesman, specification writer, and ancillary professional services.

### First Year \_\_\_\_\_

#### First Semester

ATE 101 Introduction of Architectural Technology I	_____4
ATE 103 Building Materials Technology I	_____4
ATE 105 Computer Math for Architectural Technology I <sup>1</sup>	_____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
ATE 106 Computer Math for Architectural Technology II <sup>1</sup>	_____3
ENG 102 Composition <sup>2</sup>	_____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 <sup>3</sup>	_____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 <sup>4</sup>	_____3
	14

<sup>1</sup>Students in this program may count this course toward fulfillment of their mathematics requirement.  
<sup>2</sup>ENG 100, ENG 103 or ENG 130 may be used, under certain conditions, to satisfy this requirement.  
<sup>3</sup>Recommended elective: ART 110, MUS 103, MUS 104, PHI 105 or any literature course.  
<sup>4</sup>Technical elective: ATE 205, ATE 206, 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-arts majors with permission of the instructor. Courses without prerequisites are open for enrollment to all students.

### First Year \_\_\_\_\_

#### First Semester

ART 100 Art Seminar <sup>1</sup>	_____1
ART 105 Introduction to Arts	_____3
ART 110 Drawing I	_____3
ART 121 Design I	_____3
ENG 101 Composition	_____3
Mathematics or Science elective <sup>2</sup>	_____3-4
	16-17

#### Second Semester

ART 100 Art Seminar <sup>1</sup>	_____1
ART 111 Drawing II	_____3
ART 122 Design II	_____3
ENG 102 Composition	_____3
FNA 111 History of Art I	_____3
Mathematics or Science elective <sup>2</sup>	_____3-4
	16-17

### Second Year \_\_\_\_\_

#### First Semester

Elective <sup>3</sup>	_____3
FNA 112 History of Art II	_____3
Social Science elective	_____3
Studio electives	_____6-8
	15-17

#### Second Semester

FNA 113 History of Art III	_____3
Social Science elective	_____3
Studio electives	_____9-11
	15-17

<sup>1</sup>ART 100 may be repeated to 2 credit hours.  
<sup>2</sup>Mathematics or Science elective may be taken two times for 4 credit hours each, equaling the 8 credit hours minimum requirement; or may be taken three times for 3 credit hours each, exceeding the minimum requirement by 1 credit hour.  
<sup>3</sup>Elective: 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 loan associations. The curriculum emphasizes developing competencies necessary for middle level 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 _____	3
BFC 118 Credit Administration _____	3
ENG 100 Composition or _____	3
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 150 Business Math _____	3
	<u>15</u>

#### Second Semester

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

### Second Year \_\_\_\_\_

#### First Semester

ACC 102 Principles of Accounting Theory II _____	3
BFC 211 Accounting for Financial Institutions _____	3
Banking elective <sup>1</sup> _____	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
	<u>18</u>

#### Second Semester

BFC 215 Analyzing Financial Statements _____	3
BFC 219 Consumer and Commercial Credit _____	3
ECO 210 Money and Banking _____	3
Elective <sup>1</sup> _____	3
Humanities elective _____	3
	<u>15</u>

<sup>1</sup>Electives 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 first-year program is recommended for students who plan to transfer and major in biology, botany, forestry, zoology, or other life science fields. Students interested in medicine, dentistry, osteopathy, pharmacy, physical therapy, chiropractic and other health or medical professions should also follow this program. Check with the school of your choice or a Student Development Center before planning your second year at Harper.

### First Year \_\_\_\_\_

#### First Semester \_\_\_\_\_

Biology elective <sup>1</sup> _____	4
CHM 121 General Chemistry I (4) or CHM 131 College Chemistry I (5) <sup>2</sup> _____	4-5
ENG 101 Composition _____	3
MTH 103 College Algebra _____	3
Social Science elective _____	3
	17-18

#### Second Semester \_\_\_\_\_

Biology elective <sup>1</sup> _____	4
CHM 122 General Chemistry II (4) or CHM 132 College Chemistry II (5) <sup>2</sup> _____	4-5
ENG 102 Composition _____	3
MTH 104 Plane Trigonometry _____	3
Social Science elective _____	3
	17-18

<sup>1</sup>Electives: BIO 110, BIO 120 or BIO 140.

<sup>2</sup>CHM 121 and CHM 122 is appropriate for most majors. Pre-Medicine or related fields may require CHM 131 and CHM 132.

## 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 <sup>1</sup> _____	3
Science elective _____	3-4
SPE 101 Fundamentals of Speech Communication _____	3
	15-16

#### 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) <sup>2</sup> _____	3-4
ENG 102 Composition _____	3
Mathematics elective <sup>1</sup> _____	3-4
Science elective _____	3-4
	15-18

### Second Year \_\_\_\_\_

#### First Semester \_\_\_\_\_

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

#### Second Semester \_\_\_\_\_

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

<sup>1</sup>Elective: MTH 103, MTH 124 or MTH 134.

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

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

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



## 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.

### \*\*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 course work in biology and math with grades of "C" or better, or one semester of college course work in biology and math with grades of "C" or better.
- Completion of the "Cardiac Exercise Technology Personal Goal Statement".

\*Cardiac Exercise Technology 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

<b>First Semester</b>	
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 <sup>1</sup>	1
PSY 101 Introduction to Psychology	3
	15

<b>Second Semester</b>	
BIO 161 Human Physiology	4
English <sup>2</sup>	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

<b>First Semester</b>	
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 <sup>3</sup>	3
	16

<b>Second Semester</b>	
Elective <sup>4</sup>	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

<sup>1</sup>PED 100 is recommended.

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

<sup>3</sup>SPE 101 is recommended.

<sup>4</sup>DIT 102 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
	<u>15</u>

#### Second Semester

CCA 103 Child Development II	3
EDU 211 Educational Psychology	3
Elective <sup>1</sup>	3
ENG 102 Composition	3
SOC 101 Introduction to Sociology	3
	<u>15</u>

### Second Year

#### First Semester

CCA 209 Language Arts for the Young Child	3
CCA 214 Principles of Preschool Education <sup>2</sup> or	
CCA 218 Principles of Special Education	6
CCA 225 Mental Health in Child Development	3
Elective <sup>1</sup>	3
HSC 220 Health, Nutrition and Safety	3
	<u>18</u>

#### 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 <sup>1</sup>	1
	<u>16</u>

<sup>1</sup>Electives may include courses useful in child development such as art, music, speech, physical education, etc.

<sup>2</sup>Students 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
	<u>15</u>

#### 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
	<u>16</u>

### Second Year

#### First Semester

BFC 102 Commercial Law	3
BFC 201 Commercial Credit & Collections Principles	3
BFC 215 Analyzing Financial Statements	3
ECO 202 Principles of Economics II	3
SPE 101 Fundamentals of Speech Communication	3
	<u>15</u>

#### Second Semester

BFC 202 Advanced Credit & Collections	3
BFC 217 Uniform Commercial Code	3
Elective <sup>1</sup>	3
Humanities elective	3
MKT 245 Principles of Marketing	3
	<u>15</u>

<sup>1</sup>Elective: 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 theater. 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 Language	3-4
Social Science elective	3
SPE 101 Fundamentals of Speech Communication	3

#### Second Semester

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

## Computer Science

The following first-year program is recommended for students who wish 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 105 Analytic Geometry	4
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#### First Semester

ENG 101 Composition	3
Humanities elective	3
MTH 201 Calculus I	5
MTH 208 FORTRAN Computer Programming	3
	<u>14</u>

#### Second Semester

ENG 102 Composition	3
Humanities elective	3
MTH 202 Calculus II	5
MTH 209 PASCAL Computer Programming or	
MTH 210 PL/1 Computer Programming	2
PHY 201 General Physics I—Mechanics	4
	<u>17</u>

## 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 total 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 <sup>1</sup>	3
CRJ 104 Introduction to Corrections	3
CRJ 201 Criminal Law I <sup>1</sup>	3
CRJ 202 Criminal Law II	3
CRJ 205 Juvenile Delinquency	3
CRJ 209 Police Public-Community Relations	3
CRJ 210 Introduction to Criminology <sup>1</sup>	3

### Required General Education Courses:

Electives <sup>2</sup>	12
English <sup>3</sup>	3
English elective	3
Humanities elective	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

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

### Basic Law Enforcement

CRJ 105 Criminal Courts of the U.S.	3
CRJ 116 Introduction to Forensics	3
CRJ 216 Investigative Process	3
CRJ 222 Police Operations	3

### Advanced Law Enforcement

CRJ 105 Criminal Courts of the U.S.	3
CRJ 212 Traffic Administration	3
CRJ 213 Crime Prevention	3
CRJ 216 Investigative Process	3
CRJ 220 Police Administration	3
CRJ 224 Police Supervision	3
CRJ 226 Case Management	3

### Corrections

CRJ 105 Criminal Courts of the U.S.	3
CRJ 210 Introduction to Criminology	3
CRJ 215 Alternatives to Confinement	3

### Industrial Security

CRJ 213 Crime Prevention	3
CRJ 250 Industrial Security Administration	3
CRJ 252 Industrial Fire Protection, Disaster Control	3
CRJ 253 Safety Management	3

<sup>1</sup>Students may take CRJ 203, CRJ 213, or CRJ 215, with approval of coordinator.

<sup>2</sup>In determining electives, the student should consult with the coordinator.

<sup>3</sup>Students may take ENG 100 or ENG 101, depending upon English assessment.

## 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 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 <sup>1</sup>	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>

<sup>1</sup>Elective DPR 120, DPR 121, DPR 122, DPR 123, DPR 124, DPR 125, DPR 130, DPR 136, DPR 140, DPR 142, DPR 150, DPR 160, 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, 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:

- Complete the Dental Hygiene Skills Proficiency Test.
- Interview with a member of the Dental Hygiene Faculty.

## First Year

<b>Summer Semester</b>	
BIO 160 Human Anatomy	4
CHM 100 Chemistry for the Health Sciences	4
	<hr/> 8

<b>First Semester</b>	
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
	<hr/> 17

<b>Second Semester</b>	
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
	<hr/> 17

<b>Summer Semester</b>	
DHY 103 Dental Health Education	1
DHY 151 Clinical Dental Hygiene II	2
SPE 101 Fundamentals of Speech Communication	3
	<hr/> 6

## Second Year

<b>First Semester</b>	
DHY 200 Advanced Periodontology	1
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	3
ENG 101 Composition	3
	<hr/> 17

<b>Second Semester</b>	
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
Humanities elective	3
SOC 101 Introduction to Sociology	3
	<hr/> 17

\*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.

## 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 grades of "C" or better, or one semester of college course work in science with grades of "C" or better.
- A satisfactory personal interview with the coordinator of the Dietetic Technician Program.

### First Year \_\_\_\_\_

#### First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy _____	4
DIT 100 Introduction to the Dietetic Technician Program _____	3
DIT 101 Basic Nutrition _____	3
English elective <sup>1</sup> _____	3
FSM 114 Food Standards and Sanitation _____	3
	<hr/> 16

#### Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology (4) _____	3-4
DIT 102 Advanced Nutrition _____	3
DIT 110 Principles of Food Preparation _____	3
DIT 150 Dietetic Clinical Laboratory I _____	3
PSY 101 Introduction to Psychology _____	3

15-16

### Second Year \_\_\_\_\_

#### First Semester

DIT 200 Dietetic Clinical Laboratory II _____	4
DIT 201 Nutritional Services in Institutions _____	3
EDU 211 Educational Psychology _____	3
FSM 212 Food Service Supervision _____	4
SOC 101 Introduction to Sociology _____	3
	<hr/> 17

#### Second Semester

DIT 202 Dietetic Seminar _____	2
DIT 203 Dietetic Seminar _____	1
DIT 250 Dietetic Clinical Laboratory III _____	4
English elective <sup>1</sup> _____	3
Humanities elective <sup>2</sup> _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<hr/> 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.

<sup>1</sup>Students may elect ENG 100, ENG 101, ENG 102 or ENG 103, depending on their English assessment and the advice of a student development faculty member.

<sup>2</sup>PHI 180 recommended.

## Digital Electronics and Microprocessor Technology

Digital Electronics and Microprocessor 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 <sup>1</sup> _____	3
MTH 106 Mathematics I _____	5
	<hr/> 16

#### Second Semester

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

### Second Year \_\_\_\_\_

#### First Semester

ELT 206 Electronic Computers _____	5
ELT 216 Microprocessor _____	
Software Applications _____	5
MTH 208 FORTRAN Computer _____	
Programming _____	3
Social Science elective <sup>2</sup> _____	3
	<hr/> 16

#### Second Semester

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

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

<sup>2</sup>Social Science electives: ANT 201, ECO 201, GEG 101, HST 111, HST 112, HST 141, PSC 101, PSY 101, PSY 145, SOC 101.

<sup>3</sup>To 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 <sup>1</sup> _____	3
	<hr/> 15-16

#### Second Semester

ENG 102 Composition _____	3
Humanities elective _____	3
Mathematics elective _____	3-4
Science elective _____	3
Social Science elective <sup>1</sup> _____	3
	<hr/> 15-16

<sup>1</sup>Most 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 <sup>1</sup>	3
MTH 107 Mathematics II	5
	<hr/> 18

#### Summer Semester

Social Science electives <sup>2</sup>	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 <sup>3</sup>	4-5
ELT 204 Electronics III, Advanced Electronics	5
ENG 103 Report Writing	3
PHY 102 Technical Physics II	4
	<hr/> 16-17

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

<sup>2</sup>Social Science electives: ANT 201, ECO 201, GEG 101, HST 111, HST 112, HST 141, PSC 101, PSY 101, PSY 145, SOC 101.

<sup>3</sup>Electronics 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. Technical electives may be substituted for certain of these courses<sup>1</sup>.

<b>First Year</b>	
<b>Summer Semester</b>	
MTH 105 Analytic Geometry	4
<b>First Semester</b>	
CHM 121 General Chemistry I <sup>2</sup>	4
EGR 100 Introduction to Engineering	1
EGR 120 Engineering Graphics I	3
ENG 101 Composition	3
MTH 201 Calculus I	5
	16
<b>Second Semester</b>	
CHM 122 General Chemistry II	4
EGR 121 Engineering Graphics II or MTH 208 FORTRAN Computer Programming	3
MTH 202 Calculus II	5
PHY 201 General Physics I	4
	16

<b>Second Year</b>	
<b>Summer Semester</b>	
Humanities elective	3
<b>First Semester</b>	
EGR 150 Analytical Mechanics (Statics)	3
ENG 102 Composition	3
MTH 212 Differential Equations	3
PHY 202 General Physics II	4
Social Science elective	3
	16
<b>Second Semester</b>	
EGR 211 Analytical Mechanics (Dynamics)	3
Humanities elective	3
MTH 208 FORTRAN Computer Programming or Technical elective <sup>1,3</sup>	3
PHY 203 General Physics III	4
Social Science elective	3
	16

<sup>1</sup>Technical electives: EGR 211, EGR 212, \*EGR 260, \*EGR 262, \*EGR 270, MTH 270, MTH 203, MTH 209, MTH 215.

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

<sup>3</sup>Some engineering schools will require an equivalent of MTH 209 or MTH 215.

\*Pending ICCB approval.

## Executive Secretarial Development

Executive Secretarial Development is a two-year career program leading to an associate in applied science degree. The curriculum includes 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, schools and colleges, insurance companies, banks and hospitals.

### First Year \_\_\_\_\_

#### First Semester

Mathematics elective <sup>1</sup>	3
MGT 111 Introduction to Business Organization	3
SEC 098 Review Shorthand <sup>2</sup> (2) or	
SEC 125 Elementary Shorthand <sup>2</sup> (4)	2-4
SEC 100 Introduction to Secretarial Administration	2
SEC 122 Intermediate Typing <sup>2</sup>	2
SEC 131 Business Machines	2
	<hr/>
	14-16

#### Second Semester

ENG 100 Composition <sup>3</sup>	3
SEC 126 Intermediate Shorthand <sup>2</sup>	3
SEC 133 Word Processing Equipment: IBM Personal Computer	1
SEC 134 Word Processing Equipment: Lexitron or	
SEC 137 Word Processing Equipment: Wangwriter	1
SEC 136 Word Processing Equipment: ForeWord	1
SEC 170 Introduction to Word Processing	3
SEC 221 Advanced Typing <sup>2</sup>	2
SEC 236 Secretarial Procedures <sup>4</sup>	3
	<hr/>
	17

### Second Year \_\_\_\_\_

#### First Semester

ACC 099 Business Recordkeeping <sup>2</sup> or	
ACC 101 Principles of Accounting Theory I	3
ENG 130 Business Writing I	3
SEC 171 Word Processing Dictation and Transcription Techniques	3
SEC 225 Dictation and Transcription <sup>2</sup>	3
SEC 237 Secretarial Seminar and Internship I <sup>5</sup>	3
	<hr/>
	15

#### Second Semester

Economics elective <sup>6</sup>	3
Humanities elective	3
SEC 230 Executive Machine Transcription	2
SEC 238 Secretarial Seminar and Internship II <sup>5</sup>	3
Social Science elective	3
	<hr/>
	14

<sup>1</sup>While 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.

