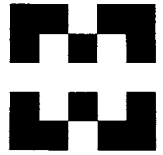


1971/72

William Rainey Harper College



William Rainey Harper College



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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 seven-member board of trustees. Harper serves high school districts #211 (Palatine and Schaumburg Townships), #214 (Elk Grove and Wheeling Townships), as well as Barrington High School District #224.

The Harper College district (#512) covers an area of 218 square miles. Communities within the college district are Arlington Heights, Barrington, Barrington Hills, Buffalo Grove, Elk Grove Village, Hoffman Estates, Inverness, Lake Barrington, Mt. Prospect, North Barrington, Palatine, Prospect Heights, Rolling Meadows, Schaumburg, South Barrington, Tower Lake, and Wheeling. Also included are portions of Carpentersville, Deer Park, Des Plaines, Fox River Grove, Hanover Park, and Roselle.



BOARD OF TRUSTEES

Just six years ago, in May, 1965, the newly elected board of trustees of William Rainey Harper College convened for their first official meeting. The college had no name, no staff, no facilities, but it did have a board consisting of seven individuals determined to establish a community college worthy of the area it serves.

How do seven people establish, staff, and equip an operating college once the voters give them the go-ahead? Words such as "dedication," "hard work," and "civic pride" just don't tell the whole story.

Harper College has been most fortunate in having a board of trustees possessing the capacity to work together in planning programs, solving problems, and establishing educational goals unique in the history of the northwest suburban area.

There has been a "total involvement" by the board members — and there has been a heartening interest and involvement by members of the community as well. Hundreds of citizens in the Harper community have worked countless hours to help accomplish key phases of the college program.

MILTON C. HANSEN, Chairman



JESSALYN M. NICKLAS, Vice Chairman



JOSEPH C. MORTON, Secretary



RICHARD L. JOHNSON



ROSS A. MILLER



LAWRENCE R. MOATS



D. EUGENE NUGENT





W. R. Harper, at right, with J. D. Rockefeller
observing University of Chicago's
Decennial Celebration, June 18, 1901.

WILLIAM RAINEY HARPER

Father of the Community College

The spirit of Harper College is reflected in its name. William Rainey Harper, first president of the University of Chicago, was a scholar, teacher, writer, and administrator who devoted his life to the pursuit of excellence in education.

Dr. Harper accomplished so much in his lifetime that he is counted among the intellectual giants of his day. A prodigy who enrolled in college at the age of ten, Harper received a bachelor of arts degree from Muskingum College in Ohio at 14 and a Ph.D. from Yale at 19, where he became a full professor of Semitic languages and biblical literature at the age of 29. During his 15-year presidency, the University of Chicago emerged as one of the leaders in the movement to reform higher education. The principle of academic freedom at this institution was clearly defined, the importance of both teaching and research was established, and the way was set for the flowering of this great American university.

A man of vision and an innovator. Dr. Harper is recognized as the father of the two-year college idea, which he initiated at the University of Chicago just before the turn of the century. In 1896, the university was divided into two major divisions — the academic college (later named junior college) for freshmen and sophomores, and the university college (later named senior college) for juniors and seniors. Full-fledged emergence of his concept came almost 70 years later.

The community college, as we know it today, came of age in the mid 1960's. In Illinois alone there are over 40 public two-year colleges serving upwards of 200,000 citizens through a full range of transfer, career/vocational, and continuing education programs on both a daytime and an evening basis.

PHILOSOPHY OF HARPER COLLEGE

An outstanding program of higher education for the community it serves is both the promise and the guiding philosophy of William Rainey Harper College. Created by a community responsive to the contemporary insistence on more education for more of its citizens, the college is determined to meet the particular 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 need for two years of high quality transferable collegiate credit, the college must recognize 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 realization of his 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 twin sober 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.

The mission of William Rainey Harper College, within the framework of this philosophy, is to provide the highest quality community college program of education, to seek out the most modern, creative, and effective organizational and educational ideas, and to test, improve, and implement those ideas which meet the needs of the community. Inherent in this mission is the responsibility of providing these programs at a reasonable cost to the student and at an efficient and reasonable cost to the community. The ultimate goal is an institution that allows

the individual student maximum opportunity to learn and develop.

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 can make for himself in modern society and to provide the necessary training for his social and personal goals. To this end, the college must create an environment conducive to the development of sound standards of thinking and conduct, and must provide those cultural experiences which will open to the student the heritage of the educated man.

OBJECTIVES

Specific objectives of the college are:

A 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.

B To offer two-year programs in technical-vocational training, providing students with the knowledge and skills required in a specific field.

C 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.

D To offer opportunities for adults in the community to initiate or to continue a collegiate education.

E To provide retraining and upgrading courses and programs to facilitate adjustment to, or re-employment or advancement in, a work environment that is undergoing rapid technological changes.

F To complement the educational programs with effective counseling services, including guidance and assistance to each individual student.

G To encourage the use of its facilities and services for educational and cultural purposes by all citizens of the community.

THE FIRST SIX YEARS

The history of Harper College is not long. Late in 1964, a petition was circulated calling for a referendum to vote on the establishment of a community college. A few months later, voters approved the referendum, and the townships of Elk Grove, Palatine, Schaumburg, and Wheeling joined together to form a community college district.

Formation of the first board of trustees was swift. Voters returned to the polls only thirty-four days after approving the referendum to elect seven citizens — from among forty-eight candidates — as the first board of the new college.

The college district (#512) reached its present boundaries in March, 1967, when voters from high school district #224 in the Barrington area voted to join the district.

The idea of a community college in this area had been mentioned as far back as 1950, but community ideas take time to grow and mature, and it takes the vision and initiative of many groups to bring important ideas to fruition.

Harper's history covers a period of only six years. Milestones in the development of this brief history include:

1965

May

College board of trustees met for the first time, using the board offices of High School District #211.

June and July

The board of trustees solicited various communities to determine their interest in having the new community college locate its campus in their area.

September

Dr. Robert E. Lahti from Michigan was employed as the first president of the college.

November and December

The board of trustees interviewed leading architectural firms for the purpose of designing and planning a new campus. Two outstanding architectural firms were selected to work in association — Caudill Rowlett Scott of Houston, Texas and Fridstein Fitch and Partners of Chi-

ago, firms respected and well known for their work in designing educational facilities.

1966

February

The college was approved as a Class I Junior College, thus becoming eligible to receive state and federal funds.

March

A 200-acre site in Palatine was selected for the permanent campus.

April

The college adopted the name "William Rainey Harper" in honor of the first president of the University of Chicago and the "father" of the junior college movement.

June

Voters in the district approved a bond issue referendum authorizing Harper College to sell \$7,375,000 in construction bonds. This bond issue represented the local share of the total building cost.

September

\$3,375,000 in construction bonds were sold to the First National Bank of Chicago at an average interest rate of 4.39 percent.

December

The first scholarship established for Harper students, a gift from the U.S. Gypsum Research Center employees, Des Plaines, was accepted by the college.

1967

January

The state approved Harper as an area vocational-technical school and set aside \$750,000 to develop approved vocational-technical programs.

The first faculty members were employed.

Tom Griffith of Palatine became the first student to enroll at Harper College.

\$4,000,000 in revenue bonds were sold to the First National Bank of Chicago at an average interest rate of 3.65 per cent.

February

An architectural master plan was approved. Phase I of the campus construction program was to cost approximately \$12,000,000.

March

Barrington voters approved a referendum by a nine to one margin to associate with the Harper district.

The state approved Harper for a \$2,600,000 federal grant.

April

Harper's first catalog was published.

September

Classes began. 1,725 students enrolled. The first edition of the student newspaper was published.

October

Ground was broken for the first six buildings of the new campus.

1968

February

The second semester began; enrollment topped 1,800; and 26 students were named to the academic honors list for the first semester.

March

Harper joined in forming GT/70, a national consortium of ten leading community junior colleges cooperatively seeking self improvement through new and stimulating approaches to quality education.

June

First summer session attracted nearly 1,000 including students from over 50 other colleges and universities throughout the country.

September

The second year of classes opened with over 3,700 students; the faculty size doubled; and five new career programs were added.

November

Harper's board of trustees became the second community junior college board admitted to membership in the Association of Governing Boards of Universities and Colleges.

1969

February

127 students earned academic honors for the first semester; five students were recognized in the 1968-69 edition of *Who's Who Among Students in American Junior Colleges*.

March

Harper president was named to a three-year term on the Board of Commissioners of the National Commission on Accrediting and on the Advisory Council of Presidents of the Association of Governing Boards.

April

Based on high performance ratings determined by a five-member examining team, the North Central Association for accreditation elevated Harper to candidacy status.

June

First commencement was held — 114 students received degrees; 72 associates in arts, 21 associates in science, and 21 associates in applied science.

Harper became the first college in Illinois to conduct student registration "on line" with its computer.

August

Harper's president was elected chairman of GT/70.

September

Phase I of campus construction was completed on schedule.

The third year of classes began with a fall enrollment of 5,400 — a student population two years ahead of the most liberal projections.

Non-credit continuing education courses for adults were offered for the first time.

October

Harper dental hygiene clinic opened to become the first such facility serving the northwest suburban area.

November

Harper linked with top management of northwest suburban business and industrial firms to form a Harper Industrial Steering Committee. The Committee announced plans for a series of in-service management conferences to be held at the college in 1970.

December

Dental hygiene students from Harper completed a six-week program of dental health education among 4,300 elementary school children from Schaumburg district 54 and Arlington Heights district 59.

1970

January

Harper and five other Chicago-area community colleges joined to form the "Skyway" community college athletic conference. Harper's vice president of student affairs was elected to head the new league.

Registration procedures were simplified through creation of a "register by telephone" system hooked into Harper's computer.

The board of trustees voted to request tax rate increases of twelve cents in the educational fund and five cents in the building (maintenance and operation) fund through a referendum held on March 21, 1970.

February

Harper presented a series of six Sunday afternoon "Open House" programs, February 8 through March 15, to introduce the college to local citizens.

Harper was featured in the National Education Television (NET) series on community colleges.

March

The seventeen cent tax referendum was rejected by a two to one vote despite endorsement by the Illinois Third District legislators.

April

Ten Harper students earned recognition in 1969-70 edition of *Who's Who Among Students in American Junior Colleges*.

May

Formal dedication of permanent campus was held on May 3, with a month-long dedication observance climaxing at the second annual commencement.

Halcyon, quarterly campus student magazine, merited national recognition in May issue of the *Junior College Journal*.

June

Hueristic, twice-yearly publication dealing with teaching innovations at Harper, introduced its first issue. Student literary magazine *Point of View* also made its debut.

Commencement on June 5 had 270 students receiving degrees: 116 associates in arts, 58 associates in science, 64 associates in applied science, and 32 certificate program recipients.

Northwest Dental Study Club praised Harper dental hygiene career program for helping to fill need for competent dental hygienists in northwest suburban area.

August

Office of evening and continuing education introduced an "outreach" program for credit and non-credit courses to be offered at off-campus locations throughout the Harper district.

Descendents of William Rainey Harper donated portrait study and personal effects of Dr. Harper to mark the beginning of a permanent archive for Harper memorabilia.

September

Announced special educational programs for homemakers of the 1970's, with program content based upon returns from a survey among 3,000 homemakers in the Harper College district.

Head count student enrollment for fall semester topped 7,000 as Harper continued to grow at a rate two years ahead of its projected pace.

October

Illinois Poet Laureate, Gwendolyn Brooks, keynoted "Expanding Horizons," first Harper workshop for women.

Illinois social science educators conducted two-day conference co-sponsored by Harper, University of Illinois at Chicago Circle, and Northern Illinois University.

Northwest Municipal Conference authorized transportation study to be conducted by Harper and the Center for Urban Studies at the University of Illinois Circle Campus. Ten northwest suburban municipalities agreed to assist in funding of study which will develop alternative plans for solving mass transportation problems in the northwest suburbs.

October-November

Three Sundays of open house activities attracted more than 3,500 visitors to Harper's campus.

November

Harper coordinated a GT/70 community college consortium conference on innovations in education which attracted educators from 20 states.

December

Faculty members of 24 associate degree nursing programs in Illinois met at Harper for a one-day seminar.

Twenty-nine sophomore dental hygiene students participated in second annual dental health education program for local elementary school children.

1971

January

Team of examiners from North Central Association of Colleges and Secondary Schools visited Harper preliminary to making recommendations for full accreditation of the college.

February

Students organized and conducted a full week of communication activities planned around the theme "Speak Out — Dialog '71."

On-campus office space for the Volunteer Service Bureau of Northwest Cook County was authorized by board of trustees to provide facilities for coordinating activities of Bureau's branch offices in the northwest suburban area.

March

Harper's Women's Advisory Committee sponsored a youth culture workshop for college-age and adult participants.

More than 3,000 visitors attended "Career Carousel," an all-day program to introduce high school students and adults to the 29 career/vocational programs at Harper College.

Full accreditation granted to Harper College by the North Central Association of Colleges and Secondary Schools.



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 him with information in particular subject fields but contributes toward an enlightened and integrated view of life. General education serves to complement the specialized training designed to prepare him for an occupation, whether it be 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 with the power to communicate them. Thus his efforts to assume his role as a citizen and to earn a livelihood are set in a perspective of values 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.

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 structures 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 an eight-week summer session. Registration for the fall semester opens the second week of September, and classes begin the following week. Final exams are held the third week of January.

Winter-spring semester registration is held the final week of January for classes beginning the first week of February. Final exams are held during the first week of June.

Summer session registration opens the second week of June for classes which begin the following week.

Day and evening classes are conducted throughout the college year.

EVENING AND CONTINUING EDUCATION

Harper College believes that education must be a continuing, lifelong pursuit to keep abreast of the knowledge explosion in science and technology and the pervasive influence of social and cultural change.

To meet the educational demands of adults, Harper has developed a complete schedule of regular evening credit and non-credit courses. Also, a variety of graduate extension courses are offered at Harper by Illinois colleges and universities.

The office of evening and continuing education seeks to provide adults with a variety of opportunities for continuing their education in a formal or informal manner. Various seminars and other programs are conducted, which are designed to meet the special needs of community interest groups. For example, the needs of business and industry are met through management training and development seminars, short courses, and workshops. Also offered are special programs relating to women's changing roles and family life.



Harper also seeks to extend its educational offerings to other community locations. Regular credit courses as well as non-credit courses are offered at various locations throughout the district as they are demanded. In addition, courses are offered on a contractual basis at other institutions such as industrial plants and local government offices.

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

LEARNING RESOURCES CENTER

The mission of the learning resources center is to support the instructional program of the college by providing appropriate resource services to both faculty and students. The staff is qualified and ready to help in the development and use of instructional and library materials.

1. Instructional Services

Instructional services, located on the first floor of the learning resources center, is prepared to assist faculty and students in the selection, production, and utilization of educational media. Instructional services has an extensive television studio, photographic service, a graphics production area, and an audio-visual equipment and materials check-out service.

2. Library Services

The library is located on the second floor of the learning resources center. It contains about 40,000 volumes, cataloged according to Library of Congress classification, along with newspapers and periodicals. About 600 magazines are currently received. Also included are extensive microfilmed back issues of the *Chicago Tribune*, the *New York Times*, and about 25 periodicals. A Xerox machine is available for making copies of either book or microfilm materials. The library card catalog contains entries for all books and other instructional media housed in the learning resources center, including records, tapes, video-tapes, slides, films, and film strips.

3. Flexible Facilities for Instruction

Seven lecture/demonstration facilities designed for large group instruction and equipped with audio systems, remote media projection, and television linked directly to the learning resources center provide the teachers and students with flexible resources for instructional use.

Other instructional areas and the LRC independent study facility, each equipped with a variety of media, are also available to support instruction.

HARPER'S CAMPUS

The completion of the first phase of Harper's exciting campus, which opened to 5,400 students in September, 1969, brought to the college district a complex of informal multi-level contemporary buildings nestled in the rolling terrain of 218 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 wing; 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.

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

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.

While suggesting strength, 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.

Scheduled for construction in the very near future are the music wing and an addition to the science-technology complex. Completion of the master plan in 1980 will enable the college to serve upwards of 16,000 students.

It is anticipated that the campus will become a focal point of the northwest suburban area, providing a cultural and educational opportunity center as well as a conference and meeting place for community organizations.

The Harper campus provides an exciting learning environment complete with the latest educational tools. Former students will be able to recall it with a feeling of pleasure and pride.

ADMISSIONS

High School Graduates

All high school graduates are eligible for admission to the college. Non-graduates, 18 years of age or older, may be admitted if they demonstrate the capacity and maturity to benefit from programs and courses offered by the college. To be placed in some programs within the college, applicants may have to meet additional requirements.

Adult Students

All classes are open to adults who meet course prerequisites and wish to attend. In addition, the college offers special courses designed to meet the needs of adults within the college community.

High School Students

High school students may be admitted to selected courses upon the recommendation of their high school principal and the director of admissions.

International Students

International students may be admitted to Harper College. Information regarding their admission may be obtained from the admissions office.



TYPES OF ADMISSION

Regular Admission

Applicants may be admitted as regular students if they are high school graduates or the equivalent and meet the requirements for placement in the program of their choice. Applicants not meeting the requirements will have an opportunity to demonstrate capacity to do college level work through an admission examination.

Provisional Admission

Applicants who have not met the requirements for placement into a specific program, or who fail to qualify for admission as regular students, may be admitted on a provisional basis to take the course work necessary to enter the program of their choice.

Applicants who have completed high school requirements by satisfactorily completing the General Education Development (G.E.D.) examination may be admitted as regular or provisional students, depending upon their performance on the admission examination.

Transfer Admission

Individuals transferring in good standing from other colleges or universities will be admitted as regular students. Students not in good standing will be admitted on a probationary status if it is felt they are ready to pursue a college program. Students must provide the admissions office with official college transcripts covering all previous college work. Students in good standing will be granted credit for all courses passed if applicable to their program at Harper. Students admitted on probation will be given credit for all applicable work in which a grade of "C" or higher was awarded.

Special Admission

Applicants desiring to enroll on a part time basis carrying less than 12 hours and not interested in earning credits applicable toward a degree may be admitted after completing the Special Admission Form. If at a later date the student wishes to enroll in a degree program, credits earned as a special student may be applicable. A student must complete the requirements for regular admission when 24 semester hours have been accumulated or when the student becomes a candidate for a degree.

Readmission

Any student who has previously attended Harper College and who is returning after an absence of one semester or more must complete an application for readmission and supply transcripts for all academic work taken since last attending Harper College. Any student dismissed for an academic or disciplinary reason must submit a petition for readmission to be reviewed by the admissions committee.

Application Procedures

Prospective full-time students (12 semester hours or more) or special students who have accumulated 24 semester hours or become candidates for a degree, are required to:

- 1 Apply for admission using forms supplied by the college.
- 2 Submit complete transcripts of all high school work and any college credits earned.
- 3 Take the American College Test (A.C.T.) and have the scores submitted to the college. Scores must be forwarded from the A.C.T. test center in Iowa City, Iowa.
- 4 Complete and return the health form.
- 5 Pay a \$10.00 non-refundable application fee.

RESIDENCY

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

Resident

A student whose residence has been determined to be within the William Rainey Harper College District (Illinois Junior College District 512).

Non-Resident

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

Out-of-State

A student whose residence is outside the State of Illinois.

ADVANCED PLACEMENT POLICY

Credit and advanced placement will be awarded to students with adequate College Entrance Examination Board (CEEB) Advanced Placement Examination grades in areas comparable to the Harper curriculum. The granting of credit and/or advanced placement will be determined following an evaluation of the examination by the appropriate division chairman.

Armed Service Experience Credit

Credit will be granted for educational experience completed while in the Armed Services. Applicants submitting 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 the United States Armed Forces Institute, will receive credit and advanced placement as recommended by the Commission on Accreditation of Service Experiences of the American Council on Education. These recommendations will be considered if the courses are equivalent to the courses offered by the college.