<sup>2</sup>Placement into ACC 099, SEC 098, SEC 122, SEC 125, SEC 126, SEC 221 and SEC 225 contingent upon previous training and consent of instructor.

<sup>3</sup>Special sections of ENG 100 are offered for secretarial students. Students in the Executive Secretarial program must enroll in one of these special sections.

<sup>4</sup>SEC 236 must be taken the semester prior to entering SEC 237.

<sup>5</sup>Enrollment restricted to students in the second year of the program with the consent of the instructor.

<sup>6</sup>Elective: 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 <sup>1</sup>	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 <sup>1</sup>	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>

\*Fashion Design is a limited enrollment program. Contact the Admissions Office for details.

## 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
MKT 106 Merchandising of Furnishings and Softline Goods	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 <sup>2</sup>	3
	<u>16</u>

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

<sup>2</sup>ART 105 is recommended.

## Fashion Merchandising\*

Fashion Merchandising is a two-year career 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
	<u>16</u>

#### 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
	<u>15</u>

## 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
	<u>18</u>

### Second Semester

DPR 101 Introduction to Data Processing	3
FAS 230 Contemporary Living	3
FAS 240 Fashion Projects	3
MKT 247 Consumer Buying Behavior	3
MKT 251 Retail Merchandise Management	3
	<u>15</u>

\*Fashion Merchandising is a limited enrollment program. Contact the Admissions Office for details.

## 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
	<u>15</u>

#### 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
	<u>15</u>

### 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
	<u>15</u>

#### Second Semester

BFC 215 Analyzing Financial Statements	3
BFC 225 International Finance	3
ECO 210 Money and Banking	3
Electives <sup>1</sup>	6
	<u>15</u>

<sup>1</sup>Electives: 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 <sup>1</sup>	3
PSY 101 Introduction to Psychology	3
	<u>15</u>

#### Second Semester

ENG 103 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 <sup>2</sup>	4
FIS 133 Hazardous Materials II	3
FIS 222 Fire Prevention Principles III	3
FIS 242 Fire Hydraulics	3
Social Science elective <sup>3</sup>	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 <sup>3</sup>	3
Physical Science elective <sup>3</sup>	3
	<u>15</u>

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

<sup>2</sup>CHM 121 may be substituted if prerequisite is fulfilled.

<sup>3</sup>Electives 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 Baking and Cooking.

<b>First Year</b>	
<b>First Semester</b>	
English <sup>1</sup>	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
	<u>15</u>

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

<b>Second Year</b>	
<b>First Semester</b>	
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
	<u>16</u>

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

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

<sup>2</sup>Elective: 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 arts 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 100 Principles of Biology	4
ENG 101 Composition	3
PED 203 Health Physical Education elective	2
Social Science elective	1
SPE 101 Fundamentals of Speech Communication	3
	<u>16</u>

#### 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
	<u>15</u>

### 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
	<u>17</u>

#### 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
	<u>16</u>

## Horticulture

Horticulture is a two-year career 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<sup>1</sup>.

### Required Core Courses:

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 111 Basic Horticultural Skills _____	4
PKM 140 Grounds Equipment and Shop Operation <sup>2</sup> _____	4
PKM 250 Park Management Seminar <sup>3</sup> _____	1

### Required General Education Courses:

BIO 120 General Botany <sup>4</sup> _____	4
English <sup>5</sup> _____	6
Humanities elective _____	3
MGT elective <sup>6</sup> _____	3
PED 201 First Aid _____	2
Social Science electives _____	6

### Elective Course:

PKM 150 Park Management Internship <sup>7</sup> _____	5
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### Specialized Study Areas

Depending on the student's career needs, he 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, Specification, 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

<sup>1</sup>Students 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.

<sup>2</sup>This 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.

<sup>3</sup>PKM 250 should not be taken until the second year of study.

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

<sup>5</sup>Students may take ENG 100, ENG 101, ENG 102, ENG 103 or ENG 130, depending upon English assessment and the advice of a student development faculty member or program coordinator.

<sup>6</sup>Students may take MGT 111, MGT 150 or MGT 154, however, only three MGT credit hours will count toward degree requirement.

<sup>7</sup>PKM 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<sup>1</sup> \_\_\_\_\_

#### First Semester

ART 121 Design I _____	3
English <sup>2</sup> _____	3
IND 101 Basic Interior Design I _____	5
IND 103 Furniture History _____	3
	14

#### Second Semester

ENG 130 Business Writing I _____	3
FNA 112 History of Art III _____	3
IND 102 Basic Interior Design II _____	5
PSY 101 Introduction to Psychology _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	17

### Second Year \_\_\_\_\_

#### First Semester

FNA 113 History of Art III _____	3
IND 201 Advanced Interior Design I _____	6
JNM 133 Feature Writing (3) or JNM 134 Media Adjunct (4) _____	3-4
SOC 101 Introduction to Sociology _____	3
	15-16

#### Second Semester

Elective _____	3
IND 202 Advanced Interior Design II _____	6
MKT 106 Merchandising of Furnishings and Softline Goods _____	3
MKT 140 Salesmanship _____	3
	15

\*Interior Design is a limited enrollment program. Contact the Admissions Office for details.

<sup>1</sup>Periodic field trips to Chicago required in all semesters.

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

## Journalism<sup>1</sup>

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
Science or Mathematics elective _____	3-4
SPE 101 Fundamentals of Speech Communication _____	3
	15-16

#### 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 Press 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 <sup>2</sup> _____	5-6
JNM 237 Externship Study _____	5
PSC 220 Suburban, Urban and State Politics or Social Science elective _____	3
	16-17

<sup>1</sup>Students must type 40 wpm or take SEC 121.

<sup>2</sup>Courses 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

ENG 101 Composition	3
SEC 102 Survey of Law Office Practice	2
SEC 122 Intermediate Typing <sup>1</sup>	2
SEC 126 Intermediate Shorthand (Manual or Machine) <sup>1</sup>	3
SEC 236 Secretarial Procedures <sup>2</sup>	3
SPE 101 Fundamentals of Speech Communication	3
	<u>16</u>

#### Second Semester

ENG 130 Business Writing I	3
RES 120 Principles of Real Estate <sup>3</sup>	2
SEC 221 Advanced Typing <sup>1</sup>	2
SEC 225 Dictation and Transcription (Manual or Machine) <sup>1</sup>	3
SEC 230 Executive Machine Transcription	2
SEC 234 Legal Office Procedures	3
	<u>15</u>

### Second Year

#### First Semester

ACC 099 Business Recordkeeping or ACC 101 Principles of Accounting Theory I	3
ACC 211 Business Law I	3
PSC 101 American Politics and Government	3
SEC 134 Word Processing Equipment: Lexitron	1
SEC 235 Legal Dictation and Transcription	3
SEC 237 Secretarial Seminar and Internship I	3
	<u>16</u>

#### Second Semester

ACC 212 Business Law II	3
Electives <sup>4</sup>	2-3
ECO 200 Introduction to Economics	3
Humanities elective	3
SEC 238 Secretarial Seminar and Internship II	3
	<u>14-15</u>

Placement in SEC 122, SEC 126, SEC 221 and SEC 225 is contingent upon previous training and consent of instructor.

<sup>2</sup>A special section of this course is offered for legal secretarial students during the fall semester. Students must enroll in this special section before taking SEC 237.

<sup>3</sup>RES 120 is offered each eight weeks. You may decide to take this course during the second half of a semester.

<sup>4</sup>These electives require the approval of the coordinator.

## 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 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
Elective <sup>1</sup>	3
LTE 202 Estate Planning	3
LTE 203 Income Taxation I	3
PSC 101 American Politics and Government	3
	<hr/> 15

### Second Semester

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

\*Legal Technology is a limited enrollment program. Contact the Admissions Office for details.

<sup>1</sup>LTE 212 is recommended.

<sup>2</sup>PHI 110 is recommended.

<sup>3</sup>Required 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 will meet them if he 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 <sup>1</sup>	4
Mathematics or elective	3
Social Science elective	3

17

#### Second Semester

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

17

## Second Year

### First Semester

Electives <sup>2</sup>	3-4
English <sup>3</sup>	3
Foreign Language <sup>4</sup>	3-4
Humanities elective <sup>5</sup>	3
Social Science elective	3

15-17

### Second Semester

Electives <sup>2</sup>	3-4
English <sup>3</sup>	3
Foreign Language <sup>4</sup>	3-4
Humanities elective <sup>5</sup>	3
Social Science elective	3

15-17

<sup>1</sup>Physical or biological science or physics, chemistry, botany or other lab science.

<sup>2</sup>Another lab science may be added. Electives may be drawn also from anthropology, art, economics, geology, geography, history, music, political science, philosophy, psychology, sociology and speech.

<sup>3</sup>Advanced English, literature or speech.

<sup>4</sup>Consult a student development faculty member for specific language requirements of the university to which you plan to transfer.

<sup>5</sup>HUM 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 those 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 \_\_\_\_\_

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

<b>Second Semester</b>	
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 <sup>1</sup> _____	3
PSY 145 Psychology in Business and Industry _____	3
	<u>15</u>

### Second Year \_\_\_\_\_

<b>First Semester</b>	
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 <sup>1</sup> _____	3
SPE 101 Fundamentals of Speech Communication _____	3
	<u>15</u>

## Second Semester

ACC 102 Principles of Accounting Theory II or	
Marketing elective <sup>1</sup> _____	3
ACC 211 Business Law I _____	3
Business elective _____	3
Humanities elective _____	3
Marketing elective _____	3
	<u>15</u>

<sup>1</sup>Electives: MKT 106, MKT 140, MKT 141, MKT 217, MKT 240, MKT 245, MKT 246, MKT 247, MKT 250, MKT 255, MKT 260, MKT 265, MAT 125.

## 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
MGT 111 Introduction to Business Organization _____	3
MAT 101 Fundamentals of Material Management _____	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 <sup>1</sup> _____	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
MKT 245 Principles of Marketing _____	3
Material Management electives <sup>1</sup> _____	6
	<u>15</u>

#### Second Semester

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

<sup>1</sup>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 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, manufacturing/production and computer aided design.

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

The Manufacturing/Production option consists of courses in quality control, production control, process planning, automation, numerical control, general education and other related areas of study.

The Computer Aided Design option offers courses in computer drafting, three-dimensional production description, mathematics, materials, special problems, solids modeling and general education.

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, pursue a bachelor of science in technology degree with a major in fields such as mechanical, manufacturing or industrial technology.

### Manufacturing/Production option

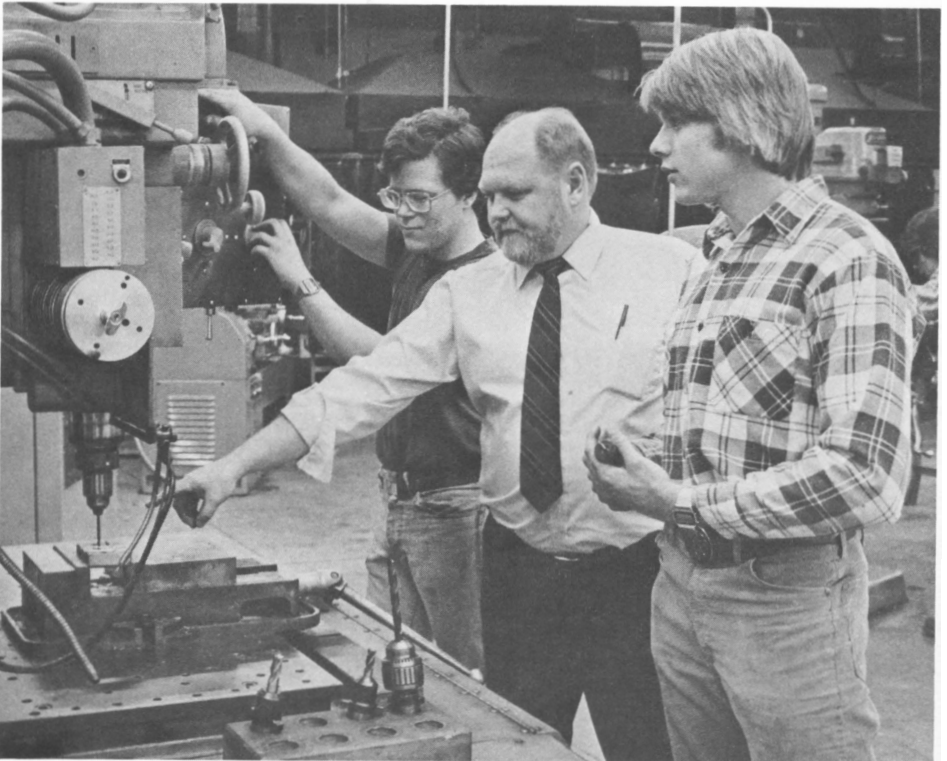
#### First Year

##### First Semester

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

##### Second Semester

ENG 103 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
		<u>17</u>



**Second Year****First Semester**

MET 111 Quality Control	3
MET 206 Metallurgy and Heat Treatment	2
MET 211 Process Planning and Tool Design	4
NMC 215 Part Programming II	3
Social Science elective	3
	<hr/>
	15

**Second Semester**

Humanities elective	3
MET 209 Applied Digital Control	3
NMC 216 Computer Aided Manufacturing	3
Social Science elective	3
	<hr/>
	12

**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	3
MTH 106 Mathematics I	5
NMC 101 Introduction to NC/CAM	3
	<hr/>
	17

**Second Semester**

ENG 103 Report Writing	3
MET 103 Descriptive Geometry	3
MET 104 Statics	3
MET 108 Manufacturing Processes and Materials	3
MTH 107 Mathematics II	5
	<hr/>
	17

**Second Year****First Semester**

MET 201 Mechanisms	4
MET 202 Advanced Technical Drafting	3
MET 204 Strength of Materials	3
MET 206 Metallurgy and Heat Treatment	2
Social Science elective	3
	<hr/>
	15

**Second Semester**

Humanities elective	3
MET 207 Machine Design	4
MET 209 Applied Digital Control	3
Social Science elective	3
Technical elective <sup>1</sup>	3
	<hr/>
	16

<sup>1</sup>Technical elective: ELT 215, MET 110, MET 111, MET 205, PHY 101.

**Computer Aided Design option****First Year****First Semester**

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

**Second Semester**

ENG 103 Report Writing	3
MET 103 Descriptive Geometry	3
MET 108 Manufacturing Processes and Materials	3
MET 114 Introduction to Computer Graphics	3
MTH 107 Mathematics II	5
	<hr/>
	17

**Second Year****First Semester**

MET 202 Advanced Technical Drafting	4
MET 211 Process Planning and Tool Design	4
MET 214 Advanced Computer Graphics	3
Social Science elective	3
Technical elective <sup>2</sup>	3
	<hr/>
	17

**Second Semester**

MET 224 Special Problems in 3D Graphics	3
MET 234 3D/CAD Modeling	3
Humanities elective	3
Social Science elective	3
	<hr/>
	12

<sup>1</sup>Technical elective: ELT 215, MET 110, MET 111, MET 205, PHY 101.

<sup>2</sup>Technical elective: ELT 210, MET 104, MET 201, MET 204, MET 209, MET 215.

## Medical Office Assistant

Medical Office Assistant is a two-year career program leading to an associate in applied science degree for persons interested in becoming medical assistants or medical secretaries in a doctor's office, clinic or hospital. 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.

### First Year

#### First Semester

BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy <sup>1</sup>	4
ENG 101 Composition	3
HSC 112 Medical Terminology	2
SEC 101 MOA/MT Orientation Seminar	2
SEC 122 Intermediate Typing <sup>2</sup>	2
SEC 240 Medical Transcription and Typing I <sup>3</sup> or	
SEC 126 Intermediate Shorthand	3
	<u>16</u>

#### Second Semester

BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology <sup>1</sup> (4)	3-4
ENG 130 Business Writing I	3
HSC 190 Clinical Procedures I	2
SEC 221 Advanced Typing	2
SEC 240 Medical Transcription and Typing I <sup>3</sup> or	
SEC 242 Medical Transcription and Typing II	3
PSY 101 Introduction to Psychology	3
	<u>16-17</u>

### Second Year

#### First Semester

ACC 099 Business Recordkeeping	3
DPR 101 Introduction to Data Processing	3
HSC 211 Clinical Procedures II	4
Humanities elective	3
SEC 241 Medical Office Procedures	4
	<u>17</u>

#### Second Semester

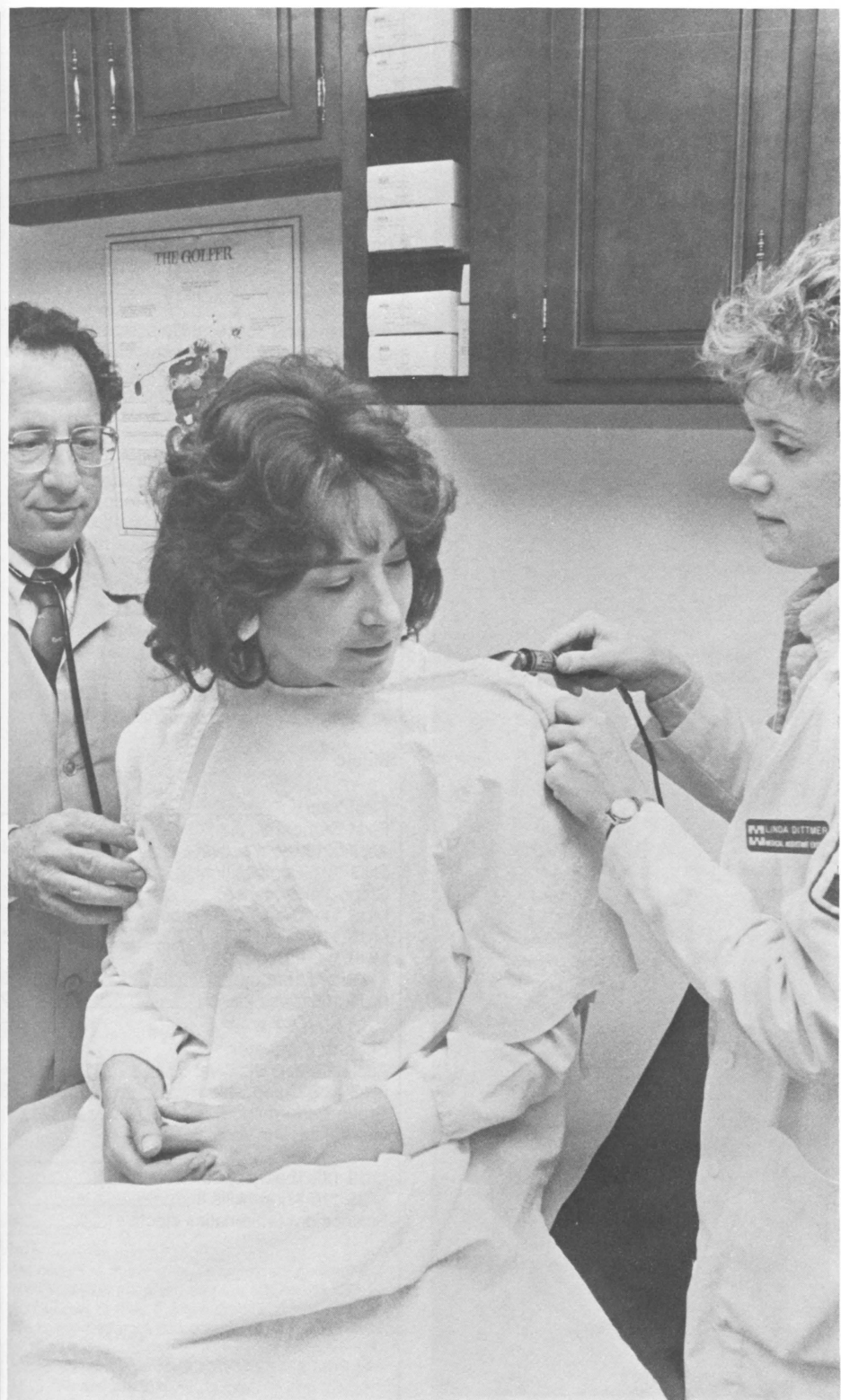
HSC 212 Clinical Laboratory Procedures	3
HSC 213 Medical Law and Ethics	2
MGT 267 Office and Administrative Management	3
SEC 239 MOA Seminar and Externship	4
Social Science elective <sup>4</sup>	3
	<u>15</u>

<sup>1</sup>Students may take BIO 135 and BIO 136 or BIO 160 and BIO 161.

<sup>2</sup>Students may be placed into more advanced courses depending upon previous training and consent of instructor.

<sup>3</sup>Students may take either SEC 240 and SEC 242, or SEC 126 and SEC 240.

<sup>4</sup>ECO 115 or ECO 200 are 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 Year<sup>1</sup>

<b>First Semester</b>	
Applied Music elective <sup>2</sup>	2-4
ENG 101 Composition	3
Group Performance <sup>3</sup>	1
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
	<u>15-17</u>

#### Second Semester

Applied Music elective <sup>2</sup>	2-4
ENG 102 Composition	3
Group Performance <sup>3</sup>	1
Instrumental or Vocal Techniques	2
MUS 112 Theory of Music II	3
MUS 116 Aural Skills II	1
Science or Mathematics elective	3-5
	<u>15-19</u>

**Second Year****First Semester**

Applied Music elective <sup>2</sup>	2-4
Elective	2
Group Performance <sup>3</sup>	1
MUS 211 Theory of Music III	3
MUS 215 Aural Skills III	1
Science or Mathematics elective	3-5
Social Science elective	3
	15-19

**Second Semester**

Applied Music elective <sup>2</sup>	2-4
Elective	2
Group Performance <sup>3</sup>	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
	17-19

**Piano Pedagogy****First Year****First Semester**

Applied Music elective <sup>2</sup>	2
ENG 101 Composition	3
Group Performance <sup>3</sup>	1
MUS 100 Introduction to Music Careers	1
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
	16

**Second Semester**

Applied Music elective <sup>2</sup>	1
ENG 102 Composition	3
Group Performance <sup>3</sup>	1
MUS 112 Theory of Music II	3
MUS 166 Aural Skills II	1
MUS 266 Class Piano IV	2
Science or Mathematics elective	3-4
	14-15

**Second Year****First Semester**

Applied Music elective <sup>2</sup>	2
Group Performance <sup>3</sup>	1
MUS 211 Theory of Music III	3
MUS 215 Aural Skills III	1
MUS 271 Piano Pedagogy I	3
Science or Mathematics elective	3-4
Social Science	3
	16-17

**Second Semester**

Applied Music elective <sup>2</sup>	2
Group Performance <sup>3</sup>	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
	16

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

<sup>2</sup>To be elected from courses numbered MUS 180 and MUS 280.

<sup>3</sup>To be elected from MUS 130, MUS 136, MUS 140, MUS 145 and MUS 150.

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

<sup>2</sup>To be elected from courses numbered MUS 180 and MUS 280.

<sup>3</sup>To 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.
- Students who fulfilled the chemistry requirement more than five (5) years prior to beginning the Nursing Program must either complete a college-level chemistry course and obtain a grade of "C" or better, or successfully proficiency test out of a college-level chemistry course.
- 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 directly into the Second Level after they: successfully complete BIO 160, BIO 161, PSY 101, and PSY 216 (or their equivalents) with grades of C or better; fulfill all first level admission requirements; arrange an interview with the Director of the Nursing Program; and submit an "Employer Evaluation Form." Residents of the Harper College district who complete the application process for the second level program by May 1 will receive preferential consideration in the selection process.

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

## First Year \_\_\_\_\_

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

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

<b>Summer Semester</b>	
NUR 104 Nursing Field Experience <sup>2</sup>	4

## Second Year \_\_\_\_\_

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

<b>Second Semester</b>	
ENG 102 Composition	3
Humanities 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.

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

<sup>2</sup>Required 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

PKM 110 Soil Science	4
PKM 102 Plant Diseases and Pests	4
PKM 111 Basic Horticultural Skills	4
PKM 121 Facilities Management	3
	<hr/> 15

#### Summer Semester<sup>1</sup>

PKM 150 Park Management Internship	5
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### Second Year

#### First Semester

English <sup>2</sup>	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 <sup>2</sup>	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

<sup>1</sup>Strongly 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.

<sup>2</sup>Students will take ENG 100, ENG 101, ENG 102, or ENG 130, depending upon their English assessment and the advice of the coordinator.



# Physical Education<sup>1</sup>

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 those 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
	<hr/> 17

#### Second Semester

Elective <sup>2</sup>	3
ENG 102 Composition	3
Mathematics or Science elective <sup>3</sup>	4
PED 201 First Aid	2
PED 204 Selected Physical Education Activities	2
PED 220 Track and Field Techniques	2
Physical Education elective	1
	<hr/> 17

### 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
	<hr/> 16

#### Second Semester

BIO 161 Human Physiology	4
Humanities elective	3
PED 206 Athletic Training Techniques	3
PED 226 Baseball Techniques	2
PED 228 Aquatics	2
Science elective	4
	<hr/> 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
	<hr/> 17

#### Second Semester

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

#### Second Semester

BIO 161 Human Physiology	4
Humanities elective	3
PED 228 Aquatics	4
PED 241 Jazz Dance II	1
PED 244 Folk Dance II	2
Science elective	4
	<hr/> 18

<sup>1</sup>The 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.

<sup>2</sup>Elective: HST 111, HST 112 or PSC 101.

<sup>3</sup>Completion 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 leading to an associate in applied science degree. The program is designed 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

ATE 209 Building Construction	
Principles for Realtors _____	3
ENG 101 Composition _____	3
MGT 111 Introduction to Business Organization _____	3
PSY 101 Introduction to Psychology _____	3
RES 101 Real Estate Transactions _____	3
SPE 115 Interviewing _____	1
	<hr/> 16

#### Second Semester

ACC 101 Principles of Accounting Theory I _____	3
ENG 130 Business Writing I _____	3
PSY 145 Psychology in Business and Industry _____	3
RES 121 Advanced Principles, Marketing and Brokerage _____	3
RES 123 Real Estate Law _____	3
	<hr/> 15

### Second Year \_\_\_\_\_

#### First Semester

DPR 101 Introduction to Data Processing _____	3
ECO 200 Introduction to Economics _____	3
MKT 245 Principles of Marketing _____	3
RES 122 Real Estate Appraisal I _____	3
RES 124 Real Estate Finance _____	3
	<hr/> 15

#### Second Semester

ECO 210 Money and Banking _____	3
Elective _____	3
Humanities elective <sup>1</sup> _____	3
MKT 140 Salesmanship or Real Estate or Business elective _____	3
RES 233 Real Estate Problems Seminar _____	3
	<hr/> 15

<sup>1</sup>PHI 110 or PHI 115 recommended.

## 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
	<hr/> 16-17

#### Second Semester

Elective <sup>1</sup> _____	3
ENG 102 Composition _____	3
Humanities elective _____	3
PED 201 First Aid _____	2
REC 206 Principles of Camping Management _____	3
Science elective _____	3
	<hr/> 17

### Second Year \_\_\_\_\_

#### First Semester

PED 204 Selected Physical Education Activities _____	2
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
	<hr/> 15

#### Second Semester

Mathematics or Science elective <sup>2</sup> _____	3-4
REC 204 Introduction to Therapeutic Recreation _____	2
REC 214 Basic Field Experience _____	2
Science elective _____	3
Social Science elective _____	3
	<hr/> 13-14

<sup>1</sup>Elective: HST 111, HST 112 or PSC 101.

<sup>2</sup>Completion of mathematics elective is contingent on requirements of four-year college or university to which student is transferring.

## 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 Year<sup>1</sup> \_\_\_\_\_

#### First Semester

English elective <sup>2</sup> _____	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 <sup>3</sup> _____	3
RAC 102 Refrigeration	
Systems _____	4
RAC 104 Residential Comfort	
Systems _____	4
RAC 106 Advanced Controls _____	4
	<u>15</u>

### Second Year<sup>1</sup> \_\_\_\_\_

#### First Semester

English elective <sup>2</sup> _____	3
RAC 201 Refrigeration System	
Design I _____	4
RAC 203 Air Conditioning	
Principles _____	4
Social Science elective _____	3
	<u>14</u>

#### Second Semester

Elective <sup>4</sup> _____	3
Humanities elective <sup>5</sup> _____	3
RAC 202 Refrigeration System	
Design II _____	4
RAC 204 Air Distribution _____	3
Social Science elective _____	3
	<u>16</u>

<sup>1</sup>RAC 290 may be substituted for some of the listed RAC courses, with approval of program coordinator.

<sup>2</sup>Students 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.

<sup>3</sup>Students will enroll in sections of MET 101 designed for RAC students.

<sup>4</sup>Suggested humanities elective: ART 122 or PHI 110.

<sup>5</sup>Suggested elective: MET 110, MGT 111, MGT 154, MGT 160, MTH 100 or MTH 102, RAC 208, RAC 211, or RAC 290.

## 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 PHY 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

### Second Year

#### First Semester

Elective	3-4
Mathematics elective	3-5
Laboratory Science elective	4-5
Social Science elective	3
	<hr/>
	13-17

#### Second Semester

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

## 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 <sup>1</sup>	4
Mathematics or Science elective	3-4
Social Science elective	3
Elective <sup>2</sup>	3
	<hr/>
	16-17

#### Second Semester

ENG 102 Composition	3
Foreign Language <sup>1</sup>	4
Mathematics or Science elective	3-4
Social Science elective	3
Elective <sup>2</sup>	3
	<hr/>
	16-17

## 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
	<hr/>
	15

#### Second Semester

ACC 102 Principles of Accounting Theory II	3
DPR 101 Introduction to Data Processing	3
English elective	3
MGT 270 Principles of Management	3
PSY 145 Psychology in Business and Industry	3
	<hr/>
	15

### Second Year

#### First Semester

ACC 211 Business Law I	3
ECO 200 Introduction to Economics	3
Management electives <sup>1</sup>	6
MKT 245 Principles of Marketing	3
	<hr/>
	15

#### Second Semester

Humanities elective	3
Management electives <sup>1</sup>	6
MGT 218 Introduction to Finance	3
MGT 291 Problems in Management and Supervision	3
	<hr/>
	15

<sup>1</sup>Check with the transfer school of your choice or a Student Development Center to determine language requirements.

<sup>2</sup>Additional social science electives may be selected.

<sup>1</sup>These electives require approval of the coordinator or a student development faculty member.

## Certificate Programs

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## Certificate Programs

A certificate program is a sequence of courses in a specialized academic and/or technical area requiring approximately two to three years of part-time or one year of full-time course work. There are currently 54 programs of this type at the College. Completion of the course work required for a specific program with a grade point average of 2.0 (C) or higher entitles the student to a certificate of achievement in that field of specialization.

Courses in certificate programs are offered in the evening as well as during the day to permit part-time evening students to meet their particular training needs and to reach an obtainable goal within a reasonable period of time. All courses creditable toward a certificate are also applicable toward an associate degree.

## 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 253 Advanced Accounting	3
ACC 254 Auditing	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 <sup>1</sup>	2
	<hr/>
	8

<sup>1</sup>Typing elective: SEC 121, SEC 122 or SEC 221, depending upon previous training and consent of the instructor.

## 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 <sup>1</sup>	2
	<hr/>
	9

<sup>1</sup>Typing elective: SEC 121, SEC 122 or SEC 221, depending upon previous training and consent of the instructor.

## Air Conditioning

See: Refrigeration and Air Conditioning

## 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

## Baking

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.

### First Semester

FSM 090 Basic Quantity Baking	10
FSM 110 Introduction to Food Service	2
FSM 114 Food Standards and Sanitation	3
	15

### Second Semester

FSM 091 Advanced Quantity Baking	10
FSM 115 Menu Planning	2
Elective	3
	15

## Banking, Finance and Credit

This program is designed for those currently employed in, or seeking employment in, banks, savings and loan 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 Accounting 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 <sup>1</sup>	3

<sup>1</sup>Elective: 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.