DEVELOPMENTAL PROGRAM

Harper College has established a program for students whose high school achievement and test scores are below the minimum for admission to other college curricula. This program is designed to give each student every opportunity to develop his abilities, to remove deficiencies, and to qualify for the college curriculum of his choice.

TUITION AND FEES (subject to change without notice)

Tuition

Resident Tuition	\$10.00 per semester hour
Non-Resident Tuition	\$32.54 per semester hour (see "Charge Back" section)
Out-of-State Tuition	\$48.04 per semester hour

Application Fee

An application fee of \$10.00 is charged each new student applying for admission. The fee, which is non-refundable, covers the cost of processing the application.

Activity Fee

Students enrolled for 12 or more semester hours will pay a \$10.00 activity fee for each semester; students enrolled for less than 12 hours will pay a \$5.00 activity fee.

Payment of this fee entitles students to admission to all student activities and to copies of all student publications (see "Student Activities").



Special Music Fee

Students enrolled in minor applied music will pay \$56.00 per semester. This entitles the student to one private lesson per week. Major applied music students will pay \$112.00 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 \$10.00 includes the cost of the diploma.

Laboratory and Music Fees

Laboratory and music fees are indicated in the course descriptions.

Late Registration Fee

A fee of \$5.00 is charged any student who registers after the close of the official registration period.

Program Change Fee

A fee of \$3.00 is charged for program changes following registration.

WITHDRAWALS

When a student wishes to withdraw from a class after regular registration, he must withdraw officially by petition approved by his counselor. The following guidelines determine grades for an official withdrawal.

1. Classes dropped prior to the beginning of the fourth week will not become a part of the students permanent record.
2. A "W" grade will be assigned to a class dropped after the beginning of the fourth week and prior to the beginning of the eleventh week.
3. A class dropped after the beginning of the eleventh week and prior to the beginning of the thirteenth week will be assigned a "W" grade if the student was passing at the time of withdrawal; if the student was failing at the time of withdrawal a grade of "F" will be assigned.

4. A grade of "F" will be assigned to a class dropped after the beginning of the thirteenth week. If extenuating circumstances exist, students **may** petition for a "W" grade through the office of the vice president of academic affairs. Students not withdrawing officially through the counseling office are subject to an "F" grade.

TUITION REFUND POLICY

Tuition refund requests should be made to the office of the registrar. Refunds will be made according to the following schedule:

	Percent of Refund
First week of classes*	80
Second week of classes	60
Third week of classes	40
Fourth week of classes	20
After fourth week	None

*Terminates with the Friday ending the first full week of classes in accordance with the college calendar.

CHARGE BACK

Resident students desiring to pursue a certificate or degree program not available at Harper College may apply for charge back tuition if they attend another public junior college in Illinois which offers that program.

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 admissions.

GRADING

At mid-term and 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 fourth week of the semester. Mid-term grades have no official standing and are given to

provide students with an indication of academic progress. The official grade point average is computed only on the basis of final grades awarded at the end of each semester or summer 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
X	Incomplete	.0
W	Withdrawal	.0

ACADEMIC HONORS

Trustees' Honor List

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

Dean's Honor List

Students achieving a grade point average of 3.50 to 3.74 during any semester are placed on the Dean's Honor List.

Honors List

Students with a grade point average of 3.25 to 3.49 are given recognition on the Honors List.

INCOMPLETE GRADES

A student may receive a grade of "X" for unfinished work in a course provided the work was incomplete because of circumstances deemed by the instructor to be unavoidable. The unfinished work must be satisfactorily completed by the mid-term of the following semester or a grade of "F" will be assigned. An extension of time may be granted by the vice president of academic affairs for special cases (e.g., military service, extended illness).



AUDITING A COURSE

A student desiring to audit a course without credit must, at the time of registration, receive approval from the instructor or division chairman and from the registrar's office. Students will be required to pay full tuition and fees and will receive a grade of "H" for the course. An auditor cannot change his status to that of a credit student nor can credit for the audited course be established at a later date.

SELECTIVE RETENTION

Students who have accumulated seven hours of credit or more and who have failed to achieve satisfactory progress may be placed on probation or be disqualified. In the following table, satisfactory performance, probation, and disqualification are defined in terms of grade point average.

Attempted Cumulative Hours	Disqualified	Probation	Satisfactory
7-18	.00- .99	1.00-1.49	1.50 or more
19-36	.00-1.29	1.30-1.74	1.75 or more
37 or more	.00-1.59	1.60-1.99	2.00 or more

Students may be disqualified without first being placed on probation if their grade point average is below the minimum level shown for probationary status. For example, if a student taking 12 credit hours during his first semester earns only a .91 grade point average, he will not be able to enroll at Harper the following semester.

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 disqualified. A probationary student may be required to carry a reduced number of units upon the recommendation of his counselor. Students not achieving a satisfactory grade point average after two semesters on probation will be disqualified from further attendance. Students ad-

mitted on probation from another institution of higher education must maintain a "C" (2.0) grade point average until they meet the "satisfactory" category of the selective retention plan.

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 counseling center at Harper is accredited by the American Personnel and Guidance Association, and the clinic operated by Harper's Dental Hygiene career program is accredited by the American Dental Association.

TRANSCRIPTS

Official transcripts of a student's academic record will be issued and sent, at his request, to other educational institutions and prospective employers. Each student is entitled to two transcripts without charge. A fee of \$1.00 is charged for each additional copy.

TRANSFER OF CREDIT

Credits earned at Harper College may be transferred to other institutions of higher education. Students should select courses at Harper to fit the program they plan to follow at the four-year institution. These courses should be selected with the aid of one of the members of the college counseling staff. The college counselors are available to help students select courses. However, primary responsibility for making the correct academic selections rests with the student. In this regard it is important that a student know which program and major he wishes to pursue and, if he wishes to transfer, which four-year college he will attend.

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 an 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 (G.P.A.) is 2.0 (C average) or above at the previously attended institution. The student's work at each institution is evaluated independently if several institutions were attended.
3. If the student's cumulative G.P.A. is less than 2.0 at a previously attended institution, credit may be transferred for all courses earning credit and successfully completed with a grade of "C" or above.
4. Credit may be transferred, but the grades earned at other institutions are not transferred nor are the grades included in computing the cumulative G.P.A. at Harper College.
5. Religion courses which are of a sectarian nature or courses which are not applicable to programs at Harper College may not receive transfer credit.

FINANCIAL AID

Harper College has developed a financial aid program so comprehensive that virtually no student in this area needs to forego a college education due to a lack of funds.

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 \$1,500.00 a year (interest free and no payments while the student is in college) can be obtained for students whose families have an adjusted net taxable income of under \$15,000.00. 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. Nearly 1,500 Harper College students

(about 25 per cent) are receiving some form of assistance in programs administered by the office of placement and student aids.

Many private and public agencies are ready and able to assist the worthy college student. Scholarships, grants, and loans are available through the federal government, the State of Illinois, local organizations such as women's clubs, chambers of commerce, the American Association of University Women, business, and industry. The Harper College board of trustees also offers a series of tuition scholarships to graduates of high schools in the college district (#512).

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 (see page 24).
2. Complete the Harper College financial aid application.
3. Furnish **evidence of need** by submitting either an American College Testing Program (A.C.T.) "Family Financial Statement" or a College Scholarship Service (C.S.S.) "Parent Confidential Statement." These are standard financial statements and are required by some financial aid programs including National Defense Student Loans, College Work-Study Program, Nursing Scholarships, and Educational Opportunity Grants.
4. Veterans, widows of veterans, war orphans, and children of families receiving social security dependent allowances are eligible for special assistance. Information about applying for educational assistance under these programs may be obtained from the Harper office of placement and student aids.

PLACEMENT SERVICES

Harper College offers complete placement services to students seeking full time and part time employment. Graduates from two-year programs are assisted in preparing for interviews, including resume and application form preparation, and interviews are arranged with prospective employers. Former Harper graduates can also utilize the college placement services.

Questions concerning placement opportunities should be directed to the office of placement and student aids.

COUNSELING

Counseling is one of the most important and necessary aspects of a community college. Harper recognizes this fact and has developed an extensive program of counseling services. All students are encouraged to see a counselor when personal or social problems arise or when assistance is needed in selecting a vocation. Counselors also serve as academic advisors, and all full time students are assigned to a specific counselor.

Human motivation seminars (small student groups numbering six to ten) are provided through the counseling department. The seminars are designed to allow individuals to experience honest and positive interactions with one another as a means of promoting personal growth. Individual strengths, values, goals, and achievements are some of the concepts discussed during the eight-week sessions.

A decentralized counseling approach is used at Harper, with counselors housed within divisional offices. Counselors are thus readily accessible to students on an appointment basis.

A counselor is always on duty in the counseling center for students who do not have an appointment. Hours are the regular college hours during the daytime and evenings (except Friday night).

The counseling center maintains a vast collection of information on vocational and college selection, including a career library describing thousands of vocations, filmstrips and recordings on career information, a machine used for assisting the student in college selection, and college catalogs for personal use by the students.

Testing Services

A comprehensive testing program is available to students without charge. Test results, through proper interpretations, can give valuable information needed to make decisions about future plans and goals. In addition to



personality, interest, and aptitude tests, national testing programs such as G.E.D., A.C.T., and the dental hygiene aptitude tests are administered at Harper College.

Community Counseling Center—A Service for Non-Harper Clients

Counseling and testing services are available, on a fee basis, to non-Harper clients regardless of age. A student finishing high school (or recently out of high school) could become a client because of problems involving the choice of an appropriate career or occupational goal, finding a suitable college or other educational institution, obtaining information about different kinds of work, or diagnosing academic difficulties. Another client may have questions regarding the desirability of returning to school, the suitability of some specialized career training program, or the wisdom of changing to another occupation after some years of experience in his present work. In addition to vocational and academic counseling and testing, personal and family counseling services are also available.

ORIENTATION

All students are invited to participate in the college orientation program held each year during the months of August and January. General information about the college will be presented, and students will meet with their counselors for academic advisement.

STUDENT SENATE

The focal point for the involvement of students in the democratic process at Harper College is the student senate. It is the aim of the college to give student government true authority and responsibility for student affairs and to recognize it as the main vehicle through which students are involved in the decision-making processes of the college. Students are appointed to college committees which make policy directly affecting them, and they are asked to assume a major role in keeping the administration abreast of student thought.

CONDUCT

In the interest of guaranteeing the broadest range of freedom to each member of the college community and maintaining order on the campus, some rules have been laid down by the students and other members of the college community. All students are held to be informed of these rules, which are printed in the *Student Handbook*.

STUDENT ACTIVITIES

The college center is an integral part of the Harper activity program. It is the setting for lectures, concerts, informal discussions, teach-ins, dances, meetings, conferences, and a variety of other activities. Facilities include food service areas, lounges, meeting rooms, game room, offices for student government, clubs and organizations, student publications, counseling, health services, job placement, and student financial aids.

A number of clubs and organizations are active at Harper College, and students are encouraged to begin any other organization that may interest them. Among the clubs formally recognized are the Future Secretaries of America, Folk Music Club, Harper Association of Marketing Management Students, Harper Players, Junior American Dental Hygiene Association, Newman Community, Nursing Students Club, Human Rights Club, Spread Eagle Ski Club, and Electronics Club. Any student interested in participating in or beginning organizations should contact the director of student activities.

The activity program includes a cultural arts series of lectures, concerts, art exhibits, films, and dramatic productions; student publications including the college newspaper, *Harbinger*, student magazine, *Halcyon*, and a literary publication, *Point of View*; intercollegiate athletic contests; a full program of intramural athletics with traditional seasonal sports as well as bridge, chess, and billiards; social programs, speech activities, and a student travel program of domestic and foreign tours.

HEALTH SERVICES

Academic achievement and the choice of educational goals are largely dependent upon the physical and emo-

tional well-being of the student. The college's acceptance of this fact has meant the recognition of the responsibility to provide a health program equal to the health needs of the students on campus.

The health services program is directed by a registered nurse with experience in counseling. A physician is available for medication, prescription, and consultation with the nurse. Students are encouraged to use health services facilities when ill or injured as well as for confidential counseling regarding personal health problems.

A rest area is available for students, faculty, and staff.

The college also recognizes that the health services program has a role to play in the health education of the students. Symposiums and literature on various health-related topics are available for students as well as for community residents.

ATHLETICS

Harper College is a member of the Skyway Community College Conference and the National Junior College Athletic Association. Colleges in the Skyway conference, in addition to Harper, are Amundsen, Elgin, Lake County, McHenry, Oakton, Triton, and Waubensee. Harper participates in eight sports, including football, cross country, golf, basketball, wrestling, baseball, tennis, and track.

An extensive intramural program has been developed by the athletic department. All students are encouraged to participate in these extra-curricular activities.

PARKING

All members of the college community, including students, faculty, and staff, are required to register their motor vehicles with the college, 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 security office in building B registers vehicles and issues parking permits.



GRADUATION REQUIREMENTS

1. A minimum of 60 semester hours of credit, at least 30 of which must be earned in attendance at Harper College.
2. A minimum grade point average of 2.0 for all work taken for the associate in arts and the associate in science degrees. A minimum grade point average of 2.0 for any applicable 60 semester hours of work for the associate in applied science degree.
3. Two hours of credit in physical education activity courses in addition to the 60 hours of credit above (1). Veterans with DD form 214 exempt from physical education requirement.
4. Satisfactory completion of political science 201 or a passing score on a college administered test on the constitutions of the United States and state of Illinois, the principles of American democratic government and the proper use and display of the American flag (sec. 27-4—school code).
5. A math standard score of 14 or higher on the A.C.T. test, a satisfactory score on a math achievement test administered by the college or the satisfactory completion of a math course at the college numbered 100 or above.
6. Requirement of 60 hours must be in courses numbered 100 or above for the degrees of associate in arts and associate in science.
7. Enrollment in Harper College during the semester in which graduation requirements are completed. Waiver of enrollment requirement by dean of instruction where exceptional circumstances warrant.
8. Fulfillment of the degree group requirements.
9. A student must apply for graduation and pay the graduation fee of \$10.00. Students are encouraged to complete their petition for graduation when registering for the semester in which his graduation requirements will be fulfilled. Notification of the students intent to graduate will be accepted in the Registrar's Office no later than one week after the mid-term of the semester in which the student intends to graduate.

DEGREE GROUP REQUIREMENTS

	Associate in Arts	Associate in Science	Associate in Applied Science
I. COMMUNICATION SKILLS			
English 101, 102	6 hrs.	6 hrs.	6 hrs. ¹
II. SOCIAL SCIENCES			
anthropology, economics, geography, history, political science, psychology, sociology, or social science	6 hrs.	6 hrs.	6 hrs.
III. SCIENCE OR MATHEMATICS			
biology, chemistry, engineering, geology, mathematics, microbiology, physical science, physics, zoology	8 hrs.	20 hrs.	8 hrs. ²
IV. HUMANITIES			
art, fine arts, foreign language, humanities, literature, music, philosophy	6 hrs.	6 hrs.	3 hrs.
	26 hrs	38 hrs.	23 hrs.

¹ English 130 or English 99 or 103 may be used in satisfying this requirement under certain conditions. See a counselor for details.

² Students majoring in an approved applied science degree program may count courses in their major toward fulfillment of this requirement.

CAREER PROGRAMS

Harper College offers a considerable number of associate degree and certificate programs in the vocational area.

Associate degree programs currently being offered are:

Accounting Aide
 Architectural Technology
 Chemical Technology
 Child Care
 Data Processing Technology
 Dental Hygiene
 Electronics Technology
 Fashion Design
 Fire Science
 Food Service Management
 Journalism
 Law Enforcement
 Marketing Mid-Management:
 General Marketing Option
 Supermarket Management Option
 Mechanical Engineering Technology
 Numerical Control Technology
 Nursing
 Secretarial Science:
 Secretarial Career
 Legal Secretary
 Supervisory & Administrative Management

Certificate programs are being offered in:

Accounting
 Architectural Technology
 Baking
 Business and Industrial Security
 Child Care
 Clerical Office or Administrative Assistant
 Cooking
 Data Processing
 Data Processing Clerical
 Electronics
 Fashion Design
 Fire Science

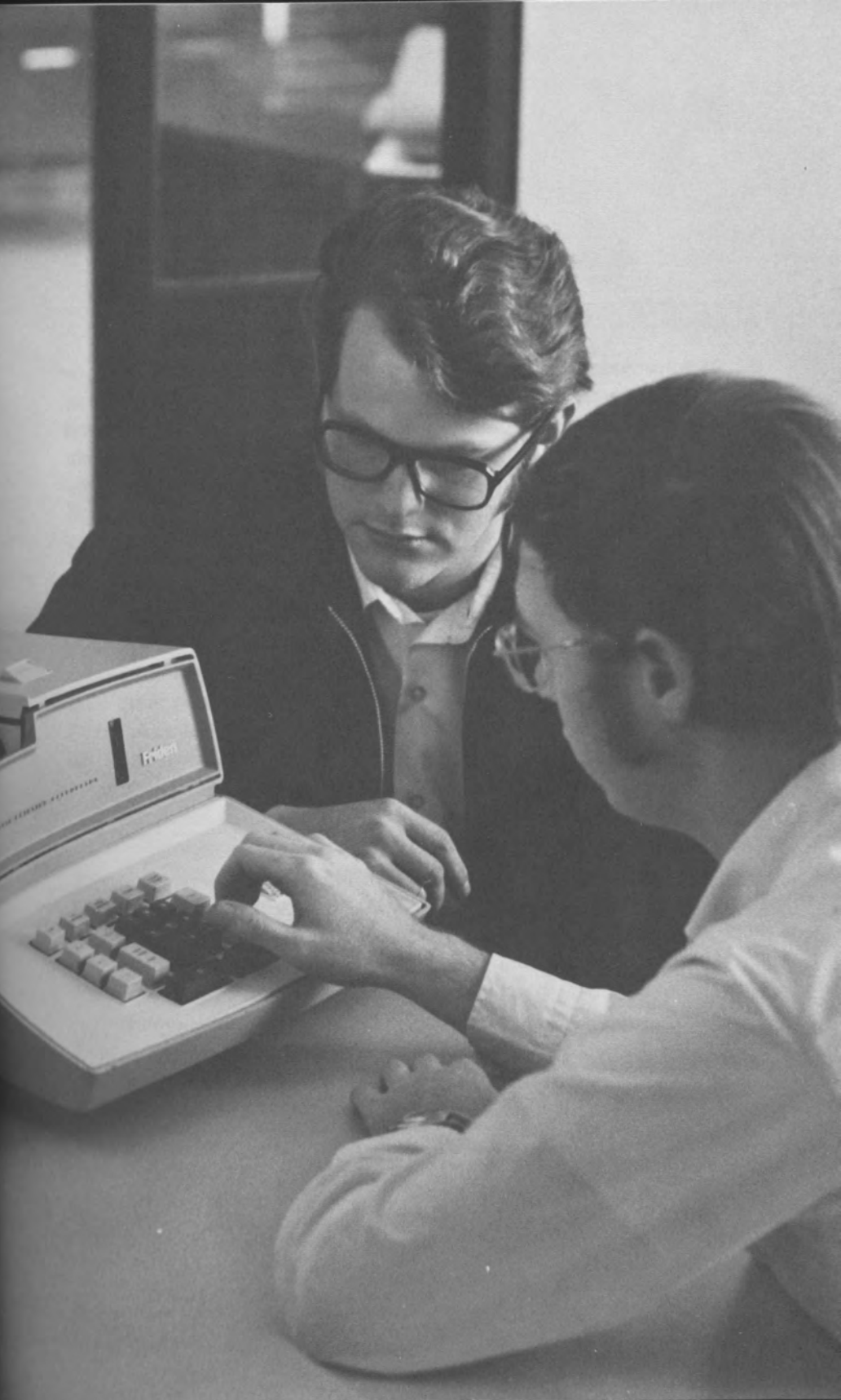
Law Enforcement
Mechanical Drafting
Mechanical Technician
Numerical Control Technician
Practical Nursing
Real Estate
Secretarial Career
Supermarket Management
Supervisory and Administrative Management

Additional programs considered for a year or two hence include:

Dental Secretary
Drafting
Fashion Merchandising/Retail Management
Interior Design
Landscape Architecture
Medical Secretary
Photography
Refrigeration & Air Conditioning
Teacher Aide
Turfgrass Management

Programs must be approved by the State Board before implementation. For current information on these programs, please check with the director of admissions.