## Brokers License Certification \_\_\_\_\_

This certificate program will provide the minimum number of hours and mandatory courses to complete the education requirements for application to take the State of Illinois Real Estate Brokers test.

RES 108 Brokers Licensure Preparation I _____	2
RES 109 Brokers Licensure Preparation II _____	2
RES 120 Principles of Real Estate _____	2
	<hr/>
	6

## Building Codes and Enforcement \_\_\_\_\_

This certificate program, which totals 24 credit hours, is designed to provide specialized education for those interested in entry level positions in this field as well as for those currently employed in building code enforcement.

This certificate will satisfy college credit requirements for entry level positions in the building code enforcement field.

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 Report Writing _____	3
FIS 115 Construction Design and Fire Safety _____	3
SPE 101 Fundamentals of Speech Communication _____	3

## 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 Environmental Relationships in Business _____	1
SEC 261 Business Law and Public Policy _____	1
SEC 262 Economics and Management _____	1
SEC 263 Financial Analysis and the Mathematics of Business _____	1
SEC 264 Communications, Work Flow, and Decision Making _____	1
SEC 265 Advanced Office Procedures _____	1

## Child Development \_\_\_\_\_

This certificate program, totaling 15 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 9 credit hours from the following courses:

CCA 101 Introduction to Child Development Careers _____	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 230 Movement and Rhythms for the Young Child _____	3
CCA 252 Child-Family- Community _____	3
CCA 253 Administration of Early Childhood Programs _____	3
HSC 220 Health, Nutrition and Safety _____	3

## Cooking

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 095 Basic Quantity	
Cooking	10
FSM 111 Introduction to	
Food Service	2
FSM 114 Food Standards	
and Sanitation	3
	<hr/>
	15

### Second Semester

FSM 096 Advanced Quantity	
Cooking	10
FSM 115 Menu Planning	2
Elective	3
	<hr/>
	15

## 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 212 Traffic Administration	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

## 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
	<hr/>
	15

### Second Semester

Data Processing elective <sup>1</sup>	3-5
DPR 136 Job Control/ Utilities	3
ENG 103 Report Writing	3
MGT 150 Business Math	3
	<hr/>
	12-14

<sup>1</sup>Elective: 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 microcomputer 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 <sup>1</sup>	3
DPR 130 BASIC for Business	4
DPR 132 Advanced Business Software	
Packages	4
SEC 110 Basic Keyboarding	1
	<hr/>
	15

<sup>1</sup>Elective: 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 <sup>1</sup> _____	3
DPR 121 General Accounting Applications for Micros <sup>1</sup> _____	2
DPR 122 Data Base for Micros <sup>1</sup> _____	1
DPR 123 Spread Sheet/Budgeting for Micros <sup>1</sup> _____	1
DPR 124 Decision Support for Micros <sup>1</sup> _____	1
DPR 125 Word Processing for Micros <sup>1</sup> _____	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 _____	3
DPR 240 Advanced RPG II _____	3
DPR 270 Data Communications Applications _____	4
DPR 280 Introduction to Data Base _____	3

<sup>1</sup>No more than 4 hours may be selected from this group.

## Digital Electronics and Microprocessor 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 _____	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 Controls 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 _____	4
FAS 103 Apparel Design and Construction I _____	3

FAS 104 Apparel Design and Construction II _____	4
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 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 120 Advanced Fashion Illustration II _____	1
FAS 212 Visual Fashion Merchandising _____	2

\*Fashion Design is a limited enrollment program. Contact the Admissions Office for details.

## 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.

<b>Electives:</b> Select at least 6 credit hours from the following courses:	
ENG 100 Composition _____	3
ENG 101 Composition _____	3
ENG 103 Report Writing _____	3
SOC 101 Introduction to Sociology _____	3
MTH 100 Basic Applied Mathematics _____	3

<b>Electives:</b> 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 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

## 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 technical 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 111 Basic Horticultural Skills _____	4

### Elective: Select one course

PKM 101 Ornamental Plants _____	4
PKM 102 Plant Diseases and Pests _____	4

## Industrial and Retail Security<sup>1</sup> \_\_\_\_\_

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

<sup>1</sup>Students 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 sales 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 courses<sup>1</sup>)

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 courses<sup>1</sup>)

ACC 211 Business Law I _____	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
MAT 125 Purchasing _____	3

<sup>1</sup>Students 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:**

PSY 101 Introduction to Psychology _____	3
PSY 150 Psychology of Deafness _____	3
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

\*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 25-credit hour program in which 14 credit hours are required courses.

**Required:**

SEC 221 Advanced Typing <sup>1</sup> _____	2
SEC 225 Dictation and Transcription (Machine or Manual) <sup>1</sup> _____	3
SEC 234 Legal Office Procedures _____	3
SEC 235 Legal Dictation and Transcription <sup>1</sup> _____	3
SEC 236 Secretarial Procedures _____	3

**Electives:** Select any four of the following courses with the advice of the coordinator.

ACC 101 Principles of Accounting Theory I _____	3
ACC 211 Business Law I _____	3
ACC 212 Business Law II _____	3
ECO 200 Introduction to Economics _____	3
MGT 111 Introduction to Business Organization _____	3
MGT 267 Office and Administrative Management _____	3
RES 120 Principles of Real Estate _____	2

<sup>1</sup>Placement into courses contingent upon previous training.

## Machinist \_\_\_\_\_

This certificate program allows for 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 <sup>1</sup> _____	3-5
	15-17

<sup>1</sup>Technical 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

### 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  
Packing \_\_\_\_\_3  
MAT 125 Purchasing \_\_\_\_\_3

### Electives: Group II (select one course)

DPR 203 Systems Analysis and  
Design I \_\_\_\_\_3  
MGT 225 Applied General Statistics \_\_\_\_\_3  
MGT 270 Principles of Management \_\_\_\_\_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

## 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 202 Advanced Technical  
Drafting \_\_\_\_\_3  
MTH 100 Basic Applied  
Mathematics \_\_\_\_\_3  
Technical electives' \_\_\_\_\_4-6  
13-15

\*Electives: MET 103, MET 104, MET 105 and MET 201.

## Mechanical Technician \_\_\_\_\_

This certificate program, developed in conjunction with area industries, prepares students for employment as industrial technicians, lab technicians, shop technicians or engineering assistants. The program may be completed in one semester of day school or two semesters of evening school.

MET 102 Technical Drafting \_\_\_\_\_3  
MET 105 Basic Machine Shop \_\_\_\_\_3  
MTH 100 Basic Applied  
Mathematics \_\_\_\_\_3  
Technical electives' \_\_\_\_\_4-6  
13-15

\*Electives: MET 110, MET 205, MET 209, NMC 101, with approval of coordinator.

## 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. Prerequisites for this concentrated program include a typing ability of 50 words per minute and business English skills.

### First Semester

BIO 135 Introduction to Human  
Anatomy and Physiology or  
BIO 160 Human Anatomy \_\_\_\_\_4  
HSC 112 Medical Technology \_\_\_\_\_2  
HSC 190 Clinical Procedures I \_\_\_\_\_2  
SEC 101 MOAMT Orientation  
Seminar \_\_\_\_\_2  
SEC 241 Medical Office  
Procedures \_\_\_\_\_4  
14

<b>Second Semester</b>	
BIO 136 Human Diseases _____	3
HSC 211 Clinical Procedures II _____	4
HSC 212 Clinical Laboratory Procedures _____	3
HSC 213 Medical Law and Ethics _____	2
SEC 240 Medical Transcription and Typing I _____	3
	15

<b>Summer Semester</b>	
SEC 239 MOA Seminar and Externship _____	4

## Medical Transcriptionist \_\_\_\_\_

This is a certificate program designed for persons interested in pursuing skills necessary to become medical transcriptionists.

<b>First Semester</b>	
BIO 135 Introduction to Human Anatomy and Physiology or	
BIO 160 Human Anatomy <sup>1</sup> _____	4
ENG 101 Composition _____	3
HSC 112 Medical Terminology _____	2
SEC 101 MOA/MT Orientation Seminar _____	2
SEC 122 Intermediate Typing <sup>2</sup> _____	2
SEC 240 Medical Transcription and Typing I _____	3
	16

<b>Second Semester</b>	
BIO 136 Introduction to Human Disease (3) or	
BIO 161 Human Physiology <sup>1</sup> (4) _____	3-4
HSC 213 Medical Law and Ethics _____	2
PSY 101 Introduction to Psychology _____	3
SEC 134 Word Processing Equipment: Lexitron or	
SEC 136 Word Processing Equipment: ForeWord or	
SEC 137 Word Processing Equipment: Wangwriter _____	1
SEC 221 Advanced Typing _____	2
SEC 242 Medical Transcription and Typing II _____	3
	14-15

<sup>1</sup>Students may take BIO 135 and BIO 136 or BIO 160 and BIO 161.

<sup>2</sup>The student will be placed into more advanced courses depending upon previous training and consent of instructor.

## Numerical Control Technician \_\_\_\_\_

This certificate program allows for in-depth course work in numerical control. Such courses should provide an individual with the necessary background to assume a responsible position in this area.

MET 105 Basic Machine Shop _____	3
MET 209 Applied Digital Control _____	3
NMC 101 Introduction to NC/CAM _____	3
NMC 105 Part Programming I _____	3
Technical electives <sup>1</sup> _____	4-6
	16-18

<sup>1</sup>Technical electives may be chosen from ELT 110, MET 205, MTH 100, MTH 106, NMC 215, NMC 220.

## 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 course work in biology with grades of "C" or better, or 1 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.
- 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	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 111 Basic Horticultural Skills	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.

**\*\*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 grades of "C" or better, or one semester of college course work in science with a grade of "C" or better.
- Satisfactory score on the Harper College Math Assessment Test.
- A satisfactory personal interview with the coordinator of the Pharmacy Technician Program.
- Completion of affidavit regarding criminal offense.

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
	16

**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
	15

**Summer Semester**

PHT 113 Pharmacy Technician Practicum	6
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\*Pharmacy 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.

**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	3
MTH 100 Basic Applied Mathematics	3
MET 102 Technical Drafting	3
MET 105 Basic Machine Shop	3
MET 108 Manufacturing Processes and Materials	3
MET 111 Quality Control	3
MET 211 Process Planning and Tool Design	4
NMC 101 Introduction to Numerical Control	3
NMC 105 Part Programming I	3
NMC 201 Numerical Controlled Machining	3
NMC 215 Part Programming II	3
NMC 220 Special Problems	3

**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 <sup>1</sup>	3-5
	15-17

<sup>1</sup>Technical 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 Service**

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 Design Communication	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**

**Clerical<sup>1</sup>**

ENG 100 Composition or ENG 101 Composition	3
SEC 099 Typewriting Review (1) or SEC 121 Elementary Typing (2) or SEC 122 Intermediate Typing (2)	1-2
SEC 131 Business Machines	2
	6-7

<sup>1</sup>Placement into courses contingent upon previous training.

### Clerk-Typist<sup>1</sup>

SEC 099 Typewriting Review (1) or	
SEC 121 Elementary Typing (2)	1-2
SEC 122 Intermediate Typing	2
SEC 221 Advanced Typing	2
	5-6

<sup>1</sup>Placement into courses contingent upon previous training.

### General Office Assistant<sup>1</sup>

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
ENG 100 Composition <sup>2</sup>	3
ENG 130 Business Writing I	3
MGT 111 Introduction to Business Organization	3
SEC 099 Typewriting Review	1
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 134 Word Processing Equipment: Lexitron	1
SEC 136 Word Processing Equipment: ForeWord	1
SEC 137 Word Processing Equipment: Wangwriter	1
SEC 170 Introduction to Word Processing	3
SEC 236 Secretarial Procedures	3
SPE 101 Fundamentals of Speech Communication	3

<sup>1</sup>Placement into courses contingent upon previous training.

<sup>2</sup>Special sections of ENG 100 are offered. Students in the General Office Assistant program must enroll in one of these special sections.

### Legal Secretary

See: Legal Secretary

### Secretarial<sup>1</sup>

A combination of 15 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 221 Advanced Typing	2
SEC 225 Dictation and Transcription (3) or	
SEC 230 Executive Machine Transcription (2)	2-3

SEC 236 Secretarial Procedures	3
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**Electives:** Select at least 6 credit hours from the following courses:

ENG 130 Business Writing I	3
SEC 122 Intermediate Typing	2
SEC 126 Intermediate Shorthand	3
SEC 131 Business Machines	2
SEC 133 Word Processing Equipment: IBM Personal Computer	1
SEC 134 Word Processing Equipment: Lexitron	1
SEC 136 Word Processing Equipment: ForeWord	1
SEC 137 Word Processing Equipment: Wangwriter	1
SEC 170 Introduction to Word Processing	3
SEC 171 Word Processing Dictation and Transcription	3
SEC 225 Dictation and Transcription	3
SEC 230 Executive Machine Transcription	2

<sup>1</sup>Placement into courses contingent upon previous training.

### Stenographer<sup>1</sup>

SEC 098 Review Shorthand (2) or	
SEC 125 Elementary Shorthand (4) or	
SEC 140 Elementary Machine Shorthand (4)	2-4
SEC 126 Intermediate Shorthand	3
SEC 225 Dictation and Transcription	3
	8-10

<sup>1</sup>Placement 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 or	
MGT 160 Principles of Supervision	3
MGT 270 Principles of Management	3
MGT 291 Problems of Management and Supervision <sup>1</sup>	3

**Electives:** Select at least 9 credit hours from the following courses:

ACC 099 Business Recordkeeping	3
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ACC 101 Principles of Accounting Theory I	3
MGT 154 Small Business 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 291 should be the last course taken in completing this sequence.

## Vending Machine Repair \_\_\_\_\_

This is a certificate program designed to develop entry level job skills in the repair of vending machines. Major emphasis is on actual experience working on vending machine equipment.

ELT 121 Automatic Vending Machine Repair I	2
ELT 122 Automatic Vending Machine Repair II	2
ELT 123 Automatic Vending Machine Repair III	2
	6

## Word Processing \_\_\_\_\_

This certificate program prepares individuals for careers in word processing with specific training in procedures, equipment and personnel. The program is designed to provide a broad general knowledge in word processing in order to give the student the widest range of employment options.

### First Semester

ENG 130 Business Writing I	3
SEC 133 Word Processing Equipment: IBM Personal Computer or	
SEC 134 Word Processing Equipment: Lexitron or	
SEC 136 Word Processing Equipment: ForeWord or	
SEC 137 Word Processing Equipment: Wangwriter or	
SEC 138 Word Processing Equipment: Advanced ForeWord or	
SEC 139 Word Processing Equipment: Advanced Wangwriter	1
SEC 170 Introduction to Word Processing	3
SEC 171 Word Processing Dictation and Transcription Techniques	3
SEC 221 Advanced Typing	2
SEC 236 Secretarial Procedures	3
	15

### Second Semester

DPR 101 Introduction to Data Processing	3
Elective <sup>1</sup>	3
MGT 160 Principles of Supervision	3
SEC 133 Word Processing Equipment: IBM Personal Computer or	
SEC 134 Word Processing Equipment: Lexitron or	
SEC 136 Word Processing Equipment: ForeWord or	
SEC 137 Word Processing Equipment: Wangwriter or	
SEC 138 Word Processing Equipment: Advanced ForeWord or	
SEC 139 Word Processing Equipment: Advanced Wangwriter	1
SEC 230 Executive Machine Transcription	2
SEC 272 Principles of Word Processing Management	3
	15

<sup>1</sup>Electives: ENG 103, MGT 167, MGT 267, PSY 145, SEC 122, SEC 234, SEC 237, SEC 240, SPE 101.

## 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.

ENG 100 Composition <sup>1</sup>	3
SEC 133 Word Processing Equipment: IBM Personal Computer or	
SEC 134 Word Processing Equipment: Lexitron or	
SEC 136 Word Processing Equipment: ForeWord or	
SEC 137 Word Processing Equipment: Wangwriter or	
SEC 138 Word Processing Equipment: Advanced ForeWord or	
SEC 139 Word Processing Equipment: Advanced WangWriter	1
SEC 170 Introduction to Word Processing	3
SEC 171 Word Processing Dictation and Transcription Techniques	3
SEC 221 Advanced Typing	2
	12

<sup>1</sup>ENG 101 or ENG 130 may be substituted with consent of program coordinator.