The programs offered for 1971-72 and their course requirements are described in the following pages.



ACCOUNTING AIDE

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

First Year

FIRST SEMESTER	SECOND SEMESTER
English ¹ 3	ENG 130 Business Writing ¹ 3
Mathematics ² 3	SPE 101 Fund. of Speech 3
BUS 101 Accounting I 3	DPR 101 Intro. to Data Proc. . . 3
BUS 111 Intro. to Bus. Org. . . . 3	BUS 102 Accounting II 3
SEC 131 Business Machines . . . 2	ECO 200 Intro. to Economics . . 3
Physical Education elective 1	Physical Education elective 1
<u>15</u>	<u>16</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
BUS 098 Tax & Payroll Acctg. . . 4	PSY 145 Psychology in Business & Industry 3
BUS 211 Business Law I 3	BUS 202 Inter. Acctg. II 3
BUS 201 Inter. Acctg. I 3	BUS 203 Cost Accounting 3
PSY 101 Intro. to Psychology . . 3	BUS 270 Principles of Mgt. 3
Humanities elective 3	BUS 262 Accounting Seminar & Internship 3
<u>16</u>	<u>15</u>

¹ Students may elect English 99, English 101 or English 102 depending on their test scores and advice of their business division counselor. Business Writing may be taken as the second English course.

² Students may elect any mathematics course offered depending on their test scores and advice of their vocational counselor; however, only MTH 095 or higher will satisfy this requirement.

ARCHITECTURAL TECHNOLOGY

Architectural Technology is a two-year technical program leading to an Associate in Applied Science degree. Curriculum emphasis is on architecture, 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	SECOND SEMESTER
ATE 101 Intro. to Architectural Tech. I 4	ATE 102 Intro to Architectural Tech. II 4
ATE 103 Building Materials Technologies I 4	ATE 104 Building Materials Technologies II 4
ATE 105 Computer Math for Architectural Tech. I ² 3	ATE 106 Computer Math for Architectural Tech. II ² 3
ENG 101 Composition ¹ 3	ENG 102 Composition ¹ 3
Social Science elective 3	Social Science elective 3
Physical Education elective 1	Physical Education elective 1
<u>18</u>	<u>18</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
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 & Optimization 3	ATE 206 Comp. Applications in Architecture 3
ATE 207 Strength of Mtls. I . . . 3	ATE 208 Strength of Mtls. II . . . 3
Humanities elective 3	Technical elective 3
<u>17</u>	<u>17</u>

¹ English 99, 103 or 130 may be used, under certain conditions, to satisfy this requirement.

² Students in this program may count this course toward fulfillment of their mathematics requirement.

CHEMICAL TECHNOLOGY

Chemical Technology is a two-year program leading to an associate in applied science degree. The program is designed to combine chemical, physical, and mathematical theories with procedural and technical skills for application in the chemical and allied industries.

Graduates will find employment in such positions as research technician, production technician, product analyst, pilot-plant operator, and product or equipment salesman.

First Year

FIRST SEMESTER	SECOND SEMESTER
CHM 121 General Chem. I 4	CHM 122 General Chem. II . . . 4
MTH 101 Fund. of Math. I 3	MTH 102 Fund. of Math. II 3
ENG 101 Composition 3	ENG 103 Report Writing 3
PHY 101 Technical Physics I . . . 4	PHY 102 Technical Physics II . . 4
CHM 110 Chemical Tech. Seminar 1	PED 216 First Aid 2
Physical Education elective 1	<u>16</u>
<u>16</u>	

Second Year

FIRST SEMESTER	SECOND SEMESTER
CHM 204 Organic Chemistry . . 5	Humanities elective 3
ECO 201 Principles of Eco. . . . 3	Social Science elective 3
CHM 240 Unit Operations I . . . 4	Physical Education elective 1
CHM 210 Quantitative & Instrumental Analysis I 5	CHM 241 Unit Operations II . . 4
<u>17</u>	CHM 211 Quantitative & Instrumental Analysis II 5
	<u>16</u>

CHILD CARE (Care and Guidance of Children)

The Child Care curriculum meets the growing demand in local communities for trained personnel capable of working in nursery schools, day care centers, and mental health centers for children. The curriculum prepares students for semi-professional positions in the full range of child care, including psychiatric aide, mental health worker, group counselor, classroom aide, and nursery school teacher.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 099 Composition	ENG 101 Composition
or	or
ENG 101 Composition 3	ENG 102 Composition 3
PSY 101 Intro. to Psychology .. 3	EDU 201 Intro. to Education .. 3
SOC 101 Intro. to Sociology .. 3	PSY 216 Child Psychology I ... 3
Elective (Math) 3	PSY 217 Adolescent Psy. 3
Elective (Humanities) 3	SOC 215 Group Dynamics 3
Physical Education 1	Physical Education 1
<u>16</u>	<u>16</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
SOC 120 Social Patterns of Courtship and Marriage 3	CCA 220 Child Care Practicum Internship 6
EDU 211 Educational Psy. 3	CCA 110 Creative Activities for Young Children 3
CCA 214 Laboratory 2	PED 201 First Aid 2
CCA 215 Principles of Pre-School Education 4	PSY 219 Psychology of Exceptional Children 3
CCA 109 Language Arts for the Young Child 3	<u>14</u>
<u>15</u>	

DATA PROCESSING TECHNOLOGY

The Data Processing Program is a technical curriculum to train 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 will find employment as computer programmers, systems analysts, and computer and unit record equipment operators.

First Year

FIRST SEMESTER	SECOND SEMESTER
DPR 101 Intro. to DP 3	DPR 108 Computer Prog. I 5
ECO 200 Intro. to Economics . . 3	DPR 150 DP Math. I 3
ENG 101 Composition ¹ 3	DPR 203 Sys. Anal. & Des. I . . . 3
MTH 103 College Algebra ¹ 3	BUS 101 Accounting I 3
SOC 101 Intro. to Soc. 3	BUS 111 Intro. to Bus. Org. . . . 3
Physical Education elective 1	<u>17</u>
<u>16</u>	

Second Year

FIRST SEMESTER	SECOND SEMESTER
DPR 110 Computer Prog. II 5	DPR 210 Computer Prog. III 4
ENG 103 Report Writing 3	Humanities elective 3
DPR 204 Sys. Anal. & Des. II . . . 3	DPR 202 Prog. Systems 3
DPR 250 DP Math. II 3	DPR 230 Field Pro./Case St. . . . 3
BUS 102 Accounting II 3	BUS 203 Intro. Cost Acc. 3
Physical Education elective 1	<u>16</u>
<u>18</u>	

¹ Students not qualifying in placement tests for English 101 or college Algebra 103, will be required to take appropriate preparation work.

DENTAL HYGIENE

Dental Hygiene is a two-year program including one summer session and leading to an associate in science degree in dental hygiene. The program is designed to train the hygienist and educate the person. Pre-admission requirements include high school graduation with a minimum of high school mathematics, chemistry and biological science. Candidates must score satisfactorily on the National Dental Hygiene aptitude test and have a personal interview with a member of the dental hygiene faculty.

Graduates, after passing state board examinations and achieving licensure, are qualified for private practice in the dental office, hospitals, health agencies, government, and armed services.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 Composition 3	ENG 102 Composition 3
SOC 101 Intro. to Sociology . . . 3	BIO 180 Histology & Embryology 3
BIO 160 Anatomy & Phys. 4	BIO 161 Anatomy & Phys. 4
CHM 100 Intro. Chemistry 4	CHM 101 Biochemistry 4
DHY 170 Intro. to Dentistry .. 1	DHY 111 Dental Radiology . . . 1
DHY 161 Dental Anatomy 4	DHY 101 Pre-clinic 2
<u>19</u>	Physical Education elective 1
	<u>18</u>

SUMMER SESSION

ART 105 Art Appreciation 3
BIO 130 Microbiology 4
DHY 150 Clinic & Radiology .. 2
<u>9</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
SPE 101 Fund. of Speech 3	PSY 101 Intro. to Psychology .. 3
BIO 190 Pathology 3	PHI 115 Ethics 3
DHY 230 Nutrition & Perid. . . . 2	DHY 201 Seminar 2
DHY 240 Dent. Pharm. & Anesthetics 1	DHY 221 Community Dent. . . . 3
DHY 220 Community Dent. . . . 3	DHY 251 Clinic 4
DHY 250 Clinic 4	DHY 291 Dental Assisting 2
DHY 280 Dental Materials & Assisting 3	Physical Education elective 1
<u>19</u>	<u>18</u>

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

First Year

FIRST SEMESTER	SECOND SEMESTER
ELT 110 Intro. Electronics 2	ELT 111 Electronics I 3
ELT 101 Circuits I 4	ELT 102 Circuits II 4
MTH 106 Mathematics I 5	MTH 107 Mathematics II 5
ELT 105 Electro-Mech. Draft. . . 3	ELT 210 Computer Program. . . 3
ENG 101 English 3	Humanities elective ¹ 3
Physical Education elective 1	
	<u>18</u>
<u>18</u>	

Second Year

FIRST SEMESTER	SECOND SEMESTER
ELT 203 Electronics II, Pulse . . . 4	ELT 204 Electronics III 4
ELT 103 Circuits III, Networks . 4	Electronics Tech. elective ² 4
MTH 206 Mathematics III 3	Social Science elective ³ 3
PHY 101 Technical Physics I . . 4	ENG 103 Eng. Tech. Report . . . 3
Social Science elective ³ 3	PHY 102 Technical Physics II . . 4
	Physical Education elective . . . 1
<u>18</u>	<u>19</u>

¹ Any three hour course in the Humanities area will meet this requirement.

² Technical electives

ELT 205 Electronic Instrumentation 4	ELT 211 Analog Simulation I 4
ELT 206 Electronic Computers 4	ELT 212 Analog Simulation II 4
ELT 207 UHF Com. and Reception 4	

Courses may not be taken out of sequence without the consent of the instructor.

³ The Social Science requirement can be completed by taking six hours from the following courses.

ANT 201 General Anthropology 3	HST 141 History of the Western Civilization 4
ECO 201 Principles of Economics 3	PSC 201 American Government 3
GEO 101 World Geography 3	PSY 101 Introduction to Psychology 3
HST 111 History of the American People to 1865 3	PSY 145 Psychology in Bus. & Ind. 3
HST 112 History of the American People from 1865 3	SOC 101 Introduction to Sociology 3



FASHION DESIGN

Fashion Design is a two-year 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. A survey of History of Costume, as an inspiration for contemporary design, and an analysis of current fashion trends are included. Facilities will simulate the professional atmosphere of the fashion industry.

Graduates will find employment as couture fashion designers, mass production fashion designers, flat pattern makers, fashion illustrators and fashion co-ordinators. Other areas of employment in the fashion industry include: fashion advertising, fashion promotion, fashion journalism, retailing, buying, window displaying, and other related careers.

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

First Year

FIRST SEMESTER	SECOND SEMESTER
FAS 101 Flat Pattern Design and Draping I 4	FAS 102 Flat Pattern Design and Draping II 4
FAS 103 Apparel Design I 3	FAS 104 Apparel Design II 4
FAS 105 Fashion Design Illustration I 1	FAS 106 Fashion Design Illustration II 1
FAS 107 Textiles & Apparel Construction I 2	FAS 108 Textiles & Apparel Construction II 2
ENG 101 Composition* 3	ENG 102 Composition* 3
Social Science elective 3	Physical education elective . . . 1
<u>16</u>	<u>15</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
FAS 201 Advanced Flat Pattern Design & Draping I 4	FAS 202 Advanced Flat Pattern Design & Draping II 4
FAS 203 Advanced Diversified Apparel Design II 4	FAS 204 Advanced Diversified Apparel Design II 4
FAS 205 Tailoring Tech. I 2	FAS 206 Tailoring Tech. II 2
FAS 207 History of Costume I . 2	FAS 208 History of Costume II . 2
Social Science elective 3	Humanities elective 3
Physical Education elective . . . 1	
<u>16</u>	<u>15</u>

* Students may elect ENG 99, ENG 101 or ENG 102, depending on their test scores and advice of vocational counselor.

FIRE SCIENCE

The program specifically establishes a two-year associate degree program for currently employed fire protection personnel and new students seeking employment in the general field of fire science.

The program will provide formal training for persons who desire:

1. To enter fire service after completion of the program.
2. To continue their education in a Fire Protection Engineering baccalaureate program.
3. To seek employment in industrial fire protection, with insurance companies, or with fire protection equipment companies.
4. To upgrade their professional status and intellectual competence (those currently employed in fire service).

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 099 or 101 Composition .. 3	ENG 103 Report Writing 3
PSY 101 Introduction 3	Approved Elective ¹ 3
FIS 102 Introduction 3	FIS 115 Bldg. Const. & Codes .. 3
MTH 095 Algebra 3	MTH 096 Geometry 3
FIS 110 Tactics & Strategy I ... 3	FIS 111 Tactics & Strategy II .. 3
Physical Education elective 1	Physical Education elective 1
<u>16</u>	<u>16</u>

Second Year

THIRD SEMESTER	FOURTH SEMESTER
FIS 130 Fire Hydraulics 3	FIS 106 Fire Prevention II 3
FIS 103 Fire Prevention I 3	Humanities elective 3
Physical Science elective 3	FIS 120 Haz. Materials I 3
SPE 101 Speech 3	FIS 201 Fire Admin. II 3
FIS 101 Fire Admin. I 3	FIS 140 Fire Causes & Inves. ... 3
<u>15</u>	<u>15</u>

¹ Approved Electives may be selected from the following: FIS 121, PSY 145, PHY 102, PSC 201, SOC 101, ATE 101, LAE 213.

FOOD SERVICE MANAGEMENT

Food Service Management is a two-year 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, with 15 credits required in the division of business. Graduates will be qualified to assume positions as production supervisors, management trainees, and small unit managers. One-year certificate programs will be offered in Cooking and in Baking.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 099 or 101 3	ENG 101 or 102 (Composition). 3
FSM 111 Intro. to Food Svc. . . . 2	BUS 111 Intro. to Bs. Org. . . . 3
FSM 114 Stand. & Sanitation . . . 3	FSM 115 Nutrition & Menu Pl.. 2
FSM 112 Quantity Food Prod.	FSM 112 Quantity Food Prod.
or	or
FSM 113 Quantity Food Svc. . . . 4	FSM 113 Quantity Food Svc. . . . 4
BUS 150 Business Math 3	BUS 099 Bs. Recordkeeping
Physical Education elective . . . 1	or
<u>16</u>	BUS 101 Accounting I 3
	Physical Education elective . . . 1
	<u>16</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
PSY 101 Intro. to Psychology . . . 3	Humanities elective 3
Social Science elective 3	SPE 101 Fund. of Speech 3
ENG 130 Business Writing 3	FSM 214 Cost Control 3
FSM 211 Purch. & Storage 3	FSM 215 Rest. Layout & Equip. . 3
FSM 212 Food Serv. Supv. 4	FSM 213 Seminar & Internship . 4
<u>16</u>	<u>16</u>

JOURNALISM

Journalism is a two-year program leading to an Associate in Applied Science degree. The curriculum provides intensive study and practical training in all phases of 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 ¹	SECOND SEMESTER
JNM 130 Fundamentals of Journalism 3	JNM 131 News Reporting and Writing 3
ENG 101 Composition 3	JNM 133 Feature Writing 3
HST 111 History of the Amer. People to 1865 3	JNM 134 Media Adjuncts 4
PHS 101 Gen. Phys. Science . . . 3	HST 112 History of the Amer. People from 1865 3
ECO 200 Intro. to Economics or	PSC 201 Amer. Government . . . 3
ECO 201 Prin. of Economics . . 3	<hr/> 16
Physical Education elective . . . 1	
<hr/> 16	

Second Year

FIRST SEMESTER	SECOND SEMESTER
JNM 234 Mass Com. 3	JNM 237 Externship Study 5
JNM 235 Copy Read. & Edit. . . . 4	HST 142 History of Western Civilization from 1815 4
JNM 236 Radio & T.V. News . . 3	PHI 105 Intro. to Philosophy . . 3
HST 141 History of Western Civilization to 1815 4	SOC 101 Intro. to Sociology . . . 3
Physical Education elective . . . 1	<hr/> 15
<hr/> 15	

¹ Students unable to type 40 wpm are required to take BUS 121, Elementary Typing, during their first semester.

LAW ENFORCEMENT

Law Enforcement is a two-year program leading to an Associate in Applied Science degree. It is designed to prepare men and women for careers in law enforcement service at the local, state and federal level, including positions as municipal or state policeman or security officer, technical opportunities in state or federal agencies, and work in crime prevention, probation, records and communication, often with special assignment to detective, and vice units. Special options are available for those students who wish to concentrate on courses in Business and Industrial Security. Also provided are options for students planning to earn a baccalaureate degree at a four year college or university.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG elective ¹ 3	ENG elective ¹ 3
SOC 101 Intro. to Sociology . . . 3	SOC 205 Social Problems 3
PSY 101 Intro. to Psychology . . 3	PSY 217 Develop. Psychology.. 3
LAE 101 Intro. to Law Enforcmt. & Criminal Justice 3	PSC 201 American Govt. — Org. Powers & Functions . . . 3
Elective 3	LAE 102 Police Adm. & Org. . . 3
Physical Education elective . . . 1	Physical Education elective . . . 1
<u>16</u>	<u>16</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
SPE 101 Fund. of Speech 3	LAE 202 Criminal Law II 3
LAE 201 Criminal Law I 3	LAE 211 Criminal Invest. 3
LAE 210 Intro. to Criminology. 3	Humanities elective 3
LAE elective ² 3	LAE elective ² 3
Elective 3	Elective 3
<u>15</u>	<u>15</u>

¹ Students will take English 099, English 101, English 102, or English 103, depending upon their test scores and the advice of their vocational counselor. Business Writing may be taken as the second English course.

² Elective must be taken from the following Law Enforcement offerings:

- LAE 205 Juvenile Delinquency
- LAE 207 Problems of Drug Addiction & Vice Control
- LAE 250 Police Field Service
- LAE 254 Interviewing and Case Preparation
- LAE 110 Police Operations
- LAE 212 Traffic Administration
- LAE 215 Police Defense Techniques
- Business and Industrial Security Options:
- LAE 103 Industrial Security Administration
- LAE 252 Industrial Fire Protection, Disaster Control
- LAE 253 Safety Management



LEGAL SECRETARY

A two-year 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		SECOND SEMESTER	
ENG 101 Composition	3	ENG 130 Business Writing	3
SEC 122 Interm. Typing*	2	SEC 221 Adv. Typing*	2
SEC 126 Interm. Shorthand*	3	SEC 225 Dictation & Transcrp.*.	3
BUS 101 Accounting I	3	SEC 132 Office Practice	3
Mathematics elective	3	BUS 211 Business Law I	3
Physical Education	1	SEC 236 Secretarial Proc.	2
	15	Physical Education	1
			17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
SEC 235 Legal Dict. & Proc.	4	SPE 101 Fund. of Speech	3
BUS 212 Business Law II	3	BUS 218 Intro. to Finance	3
Social Science elective	3	Humanities elective	3
PSY 101 Intro. to Psychology	3	Elective	3
SEC 237 Sec. Seminar &		SEC 238 Sec. Seminar &	
Internship I	3	Internship II	3
	16		15

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

MARKETING MID-MANAGEMENT (GENERAL MARKETING OPTION)

A two year program for persons interested in preparing for positions in the dynamic field of marketing. Career objectives of persons completing this program would be in the areas of sales, advertising and sales promotion, marketing management, wholesaling retailing, or other specialized areas of marketing.

First Year

FIRST SEMESTER		SECOND SEMESTER	
English elective	3	PSY 145 Psychology in Business and Industry . . .	3
PSY 101 Intro. to Psychology	3	ENG 130 Business Writing . .	3
BUS 111 Intro. to Bus. Org. .	3	BUS 245 Prin. of Marketing	
BUS 140 Prin. of Salesmanship		or	
or		other Marketing elective . . .	2-3
other Marketing elective . . .	2-3	BUS 270 Prin. of Mgt.	3
BUS 150 Business Math	3	DPR 101 Intro. to Data Proc.	3
Physical Education elective .	1	Physical Education elective .	1
	<u>15-16</u>		<u>15-16</u>

Second Year

FIRST SEMESTER		SECOND SEMESTER	
SPE 101 Fund. of Speech . . .	3	Humanities elective	3
ECO 200 Intro. to Economics . .	3	BUS 102 Accounting II	
BUS 101 Prin. of Acctg. I . . .	3	or	
BUS 281 Mktg. Internship . .	3	Marketing elective	3
Marketing elective	3	BUS 211 Business Law I . . .	3
	<u>15</u>	Business elective	3
		BUS 282 Mktg. Internship II	3
			<u>15</u>
		Summer Options*	6

Marketing Mid-Management Electives

BUS 140 Salesmanship	3	BUS 109 The Retail Food Distribution Industry	2
BUS 245 Prin. of Mktg.	3	BUS 215 Supermarket Oper. . .	3
BUS 217 Advertising	3	BUS 216 Supermarket Merch. .	3
BUS 250 Retailing	3		
BUS 249 Purchasing	3		

* The summer option may be taken on a voluntary basis as an optional part of the program. Approval of the program coordinator will be required for courses selected.

MARKETING MID-MANAGEMENT (SUPERMARKET MANAGEMENT OPTION)

Supermarket Management is a two-year occupational curriculum consisting of 64 semester hours of credit and leads to the award of an AAS degree. The curriculum is designed to provide training and experience that can lead to managerial positions in the industry. The cooperative method of education is employed whereby the student alternates between terms of full time attendance at school and full time work experience during the course of the program.

This method is illustrated by the school term/work term patterns below.

School Semester	Curriculum Patterns	
	Pattern #1 (Summer start)	Pattern #2 (Fall start)
1st Year		
Summer.....	School term	Work term
Fall.....	School term	School term
Spring.....	Work term	School term
Summer.....	School term	Work term
2nd Year		
Fall.....	Work term	School term
Spring.....	School term	Work term
Summer.....	Work term	School term

Course work*

Course work taken under the Supermarket Management Option is comparable to that taken under the General Marketing Option described on page 61, insofar as the general education and the general business courses are concerned. To support the Supermarket Management Option, the following specialized courses have been developed in cooperation with representatives of the supermarket industry:

- BUS 109 — The Retail Food Distribution Industry
- BUS 215 — Supermarket Operations
- BUS 216 — Supermarket Merchandising

*Specific details as to the timing and sequence of particular courses will be determined through consultation with the program coordinator and the Business Division counselors.

MECHANICAL ENGINEERING TECHNOLOGY

Mechanical Engineering is a two-year technical program leading to an associate in applied science degree. The program is designed to train students in the field of mechanical design and drafting. The curriculum includes courses in mechanical design and drafting, mathematics, physics, and general education.

Graduates will be employed in such positions as mechanical designers, mechanical draftsmen, machine designers, tool and die designers, mechanical engineering technicians, and technical salesmen.

First Year

FIRST SEMESTER	SECOND SEMESTER
MTH 106 Mathematics I 5	MTH 107 Mathematics II 5
MET 101 Elements of Drafting . 3	ENG 103 Rep. Writing 3
MET 103 Desc. Geometry 2	Social Science elective 3
MET 108 Mfg. Proc. & Mat. . . . 3	MET 102 Technical Drafting .. 4
Physical Education elective . . . 1	MET 104 Statics 2
ENG 099 or 101 Comp. 3	Physical Education elective . . . 1
<u>17</u>	<u>18</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
MET 205 Fluid Power & Systems Control 4	*ECO 201 Prin. of Economics .. 3
MET 201 Mechanisms 4	MET 206 Metallurgy & Heat Treatment 3
MET 204 Strength of Mtls. 3	MET 207 Machine Design 6
PHY 101 Tech. Physics I 4	MET 210 Fortran Prog. 3
Humanities elective 3	PHY 102 Tech. Physics II 4
<u>18</u>	<u>19</u>

* or a Social Science Elective.

NUMERICAL CONTROL TECHNOLOGY

Numerical Control Technology is a two-year technical program leading to an associate in applied science degree. Numerical Control Technology is the application of coded information to the performance functions of machining and drafting. The program is designed to train students for the field of numerical control — machine tools and drafting. The curriculum offers courses in numerical control, mathematics and general education.

Graduates of the program will find employment in such positions as numerical control parts programmer, numerical control coordinator, numerical control computer programmer and numerical control salesman.

First Year

FIRST SEMESTER	SECOND SEMESTER
MET 101 Elem. of Drafting 3	ENG 101 or ENG 099
MET 105 Basic Mach. Shop . . . 3	Composition 3
MET 108 Mfg. Proc. & Mat. . . . 3	MET 102 Technical Drafting . . . 4
MTH 106 Mathematics I ¹ 5	MET 109 Mfg. Proc. & Mat. II . . 3
NMC 101 Intro. to Num. Control 2	MTH 107 Mathematics II ¹ 5
<u>16</u>	<u>18</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
ENG 103 Report Writing 3	*Technical elective 3
NMC 201 Num. Control Mach. 3	NMC 216 Part Prog. II 3
MET 210 Comp. Prog. Fortran 3	NMC 220 Special Problems . . . 3
NMC 215 Part Prog. II 3	Humanities elective 3
Physical Education elective . . . 1	Physical Education elective . . . 1
Social Science elective 3	Social Science elective 3
<u>16</u>	<u>16</u>

¹ Students may elect MTH 104 and 105, dependent upon meeting the prerequisite of MTH 103 or high school equivalent and advice of the counselor.

* Technical Elective may be chosen from NMC 214, Graphical Display Systems, or an appropriate ATE, ELT, MET, EGR course.

NURSING: ASSOCIATE DEGREE

This two-year nursing program, leading to an Associate in Applied Science degree, is designed to prepare students to become Registered Nurse practitioners.

The program is open to qualified men and women who are interested in nursing as a career. Specific requirements for admission include: high school grade average of "C"; satisfactory completion of high school algebra, biology, and chemistry; good health; personal interview. If chemistry has been completed more than three years prior to intended entrance into the program, it must be repeated. It is possible to pursue the curriculum over a period of three or more years.

Graduates, after passing the licensure examination, are qualified for staff nurse positions in hospitals and various specialized care settings.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 Composition 3	ENG 102 Composition 3
*BIO 170 Bio-Physical Sci. 4	*BIO 171 Bio-Physical Sci. 4
PSY 101 Intro. to Psych. 3	SOC 101 Intro. to Soc. 3
*NUR 101 Found. of Nursing .. 5	*NUR 102 Found. of Nursing .. 5
Physical Education elective 1	Physical Education elective 1
<u>16</u>	<u>16</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
Humanities elective 3	Elective 3
PSY 216 Child Psychology	*SOC 215 Group Dynamics ... 3
or	*NUR 202 Phy. & Men.
PSY 217 Adolescent Psy. 3	Illness II 10
*NUR 201 Phy. & Men.	<u>16</u>
Illness I 10	
<u>16</u>	

* These courses comprise the core of the sequence of nursing courses and must be taken in sequence as indicated.

SECRETARIAL CAREER

Secretarial Career is a two-year program leading to an Associate in Applied Science degree. The curriculum is designed to give the student experience in office practices, secretarial duties, and functions of office administration.

Graduates may be employed in any of a variety of agencies, including manufacturing firms, government agencies, schools, and colleges, insurance companies, banks, and hospitals.

First Year

FIRST SEMESTER	SECOND SEMESTER
ENG 101 3	ENG 130 Business Writing 3
SEC 121 Elem. Typing ¹ 2	SEC 126 Inter. Shorthand ^{1,2} ... 3
BUS 111 Intro. to Bus. Org. 3	SEC 122 Inter. Typing ¹ 2
SEC 131 Business Mach. 2	SEC 132 Office Practice 3
Mathematics elective ³ 3	PSY 101 Intro. to Psychology .. 3
SEC 125 Elem. Shorthand ^{1,2} ... 3	SEC 236 Secretarial Proc. ⁴ 2
Physical Education elective ... 1	Physical Education elective ... 1
<u>17</u>	<u>17</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
BUS 101 Accounting I or	BUS 211 Business Law 3
BUS 099 Bus. Rec. Keeping ... 3	ECO 200 Intro. to Economics .. 3
SEC 221 Adv. Typing ¹ 2	Humanities elective 3
SEC 225 Dict. & Transc. ^{1,2} 3	DPR 101 Intro. to Data Proc. .. 3
SPE 101 Fund. of Speech 3	SEC 238 Secretarial Seminar & Internship II ⁵ 3
SEC 237 Secretarial Seminar & Internship I ⁵ 3	<u>15</u>
<u>14</u>	

¹ Placement into SEC 121, SEC 122, SEC 221, SEC 125, SEC 126, and SEC 225 is contingent upon previous training and consent of instructor. (See Course Desc.)

² Students will take English 101 concurrently with their first shorthand course.

³ While students may take any mathematics course offered, depending upon their test scores and the advice of their counselor, Business Mathematics (BUS 150) is recommended.

⁴ SEC 236 must be taken the semester prior to entering SEC 237.

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

SUPERVISORY AND ADMINISTRATIVE MANAGEMENT

A two-year associate degree program 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 either in an industrial or administrative management capacity, but it also provides the fundamental management skills needed by the successful owner-manager of a business.

First Year

FIRST SEMESTER	SECOND SEMESTER
BUS 101 Accounting I 3	BUS 102 Accounting II 3
BUS 111 Intro. to Bus. Org. . . . 3	ENG elective 3
ENG 101 Composition 3	BUS elective* 3
DPR 101 Intro. to Data Proc. . . 3	BUS 270 Prin. of Mgt. 3
PSY 101 Intro. to Psychology . . 3	PSY 145 Psy. in Bus. & Ind. . . . 3
Physical Education 1	Physical Education 1
<u>16</u>	<u>16</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
BUS 245 Prin. of Marketing . . . 3	HUM elective 3
ECO 200 Intro. to Economics . . 3	Social Science elective 3
BUS 211 Business Law I 3	BUS 218 Intro. to Finance 3
BUS electives* 6	BUS electives* 6
<u>15</u>	<u>15</u>

* Electives may include any course with a "BUS" prefix, or a combination of "BUS" courses and the following:

DPR 203 Systems Analysis and Design I—(3)
SEC 131 Business Machines—(2)

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 21 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.

While completion of a certificate program may be the primary goal for some adults, for others it may represent their first step toward an associate degree.

Accounting Aide	Fire Science
Architectural Technology	Law Enforcement
Baking	Mechanical Drafting
Business and Industrial Security	Mechanical Technician
Child Care	Numerical Control Technician
Clerical Office or Adm. Asst.	Practical Nursing
Cooking	Real Estate
Data Processing - Technical	Secretarial Career
Data Processing - Clerical	Supermarket Management
Electronics	Supervisory & Admin. Mgmt
Fashion Design	

ACCOUNTING AIDE

Accounting Aide is a certificate program 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.

BUS 101 Accounting I	3	BUS 202 Inter. Accounting II . .	3
BUS 102 Accounting II	3	BUS 203 Cost Accounting	3
BUS 201 Inter. Accounting I . .	3		<hr/>
BUS 098 Tax & Payroll			19
Accounting	4		

ARCHITECTURAL TECHNOLOGY

Architectural Technology is a technical program leading to a certificate upon completion of any of the following course offerings totaling fifteen credit hours. The curriculum emphasis is on Architecture in the related areas of construction, drafting, computer programming, estimating and specifications.

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

ATE 101 Intro. to Arch. Tech. I. . .	4	ATE 203 Constr. Problems I . . .	4
ATE 103 Building Materials I . .	4	ATE 205 Computer Graphic . . .	3
ATE 105 Computer Math		ATE 207 Strength of Mtls. I . . .	3
for Arch. Tech. I	3	ATE 202 Comprehensive Bldg.	
ATE 102 Intro. to Arch. Tech. II. .	4	Project II	4
ATE 104 Building Materials II . .	4	ATE 204 Constr. Problems II . .	4
ATE 106 Computer Math		ATE 206 Computer Concepts II. .	3
for Arch. Tech. II	3	ATE 208 Strength of Mtls. II . . .	3
ATE 201 Comprehensive Bldg.			
Project I	4		

BAKING

The Baking certificate program is a one-year trade oriented course planned to prepare students for entrance into the food service and baking industry.

Graduates may be able to secure positions as qualified bakers and baker's helpers in institutional, retail and commercial bakeries.

FALL	SPRING
FSM 090 Basic Quan. Baking ..10	FSM 091 Adv. Quan. Baking ..10
FSM 111 Intro. to Food Serv. .. 2	FSM 115 Nutrition and Menu Planning 2
FSM 114 Food Standards & Sanitation 3	Elective 3
<u>15</u>	<u>15</u>

BUSINESS AND INDUSTRIAL SECURITY

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.

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

LAE 103 Industrial Security Administration 3	LAE 254 Interviewing & Case Preparation 3
LAE 252 Industrial Fire Protection Disaster Control . 3	LAE 201 Criminal Law I 3
LAE 253 Safety Management .. 3	LAE 202 Criminal Law II 3
	LAE 211 Criminal Investigation. 3
	LAE 210 Police Operations 3

CHILD CARE

A one-year certificate program totaling 30 semester hours:

6 hours Social Science (PSY 101, SOC 101)

6 hours English (099, 101, or 102)

6 hours Science or Mathematics

Any 12 hours from among the following:

CCA 109 Language Arts for the Young Child 3	CCA 219 Psychology of Exceptional Children 3
CCA 110 Creative Activities for Young Children 2	EDU 201 Intro. to Education .. 3
CCA 215 Principles of Pre-School Education 4	EDU 211 Educational Psych. .. 3
	PSY 216 Child Psychology I ... 3
	PSY 217 Adolescent Psych. ... 3

CLERICAL OFFICE OR ADMINISTRATIVE ASSISTANT

A course of study for both men and women who may be interested in obtaining the skills for office or other types of administrative clerical jobs. Program may be completed in one semester of day school, or two semesters of evening school, by successfully completing 15 semester hours of course work selected from the following:

SEC 121 Elem. Typewriting ¹ ... 2	SEC 131 Business Machines ... 2
SEC 122 Inter. Typewriting 2	SEC 132 Office Practice 3
SEC 221 Adv. Typewriting 2	SEC 236 Secretarial Proc. 2
BUS 150 Bus. Mathematics ... 3	BUS 099 Bus. Recordkeeping .. 3
BUS 111 Intro. to Bus. Org. ... 3	BUS 098 Tax & Payroll Acctg. .. 4
	<u>15</u>

¹ Placement in typewriting contingent upon evaluation by Business Division faculty.

COOKING

The Cooking certificate program is a one-year trade oriented course 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' assistant.

FALL	SPRING
FSM 095 Basic Quantity	FSM 096 Advanced Quantity
Cooking10	Cooking10
FSM 111 Intro. to Food Serv. .. 2	FSM 115 Nutrition and Menu
FSM 114 Food Standards	Planning 2
and Sanitation 3	Elective 3
<u>15</u>	<u>15</u>

DATA PROCESSING-TECHNICAL

A certificate program designed to either familiarize the student with, or to upgrade his knowledge of, the field of data processing. Contingent upon the particular sequence of courses taken, the student may be able to upgrade his current position, or be able to enter the field in a variety of positions.

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

DPR 101 Intro. to Data Proc.	3	DPR 203 Sys. Anal. & Des. I	3
DPR 108 Computer Prog. I	5	DPR 204 Sys. Anal. & Des. II	3
DPR 150 Data Processing Math I	3	DPR 110 Computer Prog. II	4
DPR 202 Programming Systems.	3	DPR 210 Computer Prog. III	5
		DPR 250 Data Proc. Math II	3

DATA PROCESSING-CLERICAL

This is a two semester certificate program which includes the study of introduction to data processing, key punching and verifying, business machines operations, and general clerical subjects. Graduates will find employment as key punch operators, verifier operators, or other clerical positions in data processing installations in business, industry, and government.

FIRST SEMESTER		SECOND SEMESTER	
ENG 101 Composition ¹	3	SOC 101 Intro. to Sociology	3
BUS 101 Accounting I	3	SEC 131 Business Machines	2
DPR 101 Intro. to DP	3	Bus. or Data Proc. elective	3-5
DPR 103 K P & Ver. ²	2	ENG 130 Business Writing	3
BUS 150 Bus. Math	3	Elective	2-3
Physical Ed. elective	1	Physical Education elective	1
	<hr/> 15		<hr/> 14-17

¹ Students not qualifying for ENG 101 may take ENG 099 or RDG 095.

² Entry into DPR 103 requires successful completion of a typing course.

ELECTRONICS

Any combination of 16 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

ELT 110 Intro. to Electronics ...	2	MTH 106 Mathematics I	5
ELT 101 Circuits I	4	MTH 107 Mathematics II	5
ELT 105 Electro-Mech. Drafting.	3	MTH 206 Mathematics III	5
ELT 111 Electronics I	3	ELT 211 Analog Simulation I ..	4
ELT 102 Circuits II	4	ELT 212 Analog Simulation II ..	4
ELT 210 Computer Prog.	3	ELT 207 UHF Com. & Receptn..	4
ELT 203 Electronics II	4	ELT 206 Electronic Computers .	4
ELT 103 Circuits III	4	ELT 205 Electronic Instru.	4
ELT 204 Electronics III	4		

FASHION DESIGN

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

FAS 101 Flat Pattern Design & Draping I	4	FAS 201 Advanced Flat Pattern Design & Draping I	4
FAS 102 Flat Pattern Design & Draping II	4	FAS 202 Advanced Flat Pattern Design & Draping II	4
FAS 103 Apparel Design I	3	FAS 203 Advanced Diversified Apparel Design I	4
FAS 104 Apparel Design II	4	FAS 204 Advanced Diversified Apparel Design II	4
FAS 105 Fashion Illustration I .	1	FAS 205 Tailoring Tech. I	2
FAS 106 Fashion Illustration II .	1	FAS 206 Tailoring Tech. II	2
FAS 107 Textiles & Apparel Construction I	2	FAS 207 History of Costume I .	2
FAS 108 Textiles & Apparel Construction II	2	FAS 208 History of Costume II .	2

FIRE SCIENCE

The Fire Science 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.

Any 6 credit hours may be selected from the courses listed below:

ENG 099 Composition	3	ENG 103 Report Writing	3
ENG 101 Composition	3	SOC 101 Intro. to Sociology . .	3

Any 9 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

FIS 101 Municipal Fire Adm. I. . .	3	FIS 115 Bld. Const. & Codes . . .	3
FIS 102 Intro. to Fire Science . .	3	FIS 120 Haz. Materials I	3
FIS 103 Fire Prevention I	3	FIS 121 Haz. Materials II	3
FIS 106 Fire Prevention II	3	FIS 130 Fire Hydraulics	3
FIS 110 Fire Tact. & Strat. I	3	FIS 140 Fire Causes & Inves. . . .	3
FIS 111 Fire Tact. & Strat. II	3	FIS 201 Municipal Fire Adm. II. .	3

LAW ENFORCEMENT

This certificate program is designed to provide specialized education for those currently employed 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 counselor approval.