## Course Descriptions

Course Numbering System

Courses Offered at Harper College

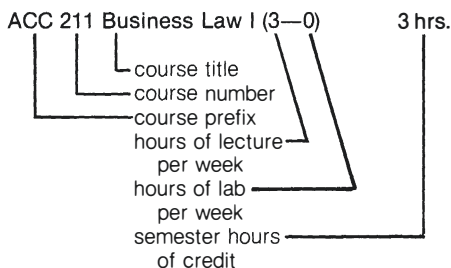
## Course Numbering System

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



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, branch 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 253 Advanced Accounting (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.

**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 is studied, as are the archeological methods of scientists who examine culture change through the long prehistorical growth of mankind.



## Architectural Technology \_\_\_\_\_

### ATE 101 Introduction to Architectural Technology I (1-6) 4 hrs.

Pragmatic fundamentals of architecture consisting of general technical procedures, drafting and sketching, working drawing outline, mechanical and electrical services, estimating format, specification format and computer relationships.

### ATE 102 Introduction to Architectural Technology II (1-6) 4 hrs.

Orthographic, oblique, perspective projections, cross-referencing, indexing, specifications, cost control budgeting; development of working drawings and specifications.

### ATE 103 Building Materials Technology I (2-4) 4 hrs.

Typical brick bearing walls and their methods of bonding; wood floor, wall and ceiling construction based on balloon and platform framing.

### ATE 104 Building Materials Technology II (2-4) 4 hrs.

Typical 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.

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.

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.

Architecture as a profession, emphasizing computer technology for building projects, finish materials, zoning and building ordinance formats, auto specifications, 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.

Analysis of zoning and building code requirements applicable to developing and completing building project, 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.

Detailing; investigation and analysis of fire resistivity of materials, construction type, Underwriters Laboratories hourly ratings, fireproofing, sprinkling and insurance requirements.

Prerequisite: ATE 104.

### ATE 204 Construction Problems II (2-4) 4 hrs.

Detailing of stairs; glazing; sealants; millwork; suspended ceiling systems; doors; windows; ceramic tile; roofing; investigation of bronze, aluminum, stainless steel, interior terrazzo, granite and marble.

Prerequisite: ATE 203.

### ATE 205 Computer Graphics and Optimization (3-0) 3 hrs.

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.

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.

Strength of materials with physics integrated. Major concepts in scientific thought, interpretation of physical measurement, and structural development of matter in its various forms applicable to building construction.

Prerequisite: ATE 104.

### ATE 208 Behavior of Architectural Materials II (3-0) 3 hrs.

Continues ATE 207. Interactions of matter interpreted through concepts of force, motion and energy, visible and invisible electromagnetic spectrum, and nature of electric fields and forces. Hooke's Law; elasticity, shear and moment diagrams.

Prerequisite: ATE 207.

**ATE 209 Building Construction** 3 hrs.

**Principles for Realtors (3-0)**

Fundamental aspects of building such as legal descriptions, surveys, foundations, masonry and frame walls, roofing, insulation, interior finishes, painting, heating, ventilating, air conditioning, plumbing and electrical. A building plan and specifications will be part of the test material from which the class will receive instruction in plan reading. The fundamentals of cost estimating will be covered.

**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 maximum of 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, covering history of solar energy, sun power, climatic data, energy conservation, heat loss calculations, state of solar art, 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 in sequent semesters.

**ART 105 Introduction to Arts (3-0)** 3 hrs.

Introduction to the 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 art 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 (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 (3-0)** 3 hrs.  
Gives a descriptive account of the universe, galaxies, stars, comets, meteors, the solar system, and their compositions, origins, evolutions and motions.  
Recommended corequisite: Concurrent enrollment in AST 111.

**AST 111 Introductory Astronomy Lab (0-2)** 1 hr.  
Complements and illustrates concepts developed in AST 101, including telescope work and star charting.  
Prerequisite: Successful completion of, or concurrent enrollment in, AST 101.

## **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 to act in accordance with, legal principles pertaining to business and to banking. Topics include contracts, commercial paper, bank deposits and collections, sales, titles agency, the Statute of Frauds and 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 (3-0) 3 hrs.**

Emphasizes the identification and examination of factors influencing and determining 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  
Management (3-0) 3 hrs.**

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  
Collection Principles (3-0) 3 hrs.**

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 Credit and  
Collections (3-0) 3 hrs.**

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  
Institutions (3-0) 3 hrs.**

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  
Lending (3-0) 3 hrs.**

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  
Services (3-0) 3 hrs.**

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 Analyzing Financial  
Statements (3-0) 3 hrs.**

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 pre-share figures and ratio analysis. Prerequisite: ACC 102 (ACC 211 is recommended.)

**BFC 216 Bank Auditing and  
Internal Control (3-0) 3 hrs.**

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: ACC 211.

**BFC 219 Consumer and Commercial Credit (3-0) 3 hrs.**

Emphasizes the practical aspects of both consumer and commercial credit management. Presents techniques of lending such as credit verification, secured and unsecured lending, slow loans and workouts.

**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 and BFC 118.

**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.

**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. Focuses on codes based on performance, plan review, permit issuance process, municipal zoning enforcement, inspection of single family dwellings and inspection report writing.  
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. Also covers procedures, layouts and safety principles for heating, cooling and ventilation systems. Will use actual code inspection problems for residential installations.

**BCE 201 BOCA Basic Building Codes (3-0) 3 hrs.**

Introduces principles and analysis of the BOCA basic building code, organization and arrangement of the BOCA basic building code with its regulations to construction of buildings and structures and the installation of fixtures and equipment.

**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) 2 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 and BIO 161.

**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, kinetic theory and nuclear chemistry. Provides laboratory experience in volumetric, gravimetric, gas analytical methods and in molecular weight determinations.

Prerequisite: Two semesters of high school chemistry or CHM 110. Credit or registration in MTH 102 or equivalent.

**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 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**

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**CCA 101 Introduction to Child Development Careers (3-0) 3 hrs.**

Surveys various career opportunities available in child care professions. Introduces history and application of child development principles. Self-examination of attitudes, skills and abilities needed in this field. Observation and participation in programs for children.

**CCA 102 Child Development I (3-0) 3 hrs.**

Research and theory related to child development from conception through preschool years. Professional application of principles and theory to programming for individual children and for children in groups. Field observations and discussion of professional practice.

**CCA 103 Child Development II (3-0) 3 hrs.**

In-depth study of human growth and development age nine through maturity. Major developmental processes of each stage: physical, social, emotional and intellectual. Relevance of theoretical knowledge to career in human development.

**CCA 111 First Three Years of Life (3-0) 3 hrs.**

Examines the theories and research related to infants and toddlers in the first three years of life, with a focus on methods of care given in both home-based and school-based infant programs. Observing various types of infant programs will be one aspect of the course.

**CCA 209 Language Arts for the Young Child (3-0) 3 hrs.**

Techniques and methods for development of language skills in the young child. Included are techniques for stimulating discussion and improving vocabulary and speech in the child. A survey and critical analysis of prose and verse for children and techniques of story-telling are included. The use of records for children will be taught.

**CCA 210 Creative Activities for Young Children (3-0) 3 hrs.**

Acquaints the student with the variety of creative art materials and methods appropriate for use in programs for young children. Includes firsthand experience with materials as well as opportunity for participation in use of these materials with children in the group situation. The place of art experience in the curriculum and the meaning of these experiences in the individual development of the child are stressed.



**CCA 214 Principles of Preschool Education (5-2) 6 hrs.**

Surveys theory and practice of early childhood education in nursery school, day care centers and primary grades. The course deals with curriculum, program planning, use of materials and equipment, role of teacher, techniques of classroom management and meeting the needs of individual children in the group situation. Students will observe and participate in a professional child service center. Prerequisite: Sophomore standing.

**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.**

Designed for parents and for teachers responsible for programming of exceptional children individually and in groups. Classification of exceptional children. Reviews special needs and specialized educational approaches for exceptional children. Prerequisite: PSY 101.

**CCA 220 Child Development Practicum Internship (3-15) 6 hrs.**

Places the student as a participant in a child care center. The student will utilize, under supervision, the skills and techniques which have been learned in specialized methods courses. In addition to field work the student will meet each week for conferences, reports, reports of supplementary reading and discussion of problems. Prerequisite: Sophomore standing or consent of coordinator.



**CCA 221 Workshop in Early Childhood Education (3-0) 3 hrs.**

Suggestions for experiences suitable for the preschool and early primary child. The course will be directed to new media, construction of teacher-made materials and trends and issues in preschool education.

**CCA 225 Mental Health in Child Development (3-0) 3 hrs.**

Self-analysis. Personal characteristics and their effects on adult-child interaction. Problems of discipline; aggression, passivity, over-activity of young children and adult coping strategies. Available referral resources in the community for children and families who need help.

Prerequisite: PSY 101.

**CCA 230 Movement and Rhythms for the Young Child (3-0) 3 hrs.**

Essential movement for preschool children taught with manufactured and homemade equipment, rhythms on playground and in classroom, and introduction to methods and materials appropriate for use in music programs for young children.

**CCA 252 Child-Family-Community (3-0) 3 hrs.**

Interrelationship of social groups and institutions within the community and their effect on the child. Effect of ethnic and cultural composition upon family life and individuals. Other topics include alternate family styles, families in crisis, community resources and legal responsibility of teachers with respect to social problems.

**CCA 253 Administration of Early Childhood Programs (3-0) 3 hrs.**

Establishment and operation of a preschool center: bookkeeping, licensing procedures, building and safety codes, insurance, transportation, interaction with staff, evaluating procedures, utilizing 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 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.

**CMN 099 Language Skills (3-0) 3 hrs.**

Provides review and instruction for the student who needs assistance in developing basic language skills. Prepares students for entry into ENG 100 or ENG 101. 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 of 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 212 Traffic Administration (3-0) 3 hrs.**  
History and growth of traffic problems; organization for traffic control, accident investigation, and analysis and interpretation of accidents. Survey of traffic laws including the Illinois Vehicle Code.

**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 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 295 Criminal Justice Internship (0-20) 4 hrs.**

Provides an orientation to full-time work in a criminal justice related agency. Students work with agency personnel to receive a thorough knowledge of agency functions, observe and participate in application of theory learned in other classes, and develop skill in performing routine criminal justice operations. Prerequisite: Consent of coordinator.

**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 instructor.

## 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 (3-0) 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 on 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 sample 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.

**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 for micros package.

**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.

**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 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. Prerequisites: 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 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 grade of "C" or better or consent of instructor.

**DPR 150 Business FORTRAN (2-2) 3 hrs.**

Introduces FORTRAN IV 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 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 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.

**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 a grade of "C" or better.

**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 a 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 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 writer and modular programming.

Prerequisite: DPR 108 and DPR 110 with a 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 or 3.00 and a 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 DPR 210, 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 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. 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.**

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.

**DHY 111 Dental Radiology (2-2) 3 hrs.**

Theory of X-ray radiation, exposure and protection are pursued in the course. Film placement, intra-oral technique, extra-oral technique, darkroom procedures, film mounting and interpretation are covered in detail, both didactically and in practical application setting.

Prerequisite: Freshman standing in Dental Hygiene Program.

**DHY 151 Clinical Dental Hygiene II (0-6) 2 hrs.**

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.

**DHY 159 Head and Neck Anatomy (3-0) 3 hrs.**

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.

**DHY 161 Dental Anatomy (1-3) 2 hrs.**

Studies the development, growth and function of the human dentition and supporting oral structures.

Prerequisite: Freshman standing in Dental Hygiene Program.

**DHY 190 General and Oral Pathology (2-0) 2 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.

**DHY 200 Advanced Periodontology (1-0) 1 hr.**

Continues study of periodontal diseases. Emphasizes advanced treatment procedures and patient care.

Prerequisite: Sophomore standing in Dental Hygiene Program.

**DHY 201 Ethics, Jurisprudence and Practice Management (2-0) 2 hrs.**

Studies the development of dental office and child 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 202 Radiology I (0-2) 1 hr.**

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 203 Radiology II (0-2) 1 hr.**

Continues DHY 202.

Prerequisite: DHY 202 and sophomore standing in Dental Hygiene Program.

**DHY 220 Community Dentistry I (1-2) 2 hrs.**  
Introduces public health principles. Emphasizes community patterns of dental caries and periodontal diseases; dental delivery systems; third party payments; fluoridation and other preventive measures; and interpretation of dental research. Provides field experiences with the aged, physically and mentally disabled and other community groups.  
Prerequisite: Sophomore standing in Dental Hygiene Program.

**DHY 221 Community Dentistry II (2-2) 3 hrs.**  
Continues DHY 103 and DHY 220, emphasizing application of teaching/learning techniques in the public school classrooms.  
Prerequisite: Sophomore standing in Dental Hygiene Program.

**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.**  
Continues 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 (2-3) 3 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 concurrent enrollment in DIT 101, BIO 135 or BIO 160, FSM 114 and consent of the coordinator.

**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 and concurrent enrollment in DIT 101, BIO 135 or BIO 160, FSM 114 and consent of the coordinator.

**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: FSM 114 or consent of instructor.

**DIT 150 Dietetic Clinical Laboratory I (1-6) 3 hrs.**  
Offers integrated clinical approach to the nutritional care of patients in a community hospital. 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 concurrent enrollment in DIT 102, BIO 102 or BIO 161, DIT 110 or consent of instructor.

**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: DIT 150 and consent of instructor.

**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: Sophomore standing in Dietetic Technician Program, consent of coordinator and concurrent enrollment in DIT 202 and DIT 203.

## Economics

**ECO 115 Consumer Economics (3-0)** 3 hrs.  
Consumer practices with emphasis on buying of investments, shelter, insurance and basic commodities.

**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.

## 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.

<p><b>ELT 105 Electro-Mechanical Drafting (1-6)</b> 3 hrs.</p> <p>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.</p>	<p><b>ELT 205 Electronic Instrumentation (3-4)</b> 4 hrs.</p> <p>Methods of sensing and controlling physical industrial processes. Components involved are transducers, indicators, recorders and controllers.</p> <p>Prerequisite: ELT 203 or consent of instructor.</p>
<p><b>ELT 110 Introductory Electronics (0-6)</b> 2 hrs.</p> <p>Laboratory instruments, circuit components, basic measuring techniques and basic circuits used as building blocks in any electronics system.</p>	<p><b>ELT 206 Electronic Computers (3-4)</b> 5 hrs.</p> <p>Studies computer architecture through the use of microprocessors, digital computer algorithms, and software programming. The utilization of microprocessors is extensive.</p> <p>Prerequisite: ELT 203 and ELT 210 or consent of instructor.</p>
<p><b>ELT 111 Electronics I, Resistive (2-3)</b> 3 hrs.</p> <p>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.</p> <p>Prerequisite: ELT 110 or consent of instructor.</p>	<p><b>ELT 207 UHF Communications and Reception (3-4)</b> 5 hrs.</p> <p>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.</p> <p>Prerequisite: ELT 203 or consent of instructor.</p>
<p><b>ELT 121 Automatic Vending Machine Repair I (1-3)</b> 2 hrs.</p> <p>Introduces skills and knowledge needed to service automatic vending equipment. Emphasizes attitudes for successful job entry and advancement in the industry.</p>	<p><b>ELT 210 Computer Programming (3-0)</b> 3 hrs.</p> <p>Involves the use of the computer and microprocessor as special tools and introduces the student to computer architecture, languages and programming.</p> <p>Prerequisite: MTH 106 or consent of instructor.</p>
<p><b>ELT 122 Automatic Vending Machine Repair II (1-3)</b> 2 hrs.</p> <p>Continues ELT 121. Emphasis upon current vending equipment and components. Emphasizes theory, demonstrations and hands-on work on component parts.</p> <p>Prerequisite: ELT 121 or consent of instructor.</p>	<p><b>ELT 215 Electrical Controls and Motors (3-4)</b> 5 hrs.</p> <p>Designed to cover 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.</p> <p>Prerequisite: ELT 110 or consent of instructor.</p>
<p><b>ELT 123 Automatic Vending Machine Repair III (1-3)</b> 2 hrs.</p> <p>Continues ELT 122. Troubleshooting of actual machines and real problems. Emphasizes rapid machine repair and timely service techniques. Covers late model machines and practice.</p> <p>Prerequisite: ELT 122 or consent of instructor.</p>	<p><b>ELT 216 Microprocessor Software Applications (3-4)</b> 5 hrs.</p> <p>Compares microprocessor instruction sets; study of assemblers, cross assemblers, interrupts, computational algorithms, search and sort routines, stack routines, problem definition, program design, debugging and documentation.</p> <p>Prerequisite: ELT 210 or consent of instructor.</p> <p>Corequisite: ELT 206 or consent of instructor.</p>
<p><b>ELT 203 Electronics II, Digital (3-4)</b> 5 hrs.</p> <p>Examines the building blocks of digital circuits. These elements are then blended into topics and applications. A sampling of the topics are Boolean algebra, Karnaugh mapping, counters and microprocessors.</p> <p>Prerequisite: ELT 111.</p>	<p><b>ELT 217 Microprocessor Peripheral Systems (3-4)</b> 5 hrs.</p> <p>Examines interfacing and operation of peripheral systems commonly used with microprocessor and minicomputers. Includes video displays, teleprinters, modems, codecs and smart terminals.</p> <p>Prerequisite: ELT 206 or consent of instructor.</p>
<p><b>ELT 204 Electronics II, Advanced Electronics (3-4)</b> 5 hrs.</p> <p>Examines electronic circuits which use non-linear devices. May apply linear equivalent circuits in this analysis. Studies amplifiers, feedback circuits, oscillators, operational amplifiers, D-A converters and A-D converters.</p> <p>Prerequisite: ELT 103 and ELT 111 or consent of instructor.</p>	

**ELT 218 Principles of Micro-processor-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

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**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 geometrical 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 (1-4) 3 hrs.**

Application of graphical principles applied to modern digital computers. Graphical output on current display devices. Application made to graphical display system.  
Prerequisite: EGR 120 or consent of instructor.