These courses must be taken at Harper College.

LAE 101 Intro. to Law Enforcement	3	LAE 210 Intro. to Criminology . .	3
LAE 102 Police Admin. & Org. . . .	3	LAE 211 Criminal Investigation. .	3
LAE 103 Ind. Sec. Adm.	3	LAE 212 Traffic Administration . .	3
LAE 110 Police Operations	3	LAE 215 Police Def. Tech.	2
LAE 201 Criminal Law I	3	LAE 250 Police Field. Svc.	3
LAE 202 Criminal Law II	3	LAE 252 Ind. Fire Protec.	3
LAE 205 Juvenile Delinquency . .	3	LAE 253 Safety Management . . .	3
LAE 207 Vice & Drug Cont.	3	LAE 254 Interv. & Case Prep. . .	3

MECHANICAL DRAFTING

The Mechanical Drafting certificate program has been developed in conjunction with the area industries to prepare students for challenging careers in drafting. The program may be completed in one semester of day school or two semesters of evening school.

MET 101 Elements of Drafting. 3	MET 201 Mechanisms 4	
MTH 106 Mathematics I 5		16
MET 102 Technical Drafting .. 4		

MECHANICAL TECHNICIAN

The Mechanical Technician 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 101 Elements of Drafting. 3	Technical elective ¹ 3-5	
MTH 106 Mathematics I 5		15-17
PHY 101 Technical Physics I .. 4		

¹ Elective to be chosen from the following courses:

MET 102 Technical Drafting 4	MET 201 Mechanisms 4
MTH 107 Mathematics II 5	MET 108 Manufacturing Processes 3

NUMERICAL CONTROL TECHNICIAN

The Numerical Control Technician's 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.

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

NMC 93 Numerical Control Drafting 2	NMC 201 Numerical Controlled Machining 3
NMC 97 ADAPT & APT Part Programming 2	MET 210 Computer Prog.-FORTRAN 3
NMC 101 Intro. to Numerical Control 2	NMC 214 Graphic Display Sys.. 3
NMC 105 Part Programming I. 3	NMC 215 Part Programming II. 3
	NMC 216 Part Programming III. 3
	NMC 220 Special Problems ... 3

NURSING: (PRACTICAL)

The practical nursing certificate program is one full year in length — two semesters and a 10 week summer session — and is designed to prepare students to become licensed practical nurses. The curriculum includes theory in the fundamentals of nursing, basic science concepts, vocational relationships and practical experiences in selected health care agencies.

After passing the state board examination for licensure, LPN's take their place in the medical team, working under the direction of a doctor or registered nurse, giving patient care in hospitals, nursing homes and other health care settings.

FIRST SEMESTER	SECOND SEMESTER
PNR 06014	PNR 07013
*Elective 2	*Elective 3
<u>16</u>	<u>16</u>

SUMMER SESSION
PNR 08011
<u>11</u>

* Electives must be selected by or have approval of coordinator.

REAL ESTATE

A certificate program of professional development for those presently engaged in the Real Estate business and an opportunity to explore the field for those who are not. A total of 18 semester hours is required for this program.

Required:	Electives: (Select two)
RES 120 Prin. of Real Estate ... 3	ATE 209 Building Construction
RES 121 Real Estate	Principles for Realtors 3
Marketing & Brokerage 3	RES 230 Prop. Mgmt. Meth. ... 3
RES 122 Real Estate Apprais. I.. 3	RES 231 Income Properties ... 3
RES 123 Real Estate Law & Fin.. 3	RES 232 Real Estate Apprais. II. 3
<u>12</u>	RES 233 Real Estate Prob. Sem.. 3
	<u>6</u>

SECRETARIAL CAREER

Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has counselor approval.

SEC 121 Beginning Typing ¹ . . .	2	SEC 125 Elem. Shorthand ²	3
SEC 122 Intermediate Typing . .	2	SEC 126 Inter. Shorthand ²	3
SEC 221 Advanced Typing	2	SEC 225 Dict. & Transc.	3
SEC 131 Business Machines . . .	2		

¹ Students for whom advanced placement is recommended should substitute SEC 131.

² Students for whom advanced placement is recommended should substitute BUS 150.

Students who can substitute previous training for both SEC 125 and SEC 126 should substitute BUS 150 and SEC 132.

SUPERMARKET MANAGEMENT

The Supermarket Management certificate program has been designed by the college and representatives of the supermarket industry for those students with an interest in careers in the fast-growing and important supermarket industry. Specifically, the program has been designed to provide training and experience that could lead to managerial positions in the industry.

The following courses are required:

BUS 109 The Retail Food		BUS 215 Supermarket Oper. . . .	3
Distribution Industry	2	BUS 216 Supermarket Mdse. . .	3

A minimum of 7 credit hours may be selected from any of the following courses:

BUS 111 Intro. to Bus. Org. . . .	3	ECO 200 Intro. to Economics . .	3
BUS 270 Principles of Mgt.	3	ECO 115 Consumer Economics. .	3
BUS 150 Business Math	3	DPR 101 Intro. to Data Proc. . .	3
BUS 101 Accounting I	3	PSY 145 Psych. in Bus. & Ind. . .	3
BUS 102 Accounting II	3	ENG 130 Business Writing	3
BUS 211 Business Law	3		

SUPERVISORY & ADMINISTRATIVE MANAGEMENT

A certificate program requiring completion of 18 semester hours as follows:

Required:

BUS 160 Prin. of Supervision . .	3
BUS 161 Problems in Management & Supervision .	3

Recommended:

BUS 270 Prin. of Management .	3
PSY 145 Psychology in Business and Industry	3
	12

Options:

(6 semester hours from the following)

BUS 274 Industrial Mgmt.	3
BUS 255 Small Bus. Mgmt.	3
BUS 267 Office & Adm. Mgmt. .	3
BUS 265 Personnel Mgmt.	3
BUS 275 Labor-Mgmt. Rel.	3
BUS 099 Bus. Recordkeeping . .	3
BUS 101 Prin. of Acctg. I	3

TRANSFER PROGRAMS

Harper College offers the first two years of most four year college programs. For example, students interested in the following areas of study can spend their first two years at Harper College qualifying for an associate degree and then transfer to a four-year institution without loss of time or credit:

Business

Accounting
 Advertising
 Business Administration
 Commerce
 Finance
 Marketing
 Retailing
 Transportation

Education

Business Education
 Education
 Library Science
 Personnel and Guidance
 Physical Education
 Special Education

Engineering

Architecture
 Chemical Engineering
 Civil Engineering
 Electrical Engineering
 Industrial Engineering
 Mechanical Engineering

Humanities

Art
 English
 Foreign Languages
 Journalism
 Law
 Liberal Arts
 Literature

Humanities (con't.)

Music
 Philosophy
 Speech
 Theology

Medicine

Dentistry
 Medicine
 Nursing
 Optometry
 Pharmacy
 Physical Therapy
 Veterinary Medicine

Natural Sciences and Mathematics

Biology
 Botany
 Chemistry
 Geology
 Mathematics
 Physics
 Zoology

Social Sciences

Anthropology
 Economics
 Geography
 History
 Political Science
 Psychology
 Social Work
 Sociology

The following programs are designed principally for students desiring to meet the requirements for an associate degree in arts or in science. These programs will, in general, meet transfer requirements to most colleges and universities, but it is important for the student to know that requirements in institutions granting baccalaureate degrees will vary. When the student can inform his counselor exactly which area he wishes to pursue and the institution at which he wishes to complete his work, a program can be arranged to suit his individual needs. In the preparation of his program at Harper College, the student should consult the catalog of the college which he will attend later. Students who have not yet selected the college at which they will complete their work will find the suggested programs good general guides to follow.

Students who enter the University of Illinois without college credit in algebra are required to take the Mathematics Placement Test before registering in the College of Commerce. The student who does not pass the test must take college algebra without credit. The student who has had college algebra or passes the placement test may proceed directly to courses required by the College for graduation.

For those students enrolling in Engineering Transfer Programs, they should be advised to develop a program at Harper by consulting with the Dean of Admissions of the school they anticipate transferring to. This would assure the student maximum transfer of credits based on good grades.

Foreign Language Requirement. Two years of one foreign language taken in high school is acceptable at the University of Illinois. The foreign language deficiency can be removed by passing an entrance examination or completing one year of foreign language in college without credit.

ARCHITECTURAL DESIGN**First Year**

FIRST SEMESTER	SECOND SEMESTER
ARC 101 3	ARC 102 3
ARC 110 3	ARC 111 3
ENG 101 3	ENG 102 3
MTH 105 4	MTH 201 5
ATE 105 3	SOC 101 3
Physical Education 1	Physical Education 1
<u>17</u>	<u>18</u>

SUMMER SESSION

Social Science 6

Second Year

FIRST SEMESTER	SECOND SEMESTER
ARC 201 4	ARC 202 4
ARC 203 3	ARC 204 3
ARC 205 3	ARC 206 3
FNA 111 3	FNA 112 3
PHY 121 5	PHY 122 5
<u>18</u>	<u>18</u>

ART**First Year**

FIRST SEMESTER	SECOND SEMESTER
English Composition 3	English Composition 3
FNA 111 3	FNA 112 3
Phys. or Biol. Science 4	Phys. or Biol. Science 4
ART 110 3	ART 111 3
ART 121 3	ART 122 3
Physical Education 1	Physical Education 1
<u>17</u>	<u>17</u>

Second Year

FIRST SEMESTER	SECOND SEMESTER
Foreign Language 4	Foreign Language 4
ART 201 3	ART 202 3
ART 225 3	ART 226 3
ART 236 2	ART 237 2
ART 206 or 296 2	ART 261 2
Social Science 3	ART 291 or 297 2
Physical Education 1	Social Science 3
<u>18</u>	<u>19</u>

BUSINESS**First Year**

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
HST 111 or 141	4-3	HST 112 or 147	4-3
Mathematics	3	Mathematics	3
PHI 105	3	Science	4-3
Science	4-3	BUS 101	3
Physical Education	1	Physical Education	1
	16-18		16-18

Second Year

FIRST SEMESTER		SECOND SEMESTER	
BUS 225	3	BUS 226	3
ECO 201	3	ECO 202	3
BUS 102	3	BUS 203	3
SPE 101	3	PSY 101 or SOC 101	3
Literature or Fine Arts	3	Literature or Fine Arts	3
Physical Education	1	Physical Education	1
	16		16

CHEMICAL ENGINEERING**First Year**

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
CHM 131	5	CHM 132	5
MTH 105	4	MTH 201	5
Social Science	3	MTH 215	3
Physical Education	1	Physical Education	1
	16		17

SUMMER SESSION

Social Science

3

Second Year

FIRST SEMESTER		SECOND SEMESTER	
CHM 204	5	CHM 205	5
MTH 202	5	MTH 212	3
PHY 201	5	PHY 202	5
Foreign Language ¹	4	Foreign Language	4
	19		17

¹ Two years of foreign language, (German, French, or Russian) are required for the Bachelor of Science degree. Two units of high school credit in one of these languages are equivalent to one year of college credit. Check the school to which transfer will be made for foreign language requirements.



CIVIL, ELECTRICAL, GENERAL AND MECHANICAL ENGINEERING
First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
CHM 121	4	CHM 122	4
EGR 120	3	EGR 121	3
MTH 105	4	MTH 201	5
Social Science	3	Humanities elective	3
	17		18

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Social Science	3	MTH 212	3
MTH 202	5	PHY 202	5
PHY 201	5	EGR 211	3
EGR 150	2	Humanities	3
Physical Education	1	Physical Education	1
	16	Technical elective ¹	3
			18

¹ Technical Elective selected from following: EGR 212, EGR 215, MTH 165, MTH 208, MTH 215, PHY 210.

ENGINEERING TECHNOLOGY FOR TEACHERS
First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
CHM 121	4	CHM 122	4
*EGR 120	3	*EGR 121	3
MTH 103	3	Social Science elective	3
MTH 104	3	MTH 105	4
Physical Education	1		
	17		17

Second Year

FIRST SEMESTER		SECOND SEMESTER	
MTH 201	5	Physical Education	1
PHY 121	5	Humanities	3
*EGR 150	2	*EGR 211	3
PSY 101	3	MTH 202	5
Humanities elective	3	PHY 122	5
	18		17

¹ Technical Electives may be selected from ATE, ELT, MET, NMC Programs providing the institution to which the student transfers accepts these credits.

LIBERAL ARTS

The Liberal Arts transfer curriculum lays the foundation of 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 for those who have not yet 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. He can often count each year of successful high school foreign language as one semester of college foreign language, and he may meet the math requirement of some universities by passing their math proficiency test.

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
Social Science	3	Social Science	3
Laboratory Science ¹	4	Laboratory Science ¹	4
Math or elective	3	Math or elective	3
Foreign Language	4	Foreign Language	4
Physical Education	1	Physical Education	1
	18		18

Second Year

FIRST AND SECOND SEMESTER	
English ²	6
Social Science	6
Humanities ³	6
Foreign Language ⁴	6-8
Additional electives ⁵	6-8
	30-34

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

² Advanced English or Literature, or Speech.

³ Humanities 201-202 are recommended, 3 credit hours each. Other humanities areas include art, music, literature and philosophy.

⁴ Consult your counselor for specific foreign language requirements of the university to which you plan to transfer.

⁵ 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.

MUSIC¹
First Year

FIRST SEMESTER		SECOND SEMESTER	
English 101	3	English 102	3
Science or Math elective ...	3-5	Science or Math elective ...	3-5
Physical Education elective .	1	Physical Education elective .	1
Music 111	3	Music 112	3
Music 115	1	Music 116	1
Group Performance ²	1	Group Performance ²	1
Applied Music elective ³	2-4	Applied Music elective ³	2-4
	<u>14-18</u>		<u>14-18</u>

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Social Science	3	Social Science	3
Music 211	3	Music 212	3
Music 215	1	Music 216	1
Instrmntl. or Vocal Tech. ...	2	Instrmntl. or Vocal Tech. ...	2
Music 121	3	Music 122	3
Group Performance ²	1	Group Performance ²	1
Applied Music elective ³	2-4	Applied Music elective ³	2-4
L. A. elective	2	L. A. elective	2
	<u>17-19</u>		<u>17-19</u>

¹ All majors in music must demonstrate minimum proficiency on the piano.² To be elected from MUS 130, 136, 140, 145, 150.³ To be elected from courses numbered 180-199, 280-299.

PRE-PROFESSIONAL PHYSICAL EDUCATION
First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
SPE 101	3	BIO 140	4
BIO 110	4	MTH	3-4
PED 200	2	PED 203	2
PED 222	2	PED 226	2
P.E. Activity	1	P.E. Activity	1
	15		15-16

Second Year

FIRST SEMESTER		SECOND SEMESTER	
BIO 160	4	BIO 161	4
PSC 201	3	HST 112	3
SOC 101 or PSY 101	3	Humanities elective	3-4
Humanities elective	3-4	PED 220	2
PED 201	2	PED 228	2
PED 210	2	PED 224	2
	17-18		16-17

Total Semester Hours 63-64

Students enrolled in AS degree program (20 semester hours required in Math/Science) must enroll in four semesters of Math courses. For AA degree candidates, the Humanities elective should be a foreign language or a Humanities course can be substituted for a PED course.

SCIENCE AND MATHEMATICS

First Year

FIRST SEMESTER		SECOND SEMESTER	
ENG 101	3	ENG 102	3
Foreign Language	4	Foreign Language	4
Mathematics	3-5	Mathematics	3-5
Laboratory Science	4-5	Laboratory Science	4-5
Physical Education	1	Physical Education	1
	15-18		15-18

Second Year

FIRST SEMESTER		SECOND SEMESTER	
Social Science	3	Social Science	3
Mathematics	3-5	Mathematics	4-5
Laboratory Science	4-5	Laboratory Science	4-5
Elective	3-4	Elective	3-4
Physical Education	1	Physical Education	1
	14-18		15-18



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 counselor for clarification on the transferability of these courses.

Courses numbered 200 and above are intended for the sophomore level.

Sample Course Listing

ANT	102	General Anthropology	(3-0)	3 hrs.
↑	↑	↑	↑ ↑	↑
course prefix	course number	course title	hours of lecture per week	semester hours of credit
			hours of lab per week	

ANTHROPOLOGY

ANT 201 General Anthropology (3-0) 3 hrs.
Human origins and early man, race and racism, archeology, and the beginning of early civilization.

ANT 202 Comparative Study of Cultures (3-0) 3 hrs.
Methods used by anthropologists to gather and interpret cultural materials. Comparison of various cultures, understanding the culture concept, and examination of the relationship between culture and personality.
Prerequisite: ANT 201.

ARCHITECTURE

ARC 101 Basic Design I (0-6) 3 hrs.
Basic factors in two-dimensional and three-dimensional design.
(\$10 lab fee).

ARC 102 Basic Design II (0-6) 3 hrs.
More complex systems of two-dimensional and three-dimensional design. Introduction to color theory.
Prerequisite: ARC 101. (\$10 lab fee).

ARC 201 Design I (0-8) 4 hrs.
Architectural design problems; emphasis on development and organization of space.
Prerequisite: ARC 102. (\$10 lab fee).

ARC 202 Design II (0-8) 4 hrs.
Architectural design problems; emphasis on structure.
Prerequisite: ARC 201 and ARC 104. (\$10 lab fee).

ARC 203 Building Construction I (2-2) 3 hrs.
Wood and masonry construction and allied materials. (\$7.50 lab fee).

ARC 204 Building Construction II (2-2) 3 hrs.
Steel construction and allied materials.
Prerequisite: ARC 203. (\$7.50 lab fee).

ARC 205 Architectural History I (3-0) 3 hrs.
Introduction to methodology of art and architectural history and criticism. A cultural-historical oriented examination of architecture and art from antiquity through medieval times.

ARC 206 Architectural History II (3-0) 3 hrs.
Continuation of ARC 205. Cultural-historical examination of architecture from renaissance to present.
Prerequisite: ARC 205.

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; computer relationships. (\$10 lab fee).

- 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.
Prerequisite: ATE 101 or consent of instructor. (\$10 lab fee).
- 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. (\$7.50 lab fee).
- 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. (\$7.50 lab fee).
- 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. (\$7.50 lab fee).
- 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, SYMAT planning, critical path and building geometry.
Prerequisite: ATE 105. (\$7.50 lab fee).
- ATE 201 Comprehensive Building Project I (0-8) 4 hrs.**
Architecture as a profession emphasizing computer technology for building project; finish materials; zoning and building ordinance formats; auto specifications; mechanical and electrical equipment coordination; site utilities; working drawings; shop drawing format; building optimization in estimating.
Prerequisite: ATE 102. (\$10 lab fee).
- 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 estimate; contingency provisions; general conditions; architect-engineer-contractor fee schedule.
Prerequisite: ATE 201. (\$10 lab fee).
- ATE 203 Construction Problem I (2-4) 4 hrs.**
Detailing; investigation and analysis of fire resistivity of materials; construction type; Underwriters Laboratories hourly ratings; fire proofing; sprinkling; insurance requirements.
Prerequisite: ATE 104. (\$7.50 lab fee).
- 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; marble.
Prerequisite: ATE 203. (\$7.50 lab fee).
- ATE 205 Computer Graphic 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. (\$7.50 lab fee).

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. (\$7.50 lab fee).