**EGR 150 Analytical Mechanical (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 moments 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.

\*Pending ICCB approval

## English

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**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.

**ENG 201 Advanced Composition (3-0)** 3 hrs.  
Advanced skills in expository and argumentative writing.  
Prerequisite: ENG 102.

**ENG 220 Creative Writing (3-0)** 3 hrs.  
Provides guided practice in various types of creative writing. Emphasizes skills common to creative expression, including description, plotting, narration, dialogue and verse.  
Prerequisite: ENG 102 or consent of dean or instructor.

## English as a Second Language \_\_\_\_\_

**ESL 063 ESL: Advanced Writing Skills (2-0)** 2 hrs.  
Develops writing of complex sentence structures. Emphasizes sentence combination, transformation, and transposition. Develops narrative writing skills. Carries no transfer credit.  
Prerequisite: Placement test.

**ESL 064 ESL: Advanced Writing Skills II (2-0)** 2 hrs.  
Continues development of complex sentence structures with emphasis on sentence combination, transformation, and transposition. Develops descriptive writing skills. Carries no transfer credit.  
Prerequisite: ESL 063 or consent of coordinator.

**ESL 073 ESL: Advanced Reading (2-0)** 2 hrs.  
Develops reading techniques for the advanced English as a Second Language student. Focuses on in-depth continuation of skills introduced in ESL 053 and 054. Encourages students to read independently materials of increasing length and complexity. Carries no transfer credit.  
Prerequisite: Placement test.

**ESL 074 ESL: Advanced Composition (2-0)** 2 hrs.  
Develops skills in expository writing for advanced students of English as a Second Language. Carries no transfer credit.  
Prerequisite: Placement test or ESL 064.

**ESL 075 ESL: Advanced Conversation and Pronunciation (2-0)** 2 hrs.  
Improves listening comprehension skills. Builds confidence in speaking ability and increases fluency. Refines pronunciation. Carries no transfer credit.  
Prerequisite: Placement test or ESL 060.

**ESL 076 ESL: Advanced Grammar I (2-0)** 2 hrs.  
Emphasizes the grammar of formal American English writing. Focuses on the grammatical structures most troublesome for advanced ESL students. Carries no transfer credit.  
Prerequisite: Placement test or ESL 060.

**ESL 077 ESL: Advanced Vocabulary (2-0)** 2 hrs.  
Emphasizes the vocabulary of informal American English speech and writing. Focuses on the idiomatic expressions most troublesome for advanced ESL students. Carries no transfer credit.  
Prerequisite: Placement test or ESL 060.

**ESL 078 Introduction to American Culture (2-0)** 2 hrs.  
Surveys American culture for non-native speakers of English, highlighting those areas necessary for success in college courses. Students 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 test or ESL 060.

**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 Test of English as a Foreign Language. Carries no transfer credit.  
Prerequisite: Placement test or ESL 060.

**ESL 086 ESL: Advanced Grammar II (2-0)** 2 hrs.

Emphasizes the syntactic constructions in formal research papers and textbooks. Focuses on written mastery of these syntactic structures. Carries no transfer credit. Prerequisite: ESL 076 or consent of coordinator.

**ESL 098 ESL: Listening and Speaking Skills for College (2-0)** 2 hrs.

Prepares the advanced student of English as a Second Language for college courses in the United States. Emphasizes listening and speaking skills. Carries no transfer credit. Prerequisite: Consent of coordinator.

**ESL 099 ESL Writing Skills for College (2-0)** 2 hrs.

Develops skills in basic research and the synthesizing of information for advanced students of English as a Second Language. Reviews the development of paragraphs and compositions. Carries no transfer credit. Prerequisite: Consent of coordinator.

## **Fashion Design**

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**FAS 101 Flat Pattern Design and Draping I (1-4)** 3 hrs.

Basic industrial techniques of pattern making combined with best features of draping. Variety of slopers (bodices, skirts, sleeves, etc.) developed. Accuracy and professional standards stressed. Patterns tested in muslin for fit. Prerequisite: Consent of coordinator.

**FAS 102 Flat Pattern Design and Draping II (2-4)** 4 hrs.

Further development of basic sloper set. Patterns tested in muslin for fit. Prerequisite: FAS 101 or consent of coordinator.

**FAS 103 Apparel Design and Construction I (1-4)** 3 hrs.

Basic principles of using master sloper set to develop patterns for original designs. Professional design room techniques. Prerequisite: Consent of coordinator.

**FAS 104 Apparel Design and Construction II (2-4)** 4 hrs.

Development of basic sloper set in patterns. Actual construction of finished garments. Emphasis on styling, fit and professional finishing. Prerequisite: FAS 103.

**FAS 105 Fashion Design Illustration I (0-2)** 1 hr.

Basic fashion sketching—front, back and side views. Relationship of figure and garment. Sketching of original design. Prerequisite: Consent of coordinator.

**FAS 106 Fashion Design Illustration II (0-2)** 1 hr.

Advanced fashion sketching, fabric rendering. Emphasis on development of individual style. Basic layout and presentation. Prerequisite: FAS 105 or consent of coordinator.

**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.

**FAS 108 Textiles II (1-2)** 2 hrs.

Continues FAS 107. Contemporary fabrics analyzed and studied. Prerequisite: FAS 107.

**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. Prerequisite: Consent of coordinator.

**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 on these periods of social, political and economic forces. Prerequisite: Consent of coordinator.

**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. Prerequisite: FAS 110.

<b>FAS 112 Fashion Basics (3-0)</b>	<b>3 hrs.</b>	<b>FAS 212 Visual Fashion Merchandising (2-0)</b>	<b>2 hrs.</b>
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.		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.	
<b>FAS 201 Advanced Flat Pattern Design and Draping I (2-4)</b>	<b>4 hrs.</b>	<b>FAS 229 Promotion of Fashion (3-0)</b>	<b>3 hrs.</b>
Continued 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.		Various techniques and media for methods to sell fashion. Emphasis on advertising: newspapers, magazines, direct mail, catalogs, radio and television. Playing important roles in sales promotion also will include: visual presentation in windows, interior displays and shops; special events, fashion shows and publicity. Analysis of practical creative assignments developed by the students. Prerequisite: FAS 102 or consent of coordinator.	
<b>FAS 202 Advanced Flat Pattern Design and Draping II (2-4)</b>	<b>4 hrs.</b>	<b>FAS 230 Contemporary Living (3-0)</b>	<b>3 hrs.</b>
Continues FAS 201. Prerequisite: FAS 201.		Understanding the social, economic, political and psychological forces that influence fashion. The shifting patterns and population profiles will be examined. The student will be involved in the world of fashion through visits to professional, civic, cultural and sports events. The consumer point of view of fashion in contemporary living will be observed by studying characteristics of Chicago and suburban stores. Fashions presented by these stores and those accepted by customers in their lifestyles of today will also be analyzed. Prerequisite: FAS 102 or consent of instructor.	
<b>FAS 203 Advanced Diversified Apparel Design I (2-4)</b>	<b>4 hrs.</b>	<b>FAS 240 Fashion Projects (3-0)</b>	<b>3 hrs.</b>
Development of patterns for the translation of original designs into completed garments. Visits to manufacturers, and speakers from industry. Prerequisite: FAS 104.		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: FAS 229.	
<b>FAS 204 Advanced Diversified Apparel Design II (2-4)</b>	<b>4 hrs.</b>		
Continues FAS 203. Prerequisite: FAS 203.			
<b>FAS 205 Tailoring Techniques I (0-4)</b>	<b>2 hrs.</b>		
Professional assembling procedures, details and finishes. Particular emphasis on coats and suits. Prerequisite: Consent of coordinator.			
<b>FAS 206 Tailoring Techniques II (0-4)</b>	<b>2 hrs.</b>		
Continues FAS 205. Tailoring of original garments. Prerequisite: FAS 205.			
<b>FAS 209 Advanced Fashion Illustration I (0-2)</b>	<b>1 hr.</b>		
Work on a professional studio level—stressing individual approaches—work sketches as well as finished art. Fashion illustration as advertising, publicity, promotion and display. Prerequisite: FAS 106.			
<b>FAS 210 Advanced Fashion Illustration II (0-2)</b>	<b>1 hr.</b>		
Continues FAS 209. Preparation of professional portfolio. Prerequisite: FAS 209.			

## Fine Arts

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### **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

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### **FIS 100 Introduction to Fire Science (3-0) 3 hrs.**

Examines the basic fundamentals of fire science. 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 fire-safe 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 of 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 the 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 practices, with emphasis on fire fighting and control at the company officer level.

Prerequisite: FIS 132.

### **FIS 201 Municipal Fire Administration II (3-0) 3 hrs.**

Advanced course including records and fire safety problems, communications and fire alarm systems, legal aspects of fire protection.

### **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 incendiary, arson laws and types of incendiary fires. Methods of determining fire cause, recognizing and preserving evidence, interviewing and detaining witnesses. Procedures in handling juveniles, 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 090 Basic Quantity Baking (0-20) 10 hrs.**

Basic training in the elements of quantity baking under the guidance of a master baker. Students will be exposed to the theory and hands-on experience in the production of the

college bake shop and discussion sessions. Prerequisite: Consent of coordinator or instructor.

**FSM 091 Advanced Quantity Baking (0-20) 10 hrs.**

Continues FSM 090. Emphasis on more advanced techniques of baking including cake decorating, hotel pastry and display pieces. Prerequisite: FSM 090 or consent of coordinator or instructor.

**FSM 095 Basic Quantity Cooking (3-15) 10 hrs.**

Basic training in the elements of quantity food preparation under the guidance of a master chef. Students will be exposed to the theory and hands-on experience of food preparation through participating in the production of the food service department and discussion sessions. Prerequisite: Consent of coordinator or instructor.

**FSM 096 Advanced Quantity Cooking (0-20) 10 hrs.**

Continues FSM 095. Emphasis on more advanced techniques of food preparation including culinary art and buffet work. Prerequisite: FSM 095 or consent of coordinator or instructor.

**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 (4-0) 4 hrs.**

Theory and practice of food service including practical experience in college cafeterias, dining rooms and catering service.

**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 or 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 of 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.

**General Educational Development (GED)****GED 021 Reading Development (1-0 to 6-0) 1-6 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. Specialized skills in locating and organizing information; reading maps; interpreting graphs, tables, or diagrams; and developing personal reading skills.

**GED 023 Pre-GED Reading Skills (2-0) 2 hrs.**

Reinforces and reviews word recognition and word attack skills such as 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 reading in the social studies and science content areas.

**GED 025 Social Studies and Science (1-0 to 6-0) 1-6 hrs.**

Reviews general comprehension and advanced reading skills and specific social studies, science, and U.S./Illinois Constitutions content and skills: cognitive skills, concept development, generalization development, modes of inquiry development, and value recognition/analysis. Prepares the student for the GED Social Studies, Science, and U.S./Illinois Constitution Tests.

**GED 031 Basic English Skills (1-0 to 6-0) 1-6 hrs.**

Introduces basic English grammar and usage, spelling, vocabulary, dictionary use, capitalization, and punctuation.

**GED 033 Pre-GED English Skills (2-0) 2 hrs.**

Reinforces basic English grammar and usage, spelling rules, vocabulary, dictionary use, capitalization, punctuation, and sentence/paragraph development.

**GED 035 English Grammar Review (2-0) 2 hrs.**

Reviews basic grammar and usage: sentence structure, style, logic and paragraph organization, punctuation, capitalization, and spelling. Review of literary language in preparation for the literature portion of GED Reading Skills Test. Prepares the student for the GED Writing Skills Test.

**GED 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.

**GED 043 Pre-GED Mathematical Skills (2-0) 2 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.

**GED 045 Intermediate Mathematical Skills (2-0) 2 hrs.**

Reviews arithmetic skills including decimals, fractions, mixed numbers, verbal reasoning, measurement, percents, ratio and proportion, and charts and graphs. Prepares the student for the GED Mathematics Test.

**GED 071 Citizenship Training (1.5-0) 1.5 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.

## **Geography**

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**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**

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**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

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**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 for improvement of 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 discussions of works read. Writings 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.

## History

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**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 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 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 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

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### 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 participate in 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 participate in 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.

## Human Services

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### 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 the medical office assistant to basic clinical procedures in the physician's examination room. Includes communication, patient interrogation, medical asepsis, assistance with patient preparation and accomplishment of the physical examination. Emphasis placed on demonstration of clinical office skills.

Prerequisite: Consent of instructor.

### HSC 211 Clinical Procedures II (2-6) 4 hrs.

Offers the medical office assistant 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 or consent of instructor.

### HSC 212 Clinical Laboratory Procedures (2-3) 3 hrs.

Designed primarily for students in the Medical Office Assistant Program. This course will include lectures, discussion and practice with respect to basic medical laboratory procedures requested by physicians. Additional emphasis will be placed on reports, specimen collections and specimen handling. Prerequisite: Consent of instructor.

**HSC 213 Medical Law and Ethics (2-0) 2 hrs.**

Acquaints the medical office assistant and medical transcriptionist with the legal and ethical responsibilities of the physician, patient and allied health personnel in medical practice. Emphasis given to professional attitudes and behavior.

**HSC 220 Health, Nutrition and Safety (3-0) 3 hrs.**

Discusses habits to promote good health. Relationship of nutrition and routine to child's physical well-being. Using snacks and meals to establish good eating habits, planning curriculum to provide a proper balance of active and quiet periods. Developing safe, healthy environments.

**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, functional room analysis and advanced planning. Continues application of color.

Prerequisite: IND 101.

**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 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.

**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.

**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.

**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.

**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 non-standard forms of sign language into appropriate spoken and written English.  
Prerequisite: ITP 111.

**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 and consent of instructor.

## **Journalism**

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**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 Press  
Photography (0-2) 1 hr.**

Teaches the functions of the 35mm camera and portable broadcast video equipment. Practical experience stresses news gathering techniques through hands-on class assignments. Helpful if student has 35mm camera.