ATE 207 Strength of 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 Strength of Materials II (3-0) 3 hrs.
 Continuation of 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 Principles for Realtors (3-0) 3 hrs.
 Fundamental aspects of building, such as legal descriptions, surveys, foundations, masonry and frame walls, roofing, insulation, interior finishes, painting, heating, ventilating, and air conditioning, plumbing and electrical. A building plan and specifications will be part of the text material from which the class will receive instruction in plan reading. The fundamentals of cost estimating will be covered.

ART

ART 105 Art Appreciation (3-0) 3 hrs.
 Workshop in perception; personal expansion through increased awareness of Art and the individual.

ART 110 Drawing I (0-6) 3 hrs.
 Introduction to theory and practice in the elements of drawing. Studio and lecture. (\$7.50 lab fee).

ART 111 Drawing II (0-6) 3 hrs.
 Continuation of ART 110. Introduction to theory and practice in elements of drawing. Studio and lecture. (\$7.50 lab fee).
 Prerequisite: ART 110.

ART 121 Design I (0-6) 3 hrs.
 Introduction to theory and practice in the principles of design. Studio and lecture. (\$7.50 lab fee).

ART 122 Design II (0-6) 3 hrs.
 Continuation of ART 121. Studio and lecture. (\$7.50 lab fee).
 Prerequisite: ART 121.

ART 180 Interior Design Workshop I (0-4) 2 hrs.
 Discussion and studio work based on principles of art, consumer education, and budgets. Color, furniture styles and arrangements; wall, window and floor treatments; fabrics; lighting; accessories; and room planning. Studio and lecture. (\$7.50 lab fee).

ART 181 Interior Design Workshop II (0-4) 2 hrs.
 Continuation of ART 180. (\$7.50 lab fee).
 Prerequisite: ART 180.

- ART 201 Drawing III (0-6)** **3 hrs.**
 Development of interpretive and representational skills through work in a variety of drawing media. Studio and lecture.
 Prerequisite: ART 111. (\$7.50 lab fee).
- ART 202 Drawing IV (0-6)** **3 hrs.**
 Continuation of Art 201. Studio and lecture. (\$7.50 lab fee).
 Prerequisite: ART 201.
- ART 206 Print Making I (0-4)** **2 hrs.**
 Linoleum, wood block, silk screen printing, intaglio, lithography and collograph. Experimentation with color combinations. Studio and lecture.
 Prerequisite: ART 111, 121. (\$7.50 lab fee).
- ART 207 Print Making II (0-4)** **2 hrs.**
 Continuation of ART 206. Studio and lecture.
 Prerequisite: ART 111, 121. (\$7.50 lab fee).
- ART 225 Figure Drawing I (0-6)** **3 hrs.**
 Drawing the human figure in action and from still poses. Rapid sketching, long poses, memory work portraiture. Studio and lecture.
 Prerequisite: ART 111. (\$7.50 lab fee).
- ART 226 Figure Drawing II (0-6)** **3 hrs.**
 Continuation of ART 225. Studio and lecture. (\$7.50 lab fee).
 Prerequisite: ART 225.
- ART 236 Composition I (0-4)** **2 hrs.**
 Pictorial composition in line, value, pattern and color. Studio and lecture.
 Prerequisite: ART 111, ART 121 and FNA 112. (\$7.50 lab fee).
- ART 237 Composition II (0-4)** **2 hrs.**
 Continuation of ART 236. Studio and lecture. (\$7.50 lab fee).
 Prerequisite: ART 236.
- ART 261 Painting (0-4)** **2 hrs.**
 Painting technique, color theory and harmony. Painting and sketching of still life, landscape and figures. Studio and lecture. (\$7.50 lab fee).
 Prerequisite: ART 111, ART 121 or permission of instructor.
- ART 262 Advanced Painting (0-4)** **2 hrs.**
 Continuation of ART 261. Painting techniques offering a wider variety of creative experiences and opportunities. Studio and lecture. (\$7.50 lab fee).
 Prerequisite: ART 261.
- ART 291 Ceramics I (0-4)** **2 hrs.**
 Basic fundamentals of ceramics: forming and shaping by hand and mechanical means, technical information about clay and glazes, stacking and firing kiln. (\$7.50 lab fee).
 Prerequisites: ART 111, ART 122 or permission of instructor.
- ART 292 Ceramics II (0-4)** **2 hrs.**
 Continuation of ART 291. (\$7.50 lab fee).
 Prerequisite: ART 291.

ART 296 Sculpture I (0-4) **2 hrs.**
 Development of three-dimensional objective and non-objective form in clay, plaster, wood and metal; introduction to mold making and casting techniques. (\$7.50 lab fee).
 Prerequisites: ART 111, ART 122 or permission of instructor.

ART 297 Sculpture II (0-4) **2 hrs.**
 Continuation of ART 296. (\$7.50 lab fee).
 Prerequisite: ART 296.

BIOLOGY

BIO 101 Biology Survey (3-0) **3 hrs.**
 Survey of science of biology emphasizing chemical and physical properties of living things; over-view of plant and animal kingdoms; systems of control; growth; differentiation; reproduction; genetics; ecology and evolution.

BIO 110 Cellular Biology (3-3) **4 hrs.**
 Structure and ultrastructure of cell; surface-volume relationships; cellular metabolism and energetics; DNA, RNA, and protein synthesis; mitosis and meiosis; genetics, gene action and population genetics.
 Prerequisite: High school biology with C or better, BIO 101 or consent of instructor. (\$5 lab fee).

BIO 120 General Botany (3-3) **4 hrs.**
 Survey of plant kingdom emphasizing evolutionary relationships; plants and their growth, structure, physiology, reproduction and ecology.
 Prerequisite: High School Biology with C or better, or BIO 101, or consent of instructor. (\$5 lab fee).

BIO 130 Microbiology (3-3) **4 hrs.**
 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, or BIO 101, or consent of instructor. (\$5 lab fee).

BIO 140 General Zoology (3-3) **4 hrs.**
 Survey of 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, or BIO 101, or consent of instructor. (\$5 lab fee).

BIO 160 Human Anatomy and Physiology I (3-2) **4 hrs.**
 Structure and function of cells, tissues, organs, and organ-systems. Skeletal, muscular, circulatory, and digestive systems are studied in detail.
 Prerequisite: High School Biology with C or better, or BIO 101, or consent of instructor. (\$5 lab fee).

BIO 161 Human Anatomy and Physiology II (3-2) **4 hrs.**
 Continuation of BIO 160. Structure and function of the nervous, respiratory, excretory, endocrine, and reproductive systems.
 Prerequisite: BIO 160. (\$5 lab fee).

BIO 170 Bio-Physical Science I (3-2) **4 hrs.**
 Interrelationships of content and application of essential principles from anatomy and physiology, chemistry, microbiology, and basic clinical pathology. (For nursing students only.) (\$5 lab fee).



BIO 171 Bio-Physical Science II (3-2)**4 hrs.**

Continuation of BIO 170.

Prerequisite: BIO 170. (\$5 lab fee).

BIO 180 Histology and Embryology (2-2)**3 hrs.**

Minute structure and development of tissue of body with particular reference to teeth and supporting tissues.

Prerequisite: BIO 161. (\$5 lab fee).

BIO 190 General Pathology (3-0)**3 hrs.**

Introduction to general pathology; common diseases affecting human body. Diseases of oral cavity emphasized. (NOTE: Offered in second year of dental hygiene program.)

Prerequisite: BIO 180. (\$5 lab fee).

BUSINESS**BUS 098 Tax and Payroll Accounting (4-0)****4 hrs.**

An explanation of the Federal tax structure and instruction in the application of the tax principles to specific problems. Also, the preparation of payroll records including tax returns for old-age benefits and employment insurance.

BUS 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.

Formerly BUS 103.

BUS 101 Accounting I (3-0)**3 hrs.**

Basic accounting and business concepts, principles of recording transactions, special ledgers and statements, end-of-period adjustments, and financial statement preparation.

BUS 102 Accounting II (3-0)**3 hrs.**

Continuation of BUS 101 with emphasis on partnerships, corporations, branches, and departments. Interpretation of financial statements, basic valuation and cost concepts, reporting of manufacturing costs.

Prerequisite: BUS 101.

BUS 109 The Retail Food Distribution Industry (2-0)**2 hrs.**

The study of the mass retail food distribution industry with major emphasis on the supermarket. Topics to be included are: history and economic development of retail food distribution, problems and practices in supermarket organization and management, current issues confronting the industry, and the future role of the retail food distribution industry.

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

Nature of business and 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.

BUS 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.

BUS 150 Business Math (3-0) 3 hrs.

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 graphs and charts design

BUS 160 Principles of Supervision (3-0) 3 hrs.

An introductory course dealing with 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.

BUS 161 Problems in Management & Supervision (3-0) 3 hrs.

A course designed to provide 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 readings will be utilized.

Prerequisite: BUS 160, BUS 270 or consent of the instructor. Recommend prior or concurrent enrollment in ECO 201.

BUS 201 Intermediate Accounting I (3-0) 3 hrs.

Problem solving course in accounting principles begun in BUS 101 and 102. Accounting and reporting process, accounting theory, inventories, tangible and intangible fixed assets.

Prerequisite: BUS 102.

BUS 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: BUS 102.

BUS 203 Introductory Cost Accounting (3-0) 3 hrs.

Use of costs for control and decision making, with emphasis on determining and reporting overhead variance, product costs (process, job order, and standard cost), by-product costs, joint-product costs, and direct and variable costing.

Prerequisite: BUS 101.

BUS 211 Business Law I (3-0) 3 hrs.

A general history of the sources of the law, an outline of the Judicial System followed by the Basic Principles of Business Law including contracts, agency and employment, and property.

BUS 212 Business Law II (3-0) 3 hrs.

Part II of the Basic Principles of Business Law including The Uniform Commercial Code, Business Organizations, and Creditors' Rights.

Prerequisite: BUS 211.

BUS 215 Supermarket Operations (3-0) 3 hrs.

Operational aspects of the supermarket, including planning, organizing, and controlling the use of capital, personnel, equipment, and facilities; work methods; departmental operations; store security; housekeeping; supply control; sanitation safety; scheduling; front-end management; cash control; and customer service.

Prerequisite: Recommended BUS 109.

- BUS 216 Supermarket Merchandising (3-0) 3 hrs.**
Merchandising techniques as applied to the supermarket, including the store manager's merchandising responsibilities; an analysis of profit centers; customer motivation; consumer dynamics; product information; space management in store sales, promotion, and displays; inventory control; pricing; advertising; brand management; creative merchandising in specific departments; and increasing departmental as well as store sales and profits.
Prerequisite: Recommended BUS 109.
- BUS 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 processes.
Prerequisite: BUS 245 or consent of instructor.
- BUS 218 Introduction to Finance (3-0) 3 hrs.**
Methods of financing business enterprises and their relationships to personal and company investment policies.
Prerequisite: BUS 111 and BUS 101.
- BUS 225 Applied General Statistics (3-0) 3 hrs.**
An introduction to 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; time series.
Prerequisite: Any mathematics course numbered 100 or above or consent of instructor.
- BUS 226 Elementary Quantitative Methods (3-0) 3 hrs.**
An introduction to the new field of 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.
- BUS 245 Principles of Marketing (3-0) 3 hrs.**
Principles and methods involved in distribution of goods and services. Role and functions of marketing institutions in business system. Product, price, promotion, and distribution channel policies.
Prerequisite: BUS 111. Prior or concurrent enrollment in ECO 201 recommended.
- BUS 249 Purchasing (3-0) 3 hrs.**
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: BUS 245 and sophomore standing. Sophomore standing may be waived upon consent of instructor.
- BUS 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: BUS 245.
- BUS 255 Small Business Management (3-0) 3 hrs.**
Organization and operation of 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: BUS 111 or consent of instructor.

BUS 262 Accounting Seminar & Internship (3)

Cooperative work experience in accounting field. Enrollment in this course is restricted to students enrolled in the accounting aid curriculum. Part of the credit for this course will be given for participation in supervised cooperative work experience program wherein an organized training plan will be followed in a college approved training station. One lecture hour per week for seminar.

Prerequisite: Consent of instructor.

BUS 265 Personnel Management (3-0) 3 hrs.

Personnel problems and labor relations. Employment techniques, wages and hours, job evaluation, training, ratings, collective bargaining, pensions and fringe benefits.

Prerequisite: BUS 270 or consent of instructor.

BUS 267 Office and Administrative Management (3-0) 3 hrs.

Application of fundamental management practices to administrative type work both in the "office" and throughout the organization. Planning organizing and controlling business services, systems and procedures, office automation, cost reduction, and human relations practices.

Prerequisite: BUS 270 or consent of instructor.

BUS 270 Principles of Management (3-0) 3 hrs.

Presents the theory and major functions of management and describes the role of the manager. Major concepts in organization are developed along with an understanding of the decision-making process and consideration of the human factors in management.

Prerequisite: BUS 111 or BUS 160.

BUS 274 Industrial Management (3-0) 3 hrs.

An 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: BUS 270 or consent of the instructor.

BUS 275 Labor-Management Relations (3-0) 3 hrs.

A course dealing 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: BUS 270 or consent of the instructor. Recommend prior or concurrent enrollment in ECO 201.

BUS 281 Marketing Management Seminar & Internship I (1-2) 3 hrs.

Principles, practices, and areas of decision-making relative to price, product, promotion, and distribution policies of various types of marketing organizations.

Restricted to students in marketing management occupational programs. Part of the credit given for participation in supervised cooperative work experience in a college approved training station. One lecture hour per week for seminar.

BUS 282 Marketing Management Seminar & Internship II (1-2) 3 hrs.

Continuation of BUS 281.

Prerequisite: BUS 281 or consent of program coordinator.

BUS 283 Marketing Management Seminar & Internship III (1-2) 3 hrs.

Continuation of BUS 281 and BUS 282.

Prerequisite: BUS 282 or consent of program coordinator.

CHEMISTRY**CHM 100 Introductory Chemistry (3-3) 4 hrs.**

Introduction to fundamental concepts of inorganic, organic, and biochemistry: matter, solutions, properties of organic compounds and chemical reactions. For students with no credit in high school chemistry. Meets prerequisite for Harper Nursing Program. (\$7.50 lab fee).

CHM 101 Survey of Organic & Biological Chemistry (3-3) 4 hrs.

A brief study of the principles of organic chemistry as related to body functions: acid-base balance, digestion, absorption, and metabolism of proteins, lipids, and carbohydrates; enzymes; nucleic acids; and the blood. Laboratory exercises include a study of the major classes of organic compounds, the blood, urine, and saliva.

Restricted to Dental Hygiene Program.

Prerequisite: CHM 100. (\$7.50 lab fee).

CHM 110 Chemical Technology Seminar (1-0) 1 hr.

Orientation for chemical technology students, including objectives of program, occupational and professional employment, and career opportunities. Panel discussions, reports, visitations to industrial laboratories, and guest speakers.

CHM 121 General Chemistry I (3-3) 4 hrs.

Fundamentals of inorganic chemistry including chemical arithmetic. For students with no credit in high school chemistry.

Prerequisite: At least one year of high school algebra with a grade of C or better or MTH 95 with a grade of C or better. (\$7.50 lab fee).

CHM 122 General Chemistry II (3-3) 4 hrs.

Continuation of CHM 121. Fundamentals and theory: descriptive chemistry of some non-metals and introduction to organic chemistry.

Prerequisite: CHM 121. (\$7.50 lab fee).

CHM 131 College Chemistry I (3-6) 5 hrs.

Principles and theories of inorganic chemistry including molecular, atomic, nuclear, and electronic theories of matter and their relations to the periodic table. Oxidation-reduction; chemical thermodynamics; bonding; behavior of gases; kinetics; equilibrium; solutions; etc. are treated quantitatively. Laboratory emphasis upon the interpretation of data. Primarily for students in chemistry, chemical engineering, or physical science curricula.

Prerequisite: One year of high school chemistry with at least a B average and credit or registration in MTH 103. (\$7.50 lab fee).

CHM 132 College Chemistry II (3-6) 5 hrs.

Primarily for students in chemistry, chemical engineering, or physical science curricula. Continuation of CHM 131. Lab includes quantitative analysis.

Prerequisite: CHM 131. (\$7.50 lab fee).

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. (\$7.50 lab fee).

Prerequisite: CHM 132 or CHM 122 and consent of instructor.

- CHM 205 Organic Chemistry II (3-6)** 5 hrs.
Continuation of CHM 204.
Prerequisite: CHM 204. (\$5 lab fee).
- CHM 210 Quantitative and Instrumental Analysis I (3-6)** 5 hrs.
Chemical methods applied in quantitative analysis; formation and properties of precipitates; theory of neutralization; basic procedures in gravimetric analysis, titrimetry.
Prerequisite: CHM 122 or CHM 132. (\$7.50 lab fee).
- CHM 211 Quantitative and Instrumental Analysis II (3-6)** 5 hrs.
Continuation of CHM 210. Emphasis on instrumental methods of performing analyses. Applications, limitations, and treatment of errors stressed.
Prerequisite: CHM 210. (\$7.50 lab fee).
- CHM 240 Unit Operations I (2-4)** 4 hrs.
Fundamental theories of chemical engineering. Fluid flow, flow measurement, fluid transportation, heat flow.
Prerequisite: CHM 122 and enrollment in Chemical Technology program. (\$7.50 lab fee).
- CHM 241 Unit Operations II (2-4)** 4 hrs.
Continuation of CHM 240. Evaporation, distillation, filtration, separations, solid handling and conveying.
Prerequisite: CHM 240. (\$7.50 lab fee).

CHILD CARE

- CCA 109 Language Arts for the Young Child (3-0)** 3 hrs.
A course designed to provide the student with the techniques and methods for encouraging the development of language skills in the young child. Included are techniques of stimulating discussion and improving vocabulary and speech in the child. A survey of the best prose and verse for young children is included, and techniques of story telling and the use of records for children will be taught. Critical analysis of books for different age levels will be stressed.
- CCA 110 Creative Activities for Young Children (3-0)** 3 hrs.
The course acquaints the student with the variety of creative art materials and methods appropriate for use in programs for young children. The course includes first-hand 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 213** 2 hrs.
A course to supplement Child Services 215 for students employed in local facilities.
- CCA 214 Children's Laboratory (0-3)** 2 hrs.
Students participate 3 hours a week in a local facility. To be taken in conjunction with Child Care 215.
- CCA 215 Principles of Pre-school Education (4-0)** 4 hrs.
Theory and practices of early childhood education in nursery school, day care center, 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. Visits are made to a variety of institutions in the community and opportunities for classroom observations will be arranged.

CCA 219 Psychology of Exceptional Children (3-0) **3 hrs.**
 Gifted, retarded, socially maladjusted, emotionally disturbed, slow learners, hypersensitive, and physically handicapped child. Designed for parents of children with these problems and teachers of special education classes in elementary schools.
 Prerequisite: PSY 101.

CCA 220 Child Care Practicum Internship (2-15) **6 hrs.**
 This course provides the student with an opportunity to participate as a student participant in a mental health facility, day care center, elementary school or nursery school, utilizing the skills and techniques which have been learned in the specialized methods courses. The student spends five mornings a week under supervision, working in an appropriate facility. Two additional hours are scheduled each week for conferences, reports, supplementary reading and discussion of problems.

DATA PROCESSING

DPR 101 Introduction to Data Processing (3-0) **3 hrs.**
 The history of data processing, scope and significance of data processing, mechanical data processing, punched card unit records, punched card machine functions, electronic data processing equipment, and basic computer concepts.

DPR 103 Key Punching and Verifying (1-4) **2 hrs.**
 Development of high level of skill in programming and operating the IBM key punch and verifier, including speed and accuracy in key punching and verifying. (\$5 lab fee).

DPR 108 Computer Programming I (4-4) **5 hrs.**
 In-depth study of COBOL. Extensive laboratory experience in writing, testing, debugging, and documenting programs for business applications.
 Prerequisite: DPR 101 or consent of instructor. (\$5 lab fee).

DPR 110 Computer Programming II (4-4) **5 hrs.**
 Program writing, testing, debugging, and documentation using an assembler language. Extensive laboratory experience in planning, writing, and testing programs for typical business applications.
 Prerequisites: DPR 101 and DPR 108, or consent of instructor. (\$5 lab fee).

DPR 150 Data Processing Mathematics I (3-0) **3 hrs.**
 For data processing students. Concepts of notation, number bases, precision and significance, iterative process, logic, Boolean Algebra, operations research, and FORTRAN for business applications.
 Prerequisite: College Algebra or consent of instructor.

DPR 202 Programming Systems (3-2) **3 hrs.**
 Purpose and function of various programming systems. Program compilers, micro-and macro-generators, utility programs, sort/merges, and job control languages.
 Prerequisite: MTH 103 or DPR 150 and either concurrent registration in or completion of DPR 210; or consent of instructor. (\$5 lab fee).

DPR 203 Systems Analysis and Design I (3-0) **3 hrs.**
 Functions and techniques of systems analysis, design, and development. Analysis of information flow, developing, organizing and using management data, establishing system specifications and equipment needs, and implementation of management information systems. Stresses methods and tools used in systems analysis and design.
 Prerequisite: DPR 101 and concurrent registration in BUS 101 or consent of instructor.

- DPR 204 Systems Analysis and Design II (3-0)** 3 hrs.
Continuation of DPR 203. Advanced concepts in management information systems. Source data automation, data capture equipment, teleprocessing equipment, time-sharing systems, and total integrated information systems concepts.
Prerequisite: DPR 203.
- DPR 210 Computer Programming III (3-4)** 4 hrs.
Continuation of DPR 110. Programming magnetic tape, random storage devices, and remote terminal systems. Includes use of IOCS for input-output devices.
Prerequisite: DPR 110. (\$5 lab fee).
- DPR 230 Field Project and/or Case Study (1-5)** 3 hrs.
Application of data processing skills in practical situation. Field project or case study in local data processing installation. Open only to Data Processing degree candidates.
Prerequisite: G.P.A. of 2.0 or higher, plus DPR 203, DPR 250, and concurrent registration in DPR 202 and DPR 210, or consent of instructor.
- DPR 250 Data Processing Mathematics II (3-0)** 3 hrs.
Continuation of DPR 150. For Data Processing majors. Elementary statistical methods: measures of central tendency; dispersion; probability, confidence intervals, correlation; and FORTRAN; as applied to data processing applications.
Prerequisites: DPR 150 and ECO 201, or consent of instructor.

DENTAL HYGIENE

- DHY 101 Pre-clinical Dental Hygiene (1-3)** 2 hrs.
Operative procedures consist of instruction and practical work on manikin heads in technique of instrumentation and polishing. Proper manipulation of instruments for removal of calcific deposits and their indications — required for admittance to clinical practice. (\$5 lab fee).
- DHY 111 Dental Radiology (1-0)** 1 hr.
Theory of X-ray radiation and dangers, exposure, and protection are introduced in this sequence. Film placement, exposure times, processing, mounting, and film interpretation are covered.
- DHY 150 Clinical Dental Hygiene and Radiology I (0-6)** 2 hrs.
Clinical practice on patient in dental hygiene clinic. Recording of patient histories, charting, X-ray, prophylaxis, topical medicinal applications, and dental health education. Improved techniques, skill, and speed emphasized in DHY 251-252. (\$7.50 lab fee).
- DHY 161 Dental Anatomy (2-4)** 4 hrs.
Human dentition and supporting tissues. Penetrating study of oral anatomical structures. Recognize, describe, and reproduce all natural tooth forms. (\$5 lab fee).
- DHY 170 Introduction to Dentistry and Dental Hygiene (1-0)** 1 hr.
Introduction, history, and organization of both the dental and dental hygiene professions. A development of professional attitudes, aims, and objectives of the members of the dental health team.
- DHY 201 Seminar (2-0)** 2 hrs.
Practice administration, dental ethics and jurisprudence. Orientation in cost accounting and bookkeeping in dental office. Dental office policies and procedures; application of ethics in everyday practice; legal responsibilities of dentist and dental hygienist; jurisprudence; State dental laws governing the practice of dental hygiene.

DHY 220 Community Dentistry I (3-0) 3 hrs.

Preventive Dentistry, Dental Health Education, and Public Health. Preventive aspects of dentistry; emphasis on dental health education, including diet and nutrition, health habits, oral prophylaxis, etiology of caries, dental stains, deposits, and periodontal health. Theories of preventive dentistry, including diseases, their etiology, prevention and cure through public health measures. (\$5 lab fee).

DHY 221 Community Dentistry II (2-2) 3 hrs.

Continuation of DHY 220 with field experience in student classroom teaching in district elementary schools. Pursuit of field studies in public health. (\$5 lab fee).

DHY 230 Nutrition and Periodontia (2-0) 2 hrs.

Nutritional needs, dietary patterns, selection and preparation of healthful foods and their relation to dental health. Diseases of gingival and periodontal tissues; tissue preservation and cures of diseases.

DHY 240 Dental Pharmacology and Anesthesia (1-0) 1 hr.

Basic dental pharmacopeia, uses of anesthetics, antibiotics, analgesics, hypnotics, and handling of dental office emergencies.

DHY 250 Clinical Dental Hygiene and Radiology II (0-12) 4 hrs.

Continuation of DHY 150. (\$10 lab fee).

DHY 251 Clinical Dental Hygiene and Radiology III (0-12) 4 hrs.

Continuation of DHY 250. (\$10 lab fee).

DHY 280 Dental Materials and Dental Assisting (2-2) 3 hrs.

Introduction to operations performed, treatments given in dental office, chairside assisting, reception and records. Materials used in restorative dentistry, prosthetic dentistry, and orthodontics, their manipulation and application in dentistry. Product introduction and orientation. (\$3 lab fee).

DHY 291 Dental Assisting (1-6) 2 hrs.

Incorporates guest lecture series covering theory and demonstrations in operative dentistry, orthodontics, prosthodontics, oral surgery, pedodontics, endodontics, military dentistry, public health, and allied health services. Field experience through observation and participation in local dental offices, clinics, and military installations. (\$5 lab fee).

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.

A descriptive rather than a quantitative approach to the study of economics. Major topic matter covers economic history, the elements of macro-economics, micro-economics 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, economic development, from a Micro-economic approach.

ECO 202 Principles of Economics II (3-0) 3 hrs.

Continuation of ECO 201. Economic problems faced by the individual and the firm. Examination of market structures, price and output determination. The Micro-economic approach.

Prerequisite: ECO 201.



EDUCATION

EDU 201 Introduction to Education (3-0) **3 hrs.**
 Organization, structure and operation of schools in United States, including elementary, secondary, college and adult education. Evaluation of each student's potential for this occupation.

EDU 211 Educational Psychology (3-0) **3 hrs.**
 Psychological 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. Classroom observation required.
 Prerequisite: PSY 101 or consent of instructor.

ELECTRONICS

ELT 101 Circuits I, Resistive Circuit Analysis (3-4) **4 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. (\$5 lab fee).

ELT 102 Circuits II, Single Time Constant Circuits (3-3) **4 hrs.**
 R-C and R-L single time constant circuits. Basic switching, circuitry, circuits with square-wave and step voltages as sources, and sinusoidal voltages as sources.
 Prerequisite: ELT 101 or consent of instructor. (\$7.50 lab fee).

ELT 103 Circuits III, Network (3-4) **4 hrs.**
 Networks that will not reduce to simple single-time constant circuits. Only steady-state solutions considered, enabling use of S-plane in circuit analysis.
 Prerequisite: ELT 102 or consent of instructor. (\$10 lab fee).

ELT 105 Electro-Mechanical Drafting (1-6) **3 hrs.**
 Drafting fundamentals and techniques with introduction to electronic and mathematical symbols, basic circuitry, electronic devices and fabrication processes. (\$5 lab fee).

ELT 110 Introductory Electronics (0-6) **2 hrs.**
 Laboratory instruments, circuit components, basic measuring techniques and basic circuits used as building blocks in any electronics system. (\$5 lab fee).

ELT 111 Electronics I, Resistive (2-3) **3 hrs.**
 Resistive circuits involving electronic devices. Volt-ampere characteristics and physics of diodes, transistors, multielement vacuum tubes, and practical resistive circuits using these devices.
 Prerequisite: ELT 110 or consent of instructor. (\$7.50 lab fee).

ELT 203 Electronics II, Pulse (3-4) **4 hrs.**
 Electronic circuits in which electronic devices are operated in a switching mode. Practical circuits are involved, such as clippers, clampers, pulse formers, multivibrators, blocking oscillators, logic circuits, and sweep circuits.
 Prerequisite: ELT 103, 111 or consent of instructor. (\$10 lab fee).

- ELT 204 Electronics III, Advanced Electronics (3-4) 4 hrs.**
Electronic circuits in which vacuum tubes and transistors are operated in the linear region of their volt-ampere characteristic such that linear equivalent circuits can be applied in the analysis. Power supplies, amplifiers, feedback circuits, oscillators, modulation systems and detectors.
Prerequisite: ELT 203 or consent of instructor. (\$10 lab fee).
- ELT 205 Electronic Instrumentation (3-4) 4 hrs.**
Methods of sensing and controlling physical industrial processes. Components involved are transducers, indicators, recorders, and controllers.
Prerequisite: ELT 203 or consent of instructor. (\$10 lab fee).
- ELT 206 Electronic Computers (3-4) 4 hrs.**
Principles of digital and analog computers. Operating techniques of digital and analog computers.
Prerequisite: ELT 203 or consent of instructor. (\$10 lab fee).
- ELT 207 UHF Communications and Reception (3-4) 4 hrs.**
Design techniques in UHF circuits, field theory wave equations, and antennas.
Prerequisite: ELT 203 or consent of instructor. (\$10 lab fee).
- ELT 210 Computer Programming (3-0) 3 hrs.**
FORTRAN programming. Solution of electronic and technical problems using IBM 360 series computer.
Prerequisite: MTH 106 or consent of instructor. (\$5 lab fee).
- ELT 211 Analog Simulation I (3-4) 4 hrs.**
Analog computing for technologies. Problem preparation and representative solutions of physical problems.
Prerequisite: MTH 206 or consent of instructor. (\$5 lab fee).
- ELT 212 Analog Simulation II (3-4) 4 hrs.**
Continuation of Analog Simulation I.
Prerequisite: ELT 211 or consent of instructor. (\$5 lab fee).

ENGINEERING

- EGR 120 Engineering Graphics I (0-6) 3 hrs.**
Graphical methods in orthogonal projections, developments, topographics, sketching, and plotting and charts and curves. Practical and theoretical analysis of common geometrical magnitudes of points, lines, planes, other surfaces, and pictorials. (\$5 lab fee.)
- EGR 121 Engineering Graphics II (0-6) 3 hrs.**
Graphical methods in mathematical calculations, including vectors, limit dimensioning, forces, tolerances, and nomography. Basic conceptual design through working drawings, assembly views, intersections and developments. (\$5 lab fee).
- EGR 122 Graphical Display Systems (0-4) 2 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. (\$5 lab fee.)

EGR 150 Analytical Mechanics (Statics) (2-0) 2 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 201.

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; influence of properties of materials.

Prerequisite: EGR 150.

EGR 215 Surveying I (2-3) 3 hrs.

Use of transit and level, reading verniers and angles, linear measurement, extending straight lines, differential and profile leveling, simple transverse survey, computation and keeping notes.

Prerequisite: MTH 103. (\$5 lab fee).

EGR 216 Surveying II (2-3) 3 hrs.

Route surveying, circular and parabolic curves, spirals, stadia surveying, U.S. Public Land Surveys, elementary land surveying and fundamentals of engineering astronomy used in surveying.

Prerequisite: EGR 215. (\$5 lab fee).

ENGLISH

CMN 099 Communications (6-0) 6 hrs.

Reading, writing, speaking, and listening theory and practice for students whose communication skills are insufficient for success in college level courses.

ENG 099 Composition (3-0) 3 hrs.

Reading and writing in clear correct English. For students whose linguistic abilities are insufficient for success in college level English.

ENG 101 Composition (3-0) 3 hrs.

Improvement of communication skills. Understanding and clear expression of written English.

Prerequisite: Satisfactory score on a placement test or ENG 099.

ENG 102 Composition (3-0) 3 hrs.

Continuation of ENG 101 in the reading and writing of various types of prose. Introduces methods used in writing investigative papers.

Prerequisite: ENG 101 or consent of Division Chairman.

ENG 103 Report Writing (3-0) 3 hrs.

Fundamental of semantics, syntax, and rhetoric as applied to business, industrial, and governmental report writing.

Prerequisite: ENG 101 or consent of Division Chairman.

- 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.**
Guided practice in various types of creative writing, emphasizing skills common to creative expression, description, narration and verse.
Prerequisite: ENG 102 or consent of Division Chairman.

FASHION DESIGN

- FAS 101 Flat Pattern Design and Draping I (2-4)** **4 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. (\$5 lab fee.)
- 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 Program Coordinator. (\$5 lab fee.)
- FAS 103 Apparel Design I (1-4)** **3 hrs.**
Basic principles of using master sloper set to develop patterns for original designs. Trends in fashion and principles of good design covered. (\$5 lab fee.)
- FAS 104 Apparel Design II (2-4)** **4 hrs.**
Development of basic sloper set into patterns. Actual construction of finished garments.
Prerequisite: FAS 103. (\$5 lab fee.)
- 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 designs. (\$5 lab fee.)
- 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 Program Coordinator. (\$5 lab fee.)
- FAS 107 Textiles & Apparel Construction I (0-4)** **2 hrs.**
General analysis of fabrics, weaves, printing and dyeing methods, finishes, etc. Professional design room techniques of constructing a garment. (\$5 lab fee.)
- FAS 108 Textiles & Apparel Construction II (0-4)** **2 hrs.**
Continuation of FAS 107. Tailoring of original designs using design room techniques. Emphasis on styling, fit, and professional finishing.
Prerequisite: FAS 107. (\$5 lab fee.)
- FAS 201 Advanced Flat Pattern Design and Draping I (2-4)** **4 hrs.**
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, FAS 102. (\$5 lab fee.)

- FAS 202 Advanced Flat Pattern Design and Draping II (2-4) 4 hrs.**
Continuation of FAS 201.
Prerequisite: FAS 201. (\$5 lab fee).
- FAS 203 Advanced Diversified Apparel Design I (2-4) 4 hrs.**
Development of patterns for the translation of original designs into completed garments. Visits to manufacturers and speakers from industry.
Prerequisite: FAS 103, FAS 104. (\$5 lab fee).
- FAS 204 Advanced Diversified Apparel Design II (2-4) 4 hrs.**
Continuation of FAS 203.
Prerequisite FAS 103, FAS 104, FAS 203. (\$5 lab fee).
- FAS 205 Tailoring Techniques I (0-4) 2 hrs.**
Professional assembling procedures, details, and finishes. Particular emphasis on coats and suits.
Prerequisite: FAS 108 or consent of Program Coordinator. (\$5 lab fee).
- FAS 206 Tailoring Techniques II (0-4) 2 hrs.**
Continuation of FAS 205. Tailoring of original garments.
Prerequisite: FAS 205. (\$5 lab fee).
- FAS 207 History of Costume I (2-0) 2 hrs.**
Survey of costume from early Egyptian to present day. Value of historic costume as inspiration for contemporary design. Trips to Chicago Historical Society.
- FAS 208 History of Costume II (2-0) 2 hrs.**
Continuation of FAS 207. Contemporary fashion trends analyzed.
Prerequisite: FAS 207

FIRE SCIENCE

- 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 102 Introduction to Fire Science (3-0) 3 hrs.**
History and philosophy of fire protection; statistics of loss of life and property by fire; agencies involved in fire protection; current legislation development and career orientation.
- FIS 103 Fire Prevention I (3-0) 3 hrs.**
Familiarization with fire prevention organization and the legal aspects of fire prevention. Essential elements of a fire prevention code. Examination of various fire prevention and building codes and their application to existing conditions and new construction.
- FIS 106 Fire Prevention II (3-0) 3 hrs.**
Familiarization with the extensive nature of fire prevention duties and activities. Emphasis on inspection procedure and hazards in specific types of occupancy. Fire prevention educational programs.
- FIS 110 Fire Fighting Tactics & Strategy I (3-0) 3 hrs.**
Review of fire chemistry, equipment, and manpower; basic fire fighting and strategy; methods of attack; preplanning fire problems.
- FIS 111 Fire Fighting Tactics & Strategy II (3-0) 3 hrs.**
Review of fire chemistry, equipment, and manpower; basic fire fighting and strategy; methods of attack; preplanning fire problems.

- FIS 115 Building Construction and Codes (3-0)** **3 hrs.**
Fundamental building construction and design; fire protection features; and special considerations.
- FIS 120 Hazardous Materials I (3-0)** **3 hrs.**
A review of basic chemistry; storage, handling, laws, standards, and fire fighting practices pertaining to hazardous materials.
- FIS 121 Hazardous Materials II (3-0-)** **3 hrs.**
A second semester course in hazardous materials covering storage, handling, laws, standards, and fire fighting practices with emphasis on fire fighting and control at the company officer level.
- FIS 130 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, underwriters' requirements for pumps.
- FIS 140 Fire Causes & Investigation (3-0)** **3 hrs.**
Introduction to arson and incendiarism, arson laws, and types of incendiary fires. Methods of determining fire cause, recognizing and preserving evidence, interviewing and detaining witnesses. Procedures in handling juveniles; court procedure and giving court testimony are covered.
- 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.

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 of baking through participation in the production of the College Bake Shop and discussion sessions.
- FSM 091 Advanced Quantity Baking (0-20)** **10 hrs.**
A continuation of FSM 090 with emphasis on more advanced techniques of baking including cake decorating, hotel pastry and display pieces. Some time will be spent in the kitchens to orient the student to cooking.
- FSM 095 Basic Quantity Cooking (0-20)** **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.
- FSM 096 Advanced Quantity Cooking (0-20)** **10 hrs.**
A continuation of FSM 095 with emphasis on more advanced techniques of food preparation including culinary art and buffet work. Exposure to bakeshop operations will be integrated into the course.
- 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 (1-9) 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 (0-10) 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 Nutrition and Menu Planning (2-0) 2 hrs.
Practical applications of nutrition as related to dietary needs of patients in health care institutions and other 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 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; purchase standards for convenience foods.

FSM 212 Food Service Supervision (4-0) 4 hrs.
A study of the theory and techniques of supervision as related to the food service industry.

FSM 213 Seminar and Internship (2-15) 4 hrs.
Cooperative work experience in the food service industry. Enrollment is restricted to sophomores in the Food Service Management curriculum. 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. Work experiences will be shared in a two-hour weekly seminar.
Prerequisite: FSM 212 or consent of instructor.

FSM 214 Cost Control (3-0) 3 hrs.
Practical applications 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 (4-0) 4 hrs.
Beginning course in the language skills of listening, understanding, speaking, reading and writing in their logical sequence.

FRN 102 Elementary French (4-0) 4 hrs.
Continuation of FRN 101. Situational conversations in French; reading and writing stressed.
Prerequisite: FRN 101 or one year of high school French.



FRN 201 Intermediate French (4-0) 4 hrs.

Conversation with emphasis on pronunciation, intonation, stress and rhythm. Grammar Review.

Prerequisite: FRN 102 or two years of high school French or consent of instructor.

FRN 202 Intermediate French (4-0) 4 hrs.

Continuation of FRN 201, plus accuracy and speed in reading, study of syntax, and extensive composition.

Prerequisite: FRN 201 or 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.

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 discussions of works read. Writing based on readings and class discussion.

Prerequisite: FRN 202 or equivalent, or consent of instructor.