**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.**

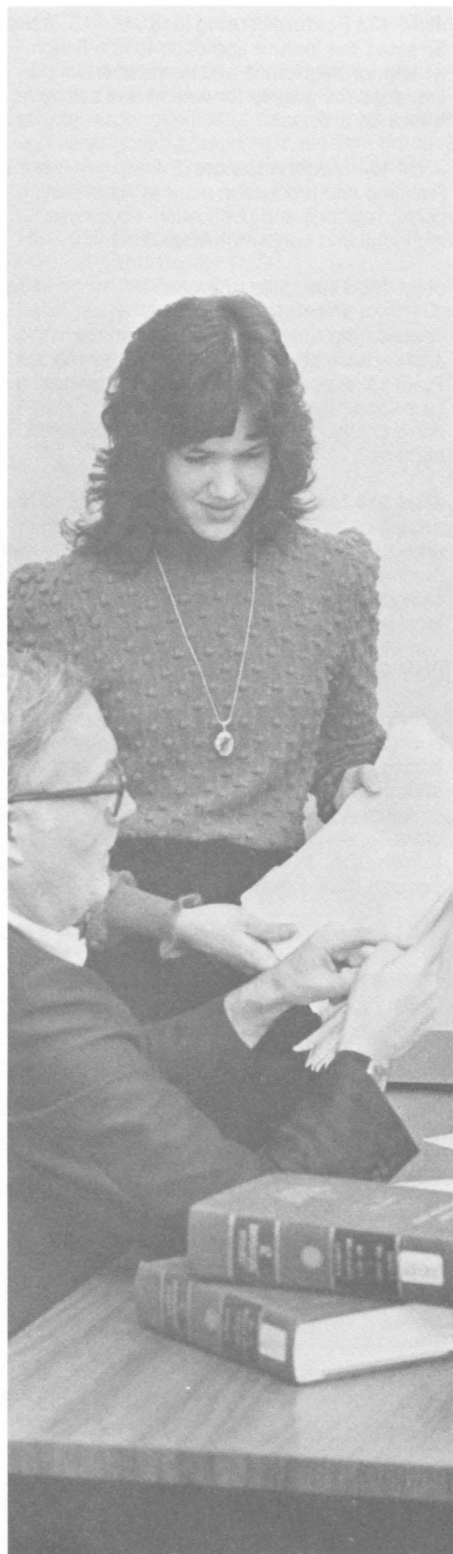
Focuses on preparation of copy for newspaper publication. Incorporates headline writing, copy editing, treatment of story placement and effective display of typographically pleasing makeup. A newspaper is prepared by the class.  
Prerequisite: JNM 130 and JNM 131 or consent of coordinator.

**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

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### 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 draftmanship 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 specialty 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 record keeping 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.

## 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 3 hrs.**  
to 1800 (3-0)

Selected works of universal significance contributed by people and civilizations from ancient times to 1800.

**LIT 207 World Literature 3 hrs.**  
Since 1800 (3-0)

Continues LIT 206. Selected works of universal significance contributed by peoples and civilizations from 1800 to the present.

**LIT 210 Introduction to 3 hrs.**  
Shakespeare (3-0)

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 3 hrs.**  
Fiction (3-0)

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 3 hrs.**  
Literature (3-0)

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 3 hrs.**  
Colonial Days to Civil War (3-0)

American literature as an expression of American life through early social and political documents, novels, short stories and poems.

**LIT 222 American Literature from 3 hrs.**  
the Civil War to 1914 (3-0)

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 3 hrs.**  
to 1800 (3-0)

Survey of English writers from beginning English literature to 1780. Reading and interpretation of writers such as Boswell, Chaucer, Congreve, Donne, Dryden, Johnson, Jonson, Malory, Milton, Pope and Swift.

**LIT 232 English Literature 3 hrs.**  
1800-1914 (3-0)

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 3 hrs.**  
American Literature (3-0)

Survey of important writers and writings in British and American literature since World War I.

## Management

**MGT 111 Introduction to Business 3 hrs.**  
Organization (3-0)

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: Mathematics Placement Test.

**MGT 154 Small Business 3 hrs.**  
Management (3-0)

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.

<p><b>MGT 160 Principles of Supervision (3-0)</b> 3 hrs.</p> <p>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.</p>	<p><b>MGT 265 Personnel Management (3-0)</b> 3 hrs.</p> <p>Personnel problems and labor relations. Employment techniques, wages and hours, job evaluation, training, rating, collective bargaining, pensions and fringe benefits. Prerequisite: MGT 270 or consent of instructor.</p>
<p><b>MGT 167 Records Management (3-0)</b> 3 hrs.</p> <p>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.</p>	<p><b>MGT 267 Office and Administrative Management (3-0)</b> 3 hrs.</p> <p>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.</p>
<p><b>MGT 168 OSHA Standards and Compliance Procedures (3-0)</b> 3 hrs.</p> <p>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.</p>	<p><b>MGT 270 Principles of Management (3-0)</b> 3 hrs.</p> <p>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.</p>
<p><b>MGT 170 Principles of Individual Financial Planning (3-0)</b> 3 hrs.</p> <p>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 on a personal portfolio.</p>	<p><b>MGT 274 Industrial Management (3-0)</b> 3 hrs.</p> <p>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.</p>
<p><b>MGT 218 Introduction to Finance (3-0)</b> 3 hrs.</p> <p>Methods of financing business enterprises and their relationships to personal and company investment policies. Prerequisite: ACC 101 and MGT 111.</p>	<p><b>MGT 275 Labor-Management Relations (3-0)</b> 3 hrs.</p> <p>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.)</p>
<p><b>MGT 225 Applied General Statistics (3-0)</b> 3 hrs.</p> <p>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.</p>	
<p><b>MGT 226 Elementary Quantitative Methods (3-0)</b> 3 hrs.</p> <p>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.</p>	

**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

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**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 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: 1) managerial analysis of the marketing environment; 2) marketing opportunity analysis; and 3) 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.

**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 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 the 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.

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 in beginning algebra 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 or equivalent, and placement test.

**MTH 103 College Algebra (3-0)** 3 hrs.

Develops topics of functions, determinants, matrices, sequences, progressions, permutations and combinations. Introduces the theory of equations.

Prerequisite: MTH 102, or equivalent with grade of "C" or better, 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 or equivalent with grade of "C" or better, 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 201 Calculus I (5-0) 5 hrs.**

Studies differentiation of elementary and transcendental functions with applications to geometry, physics and other sciences. Introduces the definite integral. Prerequisite: MTH 105 with grade of "C" or better or high school equivalent.

**MTH 202 Calculus II (5-0) 5 hrs.**

Continues MTH 201. Emphasis on the definite integral. Includes techniques of integration, vectors, parametric equations, partial differentiation, multiple integration and series, with applications for science and engineering. Prerequisite: MTH 201 with 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 and physical applications. Prerequisite: MTH 201 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 grade of "C" or better, or consent of instructor.

**MTH 208 FORTRAN Computer Programming (2-2) 3 hrs.**

Computer programming using the language FORTRAN. Prerequisite: MTH 103 or MTH 107 with grade of "C" or better, or consent of instructor.

**MTH 209 PASCAL Computer Programming (1-2) 2 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 208 with a grade of "C" or better.

**MTH 210 PL/1 Computer Programming (1-2) 2 hrs.**

Develops a working knowledge in use of the computer with the PL/1 programming language. Includes problem formulation, data storage and retrieval, algorithms, flowcharts or pseudocode, numerical analysis and structured programming. Intended for computer science, mathematics, science or engineering majors. Prerequisite: MTH 208 with a grade of "C" or better.

**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 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 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 215 with a grade of "C" or better.

**MTH 217 Assembly Language Programming and Computer Organization (2-2) 3 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.

**MTH 265 Mathematics 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**

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**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 104 Statics (3-0) 3 hrs.**

Resultants of force systems; algebraic and graphical conditions of equilibrium of force systems; analysis of forces acting on members of trusses, frames, etc.; forces due to friction, centroids. Prerequisite: 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 111 Quality Control (3-0) 3 hrs.**

Techniques of establishing and maintaining quality of product, including statistical quality control applications. Prerequisite: MTH 107 or consent of instructor.

**MET 114 Introduction to Computer Graphics (1-4) 3 hrs.**

Surveys components of computer graphic systems. Apply principles of engineering graphics to create dimensional drawings using graphics terminals, digitizers, plotters, and software. Prerequisite: MET 102.

**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.



<p><b>MET 202 Advanced Technical Drafting (1-5)</b> 3 hrs. Orthographic considerations of mechanical and tooling systems, limit and tolerance dimensioning, sketching, product illustration, and assembly drafting presentations; tooling details, fixtures and jigs and empirical data diagrams. Prerequisite: MET 102.</p>	<p>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.</p>
<p><b>MET 204 Strength of Materials (3-0)</b> 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 bending, buckling (columns); combined stresses; and influence of properties of materials. Prerequisite: MTH 107, MET 104 or consent of instructor.</p>	<p><b>MET 211 Process Planning and Tool Design (3-3)</b> 4 hrs. Selected topics in the control of the manufacturing process; the analysis and organization of manufacturing steps, operation sheets; the economics of industrial operations; economic justification of equipment purchase/lease; tool, fixture and work place design. Prerequisite: MTH 106 and MET 108, or consent of instructor.</p>
<p><b>MET 205 Advanced Machine Shop (1-5)</b> 3 hrs. Advanced application of machine shop theory and practice. Use of equipment such as lathes; O.D. and I.D. grinders; tool grinder; mills; and study of production machining, feed and speed application and quality control techniques are included. Prerequisite: MET 105 or consent of instructor.</p>	<p><b>MET 214 Advanced Computer Graphics (1-4)</b> 3 hrs. Uses computer graphics system to develop, store, retrieve and modify all phases of working drawings. Emphasis is on applications of the working drawings which are best suited to computer aided design techniques. Prerequisite: Sophomore standing in MET or consent of instructor.</p>
<p><b>MET 206 Metallurgy and Heat Treatment (1-3)</b> 2 hrs. Selected principles and concepts of physical metallurgy. Principles are applied to heat treatment of metals. Prerequisite: MET 108 or consent of instructor.</p>	<p><b>MET 215 Fluid Power (3-0)</b> 3 hrs. Technology of the transmission and storage of energy by means of pressurized fluids, both compressible and incompressible. Prerequisite: MTH 107 and MET 104, or consent of instructor.</p>
<p><b>MET 207 Machine Design (2-6)</b> 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. Emphasis on principles and calculations necessary to determine fits, stresses, loads, deformations, economy and finishes. Prerequisite: MET 201, MET 204 and MET 206.</p>	<p><b>MET 224 Special Problems in Three-Dimensional Graphics (1-4)</b> 3 hrs. Examines methods and solutions to individualized problems using computer graphics as the presentation mode. Problems are individualized, instructor approved, and presented to the entire class. Prerequisite: MET 214.</p>
<p><b>MET 209 Applied Digital Control (2-3)</b> 3 hrs. Principles and techniques of digital control as applied to mechanical machines. Consists of topics such as control logic and algebra, control sensors and logic devices (both mechanical and electrical) and applications of elements to the solution of control problems. Prerequisite: MTH 107 or consent of instructor.</p>	<p><b>MET 234 3D/CAD Modeling (1-4)</b> 3 hrs. Provides an intense study of wire-framing, detailing, and graphical modeling. Emphasis is on applications of solid models, mass properties, center of gravity, weight, stability, moments of inertia and volume. Prerequisite: MET 214.</p>
<p><b>MET 210 Advanced Welding (1-5)</b> 3 hrs. Advanced welding theory and practice. Includes discussions of equipment, setup procedures and practice of unusual positions</p>	

## 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 prepared 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 methods, 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 diction 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 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.

**MUS 161 Woodwind Instrument Class I (1-2)** 2 hrs.  
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 Class I (1-2) 2 hrs.**

For students who have had no experience playing an orchestral or band instrument and for instrumentalists already proficient but who desire to learn to play several instruments. May be repeated up to a maximum of 4 credit hours.

**MUS 163 Percussion Instrument Class I (1-2) 2 hrs.**

For students who have had no experience playing an orchestral or band instrument and for instrumentalists already proficient but who desire to learn to play several instruments. May be repeated up to a maximum of 4 credit hours.

**MUS 165 Class Piano I (1-2) 2 hrs.**

Similar to MUS 161. For students who desire a rudimentary knowledge of the keyboard and playing skills sufficient to cope with simple, practical situations. Emphasis on tonal notation, rhythmic 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 Class I (1-2) 2 hrs.**

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 Music Subject (1-6) 2 hrs.**

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 8 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 Literature (3-0) 3 hrs.**

A survey of the music literature available for performance by musical instruments, excluding keyboard instruments and voice.

**MUS 224 Keyboard and Vocal Literature (3-0) 3 hrs.**

Survey of music literature available for performance by keyboard and voice, including opera.

**MUS 265 Class Piano III (1-2) 2 hrs.**

Continues development of skills begun in MUS 165 and MUS 166. Greater emphasis on keyboard harmony, ensemble playing and jazz improvisation.  
Prerequisite: Two semesters of class piano or proficiency examination.

**MUS 266 Class Piano IV (1-2) 2 hrs.**

Continues MUS 265.  
Prerequisite: Three semesters of class piano 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; Piano, 296; Organ, 297; Voice, 298; and Classical Guitar, 299.

## **Numerical Control \_\_\_\_\_**

**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 NC lathe and mill.  
Prerequisite: NMC 101.

**NMC 214 Computer Graphics (1-4) 3 hrs.**  
Numerical controlled drafting machine, with aid of computer, used to develop various phases of working drawings. Emphasis on phases of working drawings more efficiently done by graphic display equipment.  
Prerequisite: MET 102 or consent of instructor.

**NMC 215 Part Programming II (2-2) 3 hrs.**  
Introduces use of APT programming languages for controlling metal cutting machines. Emphasizes COPY, LOOP, PATTERN, and TRACUT features. Introduces other interactive languages.  
Prerequisite: NMC 105.

**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.**  
Study and concurrent practice of methods of nursing intervention for hospitalized patients of all ages. Discusses parenting and common physical health interferences on basic physical and emotional needs. Emphasizes skills needed to: (1) 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 (2) assure implementation of the plan of care.  
Prerequisite: NUR 101, PSY 101 and BIO 135 or BIO 160.

**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 and NUR 103, BIO 136 or 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.  
Application of the nursing process as it is utilized to assist individuals from a variety of age groups experiencing physical problems to their level of optimum wellness. Concurrent practicum will provide opportunity for the assessment of needs and the planning, provision and evaluation of direct patient care based on the needs identified.  
Prerequisite: NUR 102, BIO 161 and PSY 216.

**NUR 202 Advanced Nursing II (4-12)** 8 hrs.  
Provides theory and concurrent practice in the care of patients hospitalized for acute, chronic and psychological illness. Focuses on identifying subtle clues to unmet human needs, and developing an effective plan of care treating the patient both as an individual and as a member of a family. Develops

communication skills and techniques as group dynamics in supervising and coordinating others in providing direct care to patients. Emphasizes the importance of the promotion of optimum wellness.  
Prerequisite: NUR 201, NUR 203 and BIO 130.

**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 a community; and management principles.  
Prerequisite: NUR 103.

## Office and Administrative Services

**SEC 098 Review Shorthand (0-4)** 2 hrs.  
Designed for students with one semester of Gregg shorthand. Provides a complete review of theory and additional dictation practice to enable the student to reach the 60 wpm rate required for entry into SEC 126.  
Prerequisite: Consent of instructor or coordinator.

**SEC 099 Typewriting Review (0-2)** 1 hr.  
Designed for those with one semester of previous instruction on the keyboard. Work will help correct deficiencies in speed, accuracy and manipulative skills on the electric typewriter. Successful completion will enable student to reach entry requirements for SEC 122.  
Prerequisite: Knowledge of the keyboard and a minimum typing speed of 25 words per minute.

**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 Medical Office Assistant/ Medical Transcriptionist Orientation Seminar (2-0)** 2 hrs  
Introduces careers in medical office assisting and medical transcription. Emphasizes roles within the health care team, community responsibilities, medical communications and records, health care trends and professionalism.

**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 50 words per minute or a grade of "B" or better in SEC 099 or SEC 121.

**SEC 125 Elementary Shorthand (3-2) 4 hrs.**

Introduces theory leading to development of skill in reading and fluency in writing shorthand. This is the first of a sequence of shorthand courses.

Prerequisite: Prior or concurrent enrollment in SEC 121 or typing speed of 40 words per minute.

**SEC 126 Intermediate Shorthand (2-2) 3 hrs.**

Continues development of shorthand skills and speed dictation in shorthand with emphasis on vocabulary development, mechanics of English, and transcription techniques.

Prerequisite: SEC 125 or equivalent with grade of "C" or better and SEC 121 or equivalent. (Prior or concurrent enrollment in ENG 100 or ENG 101 recommended.)

**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: 1 hr.  
IBM Personal Computer (0-2)**

Introduces the features and operation of the IBM Personal Computer, using Wordstar, Mail-Merge, and Spellstar software programs, to prepare business correspondence and reports; functions include revising, storing, retrieving, reformatting, paginating, using research and replace, headings and footings, checking

spelling, and merging variables and documents.

Prerequisite: Typing speed of 50 words per minute.

**SEC 134 Word Processing Equipment: 1 hr.  
Lexitron (0-2)**

Introduces the feature of the Lexitron videotype stand-alone display word processing equipment currently used in business.

Students learn to operate the equipment in preparing business correspondence and reports, and in the revising, storing, retrieving, archiving and merging of data. Students will complete assignments on an individualized basis in a laboratory situation.

Prerequisite: Typing speed of 50 words per minute. (Formerly SEC 130.)

**SEC 136 Word Processing Equipment: 1 hr.  
ForeWord (0-2)**

Introduces the features and functions of ForeWord, a CRT shared-logic word processing system. Students learn to operate the equipment in preparing business correspondence and reports; revision, storage, retrieving and merging of data; document assembly; formatting; creating and using a glossary. Instruction is on a self-paced basis in a laboratory situation.

Prerequisite: Typing speed of 50 words per minute.

**SEC 137 Word Processing Equipment: 1 hr.  
Wangwriter (0-2)**

Introduces the features and operation of the Wangwriter in preparing business correspondence and reports and in the revising, storing, retrieving, reformatting, moving and copying of data. Instruction is on a self-paced basis in a laboratory setting.

Prerequisite: Typing speed of 50 words per minute.

**SEC 138 Word Processing Equipment: 1 hr.  
Advanced ForeWord (0-2)**

Introduces the more advanced functions of ForeWord used in business situations in the preparation of reports, manuals, and other business documents. Instruction is on a self-paced basis in a laboratory setting.

Prerequisite: SEC 136.

**SEC 139 Word Processing Equipment: 1 hr.  
Advanced Wangwriter (0-2)**

Introduces 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.

<p><b>SEC 140 Elementary Machine Shorthand (3-2)</b> 4 hrs.</p> <p>Theory leading to the development of skill in reading and proficiency in the operation of a shorthand machine. Prerequisite: Prior or concurrent enrollment in ENG 101 and typing.</p>	<p><b>SEC 235 Legal Dictation and Transcription (2-2)</b> 3 hrs.</p> <p>Development of speed and facility in taking dictation and transcribing legal documents. 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><b>SEC 170 Introduction to Word Processing (3-0)</b> 3 hrs.</p> <p>Introduces fundamentals of word processing. Emphasizes office practices, changes in organizational structure, word processing work flow (origination, processing, reproducing, filing and distribution), equipment, role of management and secretary and career opportunities.</p>	<p><b>SEC 236 Secretarial Procedures (3-0)</b> 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><b>SEC 171 Word Processing Dictation and Transcription Techniques (3-0)</b> 3 hrs.</p> <p>Introduces and provides effective training in dictation and transcription techniques and procedures. Surveys dictation and transcription equipment currently on the market. Prerequisite: Typing speed of 40 words per minute.</p>	<p><b>SEC 237 Secretarial Seminar and Internship I (1-15)</b> 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 supervised cooperative work experience wherein 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. Prerequisite: Consent of instructor and admission in either the Executive Secretarial or Legal Secretary programs.</p>
<p><b>SEC 221 Advanced Typing (1-3)</b> 2 hrs.</p> <p>Development of high speed and proficiency in production typing from rough drafts, tabulations, and unstructured materials typical of executive, professional, government and technical offices. Prerequisite: SEC 122 with grade of "C" or better or proficiency test with instructor.</p>	<p><b>SEC 238 Secretarial Seminar and Internship II (1-15)</b> 3 hrs.</p> <p>Continues SEC 237. Prerequisite: Consent of instructor.</p>
<p><b>SEC 225 Dictation and Transcription (2-2)</b> 3 hrs.</p> <p>Strengthening of dictation speed and developing competence in transcribing mailable letters. Prerequisite: SEC 122 and SEC 126, or proficiency test with instructor, and ENG 101.</p>	<p><b>SEC 239 Medical Officer Assistant Seminar and Externship (1-15)</b> 4 hrs.</p> <p>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: SEC 241 and HSC 211 with grade of "C" or better, and consent of instructor.</p>
<p><b>SEC 230 Executive Machine Transcription (1-2)</b> 2 hrs.</p> <p>Provides training and extensive skill building in machine transcription and in the operation of machine transcribers. Prerequisite: SEC 122 or a minimum typing speed of 50 words per minute.</p>	<p><b>SEC 240 Medical Transcription and Typing I (2-2)</b> 3 hrs.</p> <p>Develops speed and accuracy in transcribing medical reports using a transcription machine. Familiarizes student with typing various medical and insurance forms. Prerequisite: Prior or concurrent enrollment in SEC 122, HSC 112, and BIO 135 or BIO 160.</p>
<p><b>SEC 234 Legal Office Procedures (3-0)</b> 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><b>SEC 241 Medical Office Procedures (4-0)</b> 4 hrs.</p> <p>Offers development of skills of patient reception, appointment, scheduling, telephone techniques, mail handling, medical records management, written communications, billing and collections and insurance. Prerequisite: Consent of instructor.</p>

**SEC 242 Medical Transcription and Typing II (2-2)** 3 hrs.

Offers advanced specialized dictation to improve skills and confidence in transcribing medical reports using a transcription machine. Prerequisite: SEC 240.

**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 the secretary comes in contact with 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.

**SEC 272 Principles of Word Processing Management (3-0)** 3 hrs.

Techniques of management and supervision for word processing centers—organizing and operating the center; selecting, training and motivating personnel; preparing procedure and policy manuals, work measurement tools and work flow charts; evaluating and selecting word processing equipment and "software" support; and studying work environment requirements.

## Operating Room Technician

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**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, disease 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 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, aeration, 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 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 of 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.**

Describes classification and action for major systemic medications.

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 Confucianism, 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

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**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- ) 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 148 Recreational Water Sports and Games (0- ) .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: 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 (0-1) 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, syncopated 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. Presents aims and objectives, and new approach 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 technique, planning of drills and experience in basketball, softball, swimming, tennis, weight training and volleyball.

**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 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.

**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.**

Studies the nature of energy as perceived by man through the sciences. Investigates the utilization of energy and its effects on life patterns.

**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

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**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)**

Electricity and magnetism: fields, induction, capacitance, direct and alternating current theory, circuits and elements of electronics. Light: reflection, interference, resonance, lenses, diffraction, polarization and Doppler effect. Primarily for students in career programs.

**PHY 121 Introductory Physics I (4-3)** 5 hrs.

Mechanics, heat and sound. Lectures, demonstrations, and laboratory. For students in arts, sciences, and architecture. Other students see PHY 201.

Prerequisite: MTH 103 and MTH 104.

**PHY 122 Introductory Physics II (4-3)** 5 hrs.

Continues PHY 121. Electricity, magnetism and light.

Prerequisite: PHY 121.

**PHY 201 General Physics I—** 4 hrs.  
**Mechanics (3-2)**

Foundations on kinematics, statics, dynamics and hydraulics. For students in engineering, mathematics, physics and chemistry.

Prerequisite: MTH 201 or concurrent enrollment.

**PHY 202 General Physics II—Heat,** 4 hrs.  
**Electricity and Magnetism (3-2)**

Foundations of heat, thermodynamics, electricity and magnetism.

Prerequisite: PHY 201, MTH 202, or concurrent enrollment.

**PHY 203 General Physics III-Wave** 4 hrs.  
**Motion, Sound, Light and Modern Physics (3-2)**

Foundations of wave motion, sound, geometrical and physical optics, and modern physics.

Prerequisite: PHY 202 and MTH 202.

## Political Science

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**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.

(Formerly PSC 201.)

**PSC 220 Suburban, Urban and** 3 hrs.  
**State Politics (3-0)**

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.

(Formerly PSC 202.)

**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.

(Formerly PSC 205.)

**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.

(Formerly PSC 206.)

## Psychology

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**PSY 101 Introduction to** 3 hrs.  
**Psychology (3-0)**

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** 3 hrs.  
**Psychology (3-0)**

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. (Formerly PSY 100.)



**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.  
(Formerly PSY 110.)

**PSY 108 Topics in Psychology (2-0) 2 hrs.**

Provides special topic seminars which allow each student the opportunity to personally examine current issues.  
(Formerly PSY 111.)

**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 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 120 Principles of Real Estate (2-0) 2 hrs.

Fundamental principles of real estate for the real estate practitioner, those seeking to qualify for the real estate market (the buyer, seller, or owner of real estate), and the person who has contact with the business in work with financial institutions. Subject matter includes the nature and economic characteristics of real estate and its ownership, titles, contracts, market values, brokerage, selling, development, taxation, appraisal, financing and licensing laws.

### 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 investments, and the role of syndicates, developers, builders, and financial institutions in promoting and managing income properties.

Prerequisite: 9 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 9 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

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**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 RAC 101. Attention given to assembling and constructing refrigeration systems to achieve desired results, trouble-diagnosing procedures for domestic and commercial equipment and proper part replacement 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.

Continues RAC 103. Integration of cooling equipment, installation of add-on cooling systems to present heating systems and trouble-diagnosing of combination systems.  
Prerequisite: RAC 101 and RAC 103.

**RAC 105 Heating and Cooling Controls (3-3)** 4 hrs.

Description of operation and function of electric equipment, control of equipment, adjusting and testing the equipment and controls, and proper replacement of defective components.

**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.

Factors considered in selection of refrigeration compressors, evaporators and condensers. Factors that affect refrigeration effect. Characteristics of common refrigerants.  
Prerequisite: RAC 102 or consent of instructor.

**RAC 202 Refrigeration System Design II (3-3)** 4 hrs.

Continues RAC 201. Factors considered in selection of metering devices, pipe sizing, piping design, oil migration and system accessories.

Prerequisite: RAC 201 or consent of instructor.

**RAC 203 Air Conditioning Principles (3-3)** 4 hrs.

Properties of air and psychrometrics. Computing heat gains and heat losses. Selection of equipment for residential and light commercial systems.

**RAC 204 Air Distribution (2-3)** 3 hrs.

Study of fans and fan performance. Factors considered in selection of fans. Duct systems, design fundamentals, sizing and location of registers.

**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 collection 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

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See: Office and Administrative Services

## Sign Language

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**SGN 101 Basic Sign Language (3-0)** 3 hrs.

Presents manual communication skills of fingerspelling and sign language used by American deaf. This course is designed for students with no previous experience in sign language.

**SGN 102 Intermediate Sign Language (3-0) 3 hrs.**

Reviews basic sign language vocabulary and fingerspelling with emphasis on developing skills in the simultaneous method. New vocabulary, intensive practice on fingerspelling of words and numbers. Introduces receptive skills and the translation of English idioms into sign.

Prerequisite: SGN 101 or consent of instructor.

**SGN 201 Advanced Sign Language (3-0) 3 hrs.**

Reviews English idioms translated into sign. Includes general overview of sign language idioms and their English counterparts; conversation building with emphasis on clarity, fluidity, accuracy in various settings, with intensive practice in reverse interpreting.

Prerequisite: SGN 102 or consent of instructor.

## **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 150 Connections: Technology and Change (3-0) 3 hrs.**

Explores America's relationship with science and technology. The evolution of eight major modern inventions and prospects for the future will be discussed in terms of technology and human values as they are reflected in society.

**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.

## **Spanish**

**SPA 101 Elementary Spanish I (4-0) 4 hrs**

Beginning course in the language skills of listening, understanding, speaking, reading and writing. 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. Plus accuracy and speed in reading, study of 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, especially 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.**

Readings of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation diction. Speaking based on discussions of 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 Communication (3-0) 3 hrs.**

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 Communication Theory (3-0) 3 hrs.**

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 Theatre (3-0) 3 hrs.**

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.

**Vending Machine Repair \_\_\_\_\_**

**ELT 121 Automatic Vending Machine Repair I (1-3) 2 hrs.**

Introduces skills and knowledge needed to service automatic vending equipment. Emphasizes attitudes for successful job entry and advancement in the industry.

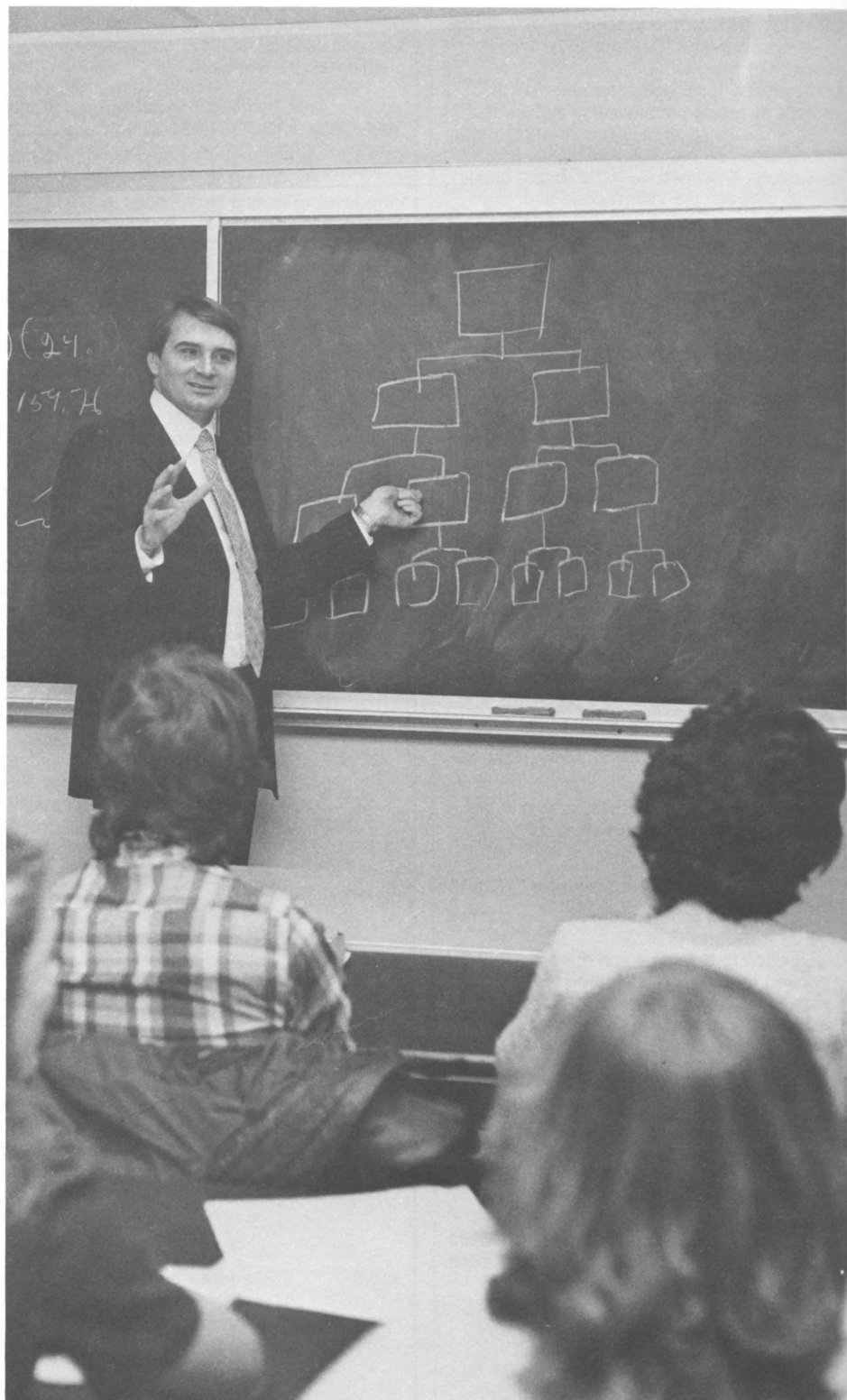
**ELT 122 Automatic Vending Machine Repair II (1-3) 2 hrs.**

Continues ELT 121 with emphasis on current vending equipment and components. Emphasizes theory, demonstrations and hands-on work on components parts.  
Prerequisite: ELT 121 or consent of instructor.

**ELT 123 Automatic Vending Machine Repair III (1-3) 2 hrs.**

Continues ELT 122 with troubleshooting of actual machines and real problems. Emphasizes rapid machine repair and timely service techniques. Covers late model machines and practice.  
Prerequisite: ELT 122 or consent of instructor.

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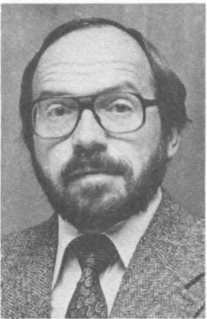
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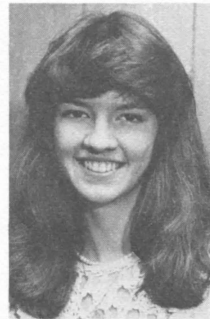
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