GEOGRAPHY**GEG 101 World Geography (3-0) 3 hrs.**

The economic, political, and cultural geography of the modern world. Raw materials, industrial resources, and trade connections related to war and peace.

GEOLOGY**GEO 101 Physical Geology (2-3) 4 hrs.**

Materials, structure and sculpture of the earth's surface. One-day field trip required. (\$10 lab fee — includes field trip cost).

GEO 102 Historical Geology (2-3) 4 hrs.

Geological history of the earth including principles employed to reconstruct this history. One-day field trip required. (\$10 lab fee — includes field trip cost).

GEO 201 Rocks and Minerals (2-3) 4 hrs.

Physical description of minerals and rocks. Introduction to crystallography, economic minerals, natural resources. Field trip required. (\$10 lab fee — includes field trip cost).

Prerequisites: GEO 101 or CHM 121 or consent of instructor.

GEO 202 Paleontology (2-3) 4 hrs.

Fossil record of life, principles of evolution and ecology. One day field trip required. (\$10 lab fee — includes field trip cost).

Prerequisite: GEO 102 or BIO 110.

GERMAN

GER 101 Elementary German (4-0) **4 hrs.**
Beginning course in the language skills of listening, understanding, speaking, reading and writing in their logical sequence.

GER 102 Elementary German (4-0) **4 hrs.**
Continuation of GER 101. Situational conversations in German; reading and writing stressed.
Prerequisite: GER 101 or one year of high school German.

GER 201 Intermediate German (4-0) **4 hrs.**
Conversation with emphasis on pronunciation, intonation, stress and rhythm. Grammar Review.
Prerequisite: GER 102 or two years of high school German or consent of instructor.

GER 202 Intermediate German (4-0) **4 hrs.**
Continuation of GER 201, plus accuracy and speed in reading, study of syntax, and extensive composition.
Prerequisite: GER 201 or 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.

GER 210 Introduction to Modern German Literature (3-0) **3 hrs.**
Reading of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and direction. Speaking based on discussions of works read. Writings based on readings and class discussions.
Prerequisite: GER 202 or equivalent, or consent of instructor.

HISTORY

HST 111 History of the American People to 1865 (3-0) **3 hrs.**
Survey of American Colonial life and institutions of 17th and 18th centuries. Period from 1763 to 1865; special stress on the social, economic, cultural, political and constitutional development of United States.

HST 112 History of the American People from 1865 (3-0) **3 hrs.**
Close of Civil War to present with primary stress on political and economic development, also including social, intellectual and cultural phases. Expanded role of government in national affairs and participation of the United States in international relations.

HST 113 Conference Course (1-0) **1 hr.**
Designed to meet interests and needs of qualified majors in history. Must be taken concurrently with HST 111 or HST 112. Specific topics will vary from semester to semester.
Prerequisite: Consent of instructor.

HST 214 Afro-American History (3-0) 3 hrs.

In-depth study of American Negro from African slave trade through slavery, Reconstruction, years of neglect, and Civil Rights Revolution in the United States; and his contributions to American culture.
Prerequisite: HST 112.

HST 141 History of Western Civilization to 1815 (4-0) 4 hrs.

Political, social, cultural, economic and technological developments from pre-historic times to advent of 1789 French Revolution.

HST 142 History of Western Civilization since 1815 (4-0) 4 hrs.

Continuation of History 141. Political, social, cultural, economic and technological developments with emphasis on such socio-political-economic concepts as nationalism and social-Darwinism.

HST 243 The Far East in the Modern World 3 hrs.

The history of East Asia since 1800. The traditional cultures of China and Japan, the western impact, and the Asian response will be covered.
Prerequisite: HST 112.

HUMANITIES**FNA 111 History of Art, I (3-0) 3 hrs.**

Art from ancient times to 1600. Area cultural facilities used, particularly the Art Institute of Chicago.

FNA 112 History of Art, II (3-0) 3 hrs.

Continuation of FNA 111 from 1600 to the present.

FNA 212 Theatre Arts: Motion Pictures, Drama, Ballet, Opera, and Music (3-0) 3 hrs.

Interrelationships and synthesis in the arts as exhibited in motion pictures, theatre, ballet, opera, and music for the theatre. Process of bringing together various artistic media such as literary elements, musical devices, and visual effects to produce these art forms.

HUM 101 The Creative Nature of Man I (2-2) 3 hrs.

Creative personality in Western tradition and the creative process with emphasis upon form, function, influence of the patron, and prevailing attitudes on music, literature and art of representative periods. Lecture-demonstration, discussion, panels and field activity.

HUM 102 The Creative Nature of Man II (2-2) 3 hrs.

Representative points of view regarding life and death in Eastern and Western worlds; problems in developing a coherent philosophy of one's own. Focus upon 20th century issues as reflected in contemporary art, music, and literature.

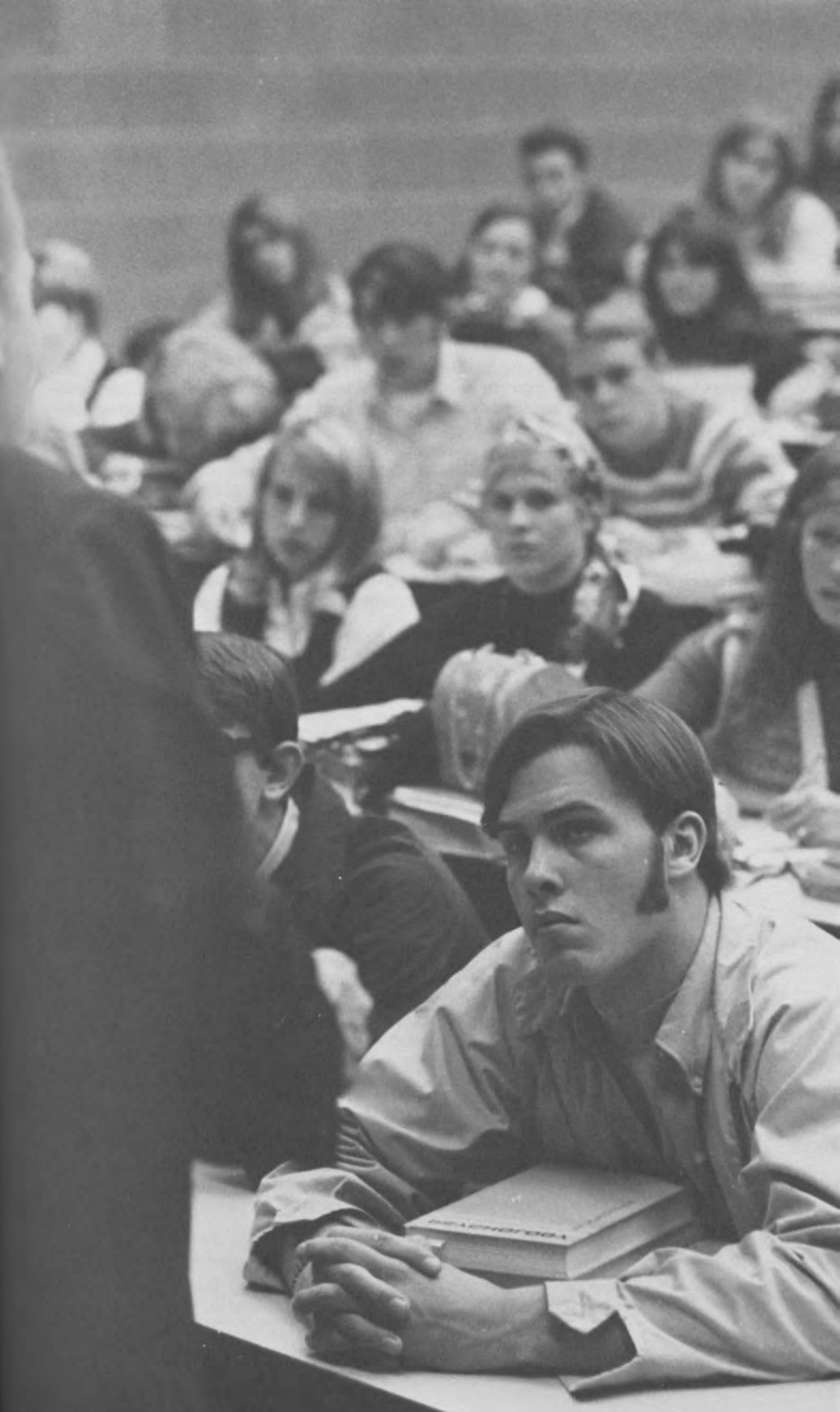
JOURNALISM**JNM 130 Fundamentals of Journalism (3-0) 3 hrs.**

History and current role of the newspaper, emphasizing leads, stories, editorials, features and reviews; copyreading and makeup.

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 instructor.



- JNM 133 Feature Writing (3-0)** **3 hrs.**
Specialized news writing stressing human element in news. Techniques, story approaches for individualistic treatment.
Prerequisite: JNM 130.
- JNM 134 Media Adjuncts (2-4)** **4 hrs.**
Planning and production work in advertising, public relations and publications — business, industrial and consumer magazines.
- 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 settings international, national, regional and local.
- JNM 235 Copy Reading and News Editing (2-4)** **4 hrs.**
Preparing copy for newspaper publication. Headline writing, copy editing, treatment of story placement and effective display of typographically pleasing make-up.
- JNM 236 Radio and Television News (3-0)** **3 hrs.**
Reporting and writing for broadcast news. Emphasis on broadcast style in all phases of newswriting and editing.
- JNM 237 Externship Study (0-10)** **5 hrs.**
Practical reporting practice and observation in professional one-day-a-week assignments at newspapers, news bureaus and television and radio newsrooms.
Prerequisite: Successful completion of three program semesters.

LAW ENFORCEMENT

- LAE 101 Introduction to Law Enforcement & Criminal Justice (3-0)** **3 hrs.**
History, role, development and constitutional aspects of law enforcement and public safety. Review of agencies and their functions involved in processes of administration of criminal justice.
- LAE 102 Police Administration and Organization (3-0)** **3 hrs.**
Principles of police administration and organization; functions and activities; records; communications; public relations; personnel and training; policy formation; planning, research; inspection, control.
- LAE 103 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.
- LAE 110 Police Operations (3-0)** **3 hrs.**
Administration of police line operations, including patrol as basic operation of the police function, investigation, traffic, juvenile, intelligence and other special operational units. Manpower distribution, analysis of operations, enforcement policy, operations during civil disorders and disasters.
- LAE 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.

- LAE 202 Criminal Law II (3-0)** **3 hrs.**
Continuation of LAE 201. Principals of arrest, search and seizure; evaluation of evidence and proof including kinds, degrees, admissibility and competence. Rules of evidence of particular importance at operational level in law enforcement. Courtroom and criminal trial procedures.
Prerequisite: LAE 201 or consent of instructor.
- LAE 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.
- LAE 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, book-making, and other types of gambling and prostitution as these factors are involved in the daily routine of police work.
- LAE 210 Introduction to Criminology (3-0)** **3 hrs.**
Crimes and criminals including criminal behavior, explanation of crime, types of crimes and criminals.
- LAE 211 Criminal Investigation (2-2)** **3 hrs.**
Conduct at crime scenes, collection and preservation of physical evidence; methods used in police science laboratory; fingerprints, ballistics, documents, photography and related forensic sciences.
Prerequisite: LAE 210 or consent of instructor.
- LAE 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 Illinois Vehicle Code.
- LAE 215 Police Defense Techniques (4-0)** **2 hrs.**
Principles necessary for self defense and weaponless control. Psychology in use of force, physical and mental preparation and practice in realistic defense and control techniques. Proper arrest and search procedures for police officer.
Prerequisite: Open only to fourth semester students of Law Enforcement or approval of Coordinator.
- LAE 250 Police Field Service (2-8)** **3 hrs.**
Practicum designed to broaden educational experience through appropriate observation and participation in law enforcement duties. Correlation of theoretical knowledge with practice in participating organizations. Students assigned to local law enforcement agencies for maximum of 10 hours per week in addition to two hour seminar. Open only to fourth semester students.
- LAE 252 Industrial Fire Protection, Disaster 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.

LAE 253 Safety Management (3-0) 3 hrs.
Principles, responsibility, 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.

LAE 254 Interviewing and Case Preparation (3-0) 3 hrs.
Interview and questioning of complainants, witnesses, victims, suspects, and informants; statements, mechanical means for the detection of deception, and case preparation.

LITERATURE

LIT 105 Poetry (3-0) 3 hrs.
Analysis and appreciation of poetry of many periods. Diction, themes, symbols, images, rhythm, and meter.

LIT 110 Drama (3-0) 3 hrs.
Analysis and appreciation of representative plays of various types and eras, with attention to origins and trends. Plays read as literature. See Speech 111 for theatrical production.

LIT 115 Fiction (3-0) 3 hrs.
Novel and short story. Structural analysis, understanding and appreciation of various types.

LIT 206 World Literature to 1800 (3-0) 3 hrs.
Selected works of universal significance contributed by peoples and civilizations from ancient times to 1800.

LIT 207 World Literature since 1800 (3-0) 3 hrs.
Continuation of LIT 206. Selected works of universal significance contributed by peoples and civilizations from 1800 to the present.

LIT 221 American Literature from Colonial Days to Civil War (3-0) 3 hrs.
American literature as an expression of American life through early social and political documents, novels, short stories, and poems.

LIT 222 American Literature from the Civil War to 1914 (3-0) 3 hrs.
American prose and poetry to the turn of the century, including regional literature, literary journalism, criticism, social and historical novels. Establishes criteria for judging American literary output.

LIT 231 English Literature to 1800 (3-0) 3 hrs.
Survey of English writers from beginning of English literature to 1880. Reading and interpretation of writers such as Chaucer, Malory, Jonson, Donne, Milton, Dryden, Congreve, Swift, Pope, Johnson, and Boswell.

LIT 232 English Literature 1800-1914 (3-0) 3 hrs.
Survey of English writers from Romantic Period to World War I. Reading and interpretation of such writers as Wordsworth, Keats, Byron, Austen, Tennyson, Browning, Dickens, Hardy, Conrad, and Shaw.

LIT 241 20th Century British and American Literature (3-0) 3 hrs.
Survey of important writers and writings in British and American literature since the first world war.

MATHEMATICS

MTH 094 Arithmetic (3-0)

3 hrs.

Review of standard arithmetic symbols and operations, to establish meaningful recall of the number relationships. Includes study of the decimal system as well as theory and drill in addition, subtraction, multiplication, and division of whole numbers, common fractions, and decimal fractions. Percent, measurement, and problem solving may be included. Not recommended for students with previous algebra courses.

MTH 095 Elementary Algebra (3-0)

3 hrs.

Signs, symbols, and operations needed for other courses in mathematics and science are introduced. Basic topics, include: introduction to sets, signed numbers, linear equations, exponents, polynomials, factoring, graphing, and quadratic equations. Equivalent to first year high school algebra. Not recommended for those who have passed high school algebra within the past five years.

MTH 096 Geometry (3-0)

3 hrs.

Concepts of Euclidean geometry, including lines, angles, polygons, and circles.

Prerequisite: One year of high school algebra with passing grade or MTH 095 with a passing grade.

MTH 101 Fundamentals of Mathematics I (3-0)

3 hrs.

Sets, logic, number bases, probability, review of selected topics in Algebra and Geometry. A general education course in Mathematics. Prerequisite: MTH 095-MTH 096 or equivalent with a grade of "C" or better.

MTH 102 Fundamentals of Mathematics II (3-0)

3 hrs.

Continuation of MTH 101 with emphasis on topics usually covered in Intermediate Algebra. Nature of roots of quadratic equations, complex numbers, rational exponents, radicals, logarithms, inequalities, binomial theorem.

Prerequisite: MTH 101 with a grade of "C" or better.

MTH 103 College Algebra (3-0)

3 hrs.

Review of graphs, logic, and set theory. Relations and functions, quadratic equations, determinants, sequences, progressions, probabilities, and an introduction to the theory of equations and modern algebra. Prerequisite: One and one-half years of high school algebra and one year of plane geometry, or MTH 102 with grade of "C" or better.

MTH 104 Plane Trigonometry (3-0)

3 hrs.

Trigonometric functions and relations, solutions of triangles, logarithms, identities, equations, and applications.

Prerequisite: One and one-half years of high school algebra and one year of plane geometry, or MTH 102 with grade of "C" or better.

MTH 105 Analytic Geometry (4-0)

4 hrs.

Rectangular and polar coordinates, the straight line, conic sections, coordinate transformations, vectors, the dot and cross product, vector geometry of lines and planes, sequences and tangents, transcendental and parametric equations.

Prerequisite: MTH 103 and MTH 104 with grade of "C" or better.

MTH 106 Mathematics I (5-0) 5 hrs.

Topics in algebra, vectors, trigonometry, vector algebra and problem solving by computer. (Fortran IV). For students in Electronic Technology, Mechanical Design Technology and Numerical Control Technology.

Prerequisite: Two years of high school mathematics or permission from the counselor of the Engineering Division.

MTH 107 Mathematics II (5-0) 5 hrs.

Continuation of MTH 106. Topics in trigonometry, analytic geometry, logarithms, differential and integral calculus introduced.

Prerequisite: MTH 106 with grade of "C" or better or consent of instructor.

MTH 111 Pre-calculus Mathematics I (5-0) 5 hrs.

Unifying concepts of functional representation in algebra, trigonometry, and analytic geometry. Axiomatic approach to real and complex number systems. Equivalent to two hours of MTH 103, two hours of MTH 104, and one hour of MTH 105.

Prerequisite: B or better in MTH 102 or consent of instructor.

MTH 112 Pre-calculus Mathematics II (5-0) 5 hrs.

Continuation of MTH 111 extending the concept of functional representation of exponential, logarithmic, implicit quadratic functions of two or more variables, and graphical analyses of functions in polar and parametric representations. Introduction to differentiation and integration. Equivalent to one hour of college algebra, one hour of trigonometry, and three hours of analytic geometry.

Prerequisite: MTH 111 with a grade of "C" or better.

MTH 124 Finite Mathematics I (3-0) 3 hrs.

Introduction to finite mathematics primarily for students in Social Sciences and Business: basic ideas of logic, set theory, vectors, and matrices. Problems selected from Social Sciences and Business.

Prerequisite: MTH 103 or equivalent with a grade of "C" or better. Offered Fall semester.

MTH 134 Finite Mathematics II (4-0) 4 hrs.

A continuation of MTH 124 with emphasis on relations, functions, probability and basic concepts of calculus, with application in Social Sciences and Business.

Prerequisite: MTH 124 with a grade of "C" or better. Offered Spring semester.

MTH 165 Statistics (3-0) 3 hrs.

Tabular and graphic representation; normal distribution, dispersion, statistical inference, sampling, distribution of means, regression and correlation analysis, probability — including finite probability by use of set theory. Applications in education, business, natural and social science.

Prerequisite: MTH 101 with grade of "C" or better or consent of instructor.

MTH 201 Calculus I (5-0) 5 hrs.

Differentiation of elementary functions with applications to geometry, physics, and other sciences. Differential, approximation formula of integration and introduction to the definite integral.

Prerequisite: MTH 105 or MTH 112 with grade of "C" or better.

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

Continuation of MTH 201 with emphasis on the definite integral. Applications to geometry, mechanics, and physics. Hyperbolic functions, techniques of integration, vectors, parametric equations, partial differentiation, multiple integration, and series.

Prerequisite: MTH 201 with a grade of "C" or better.



MTH 203 Linear Algebra (3-0) 3 hrs.

Systems of linear equations, vector spaces, linear dependence, bases, matrices, determinants, transformations with geometric and physical applications.

MTH 206 Mathematics III (3-0) 3 hrs.

For students in Electronics Technology. Continuation of MTH 107 with introduction to differential equations and LaPlace transforms.
Prerequisite: MTH 107 with grade of "C" or better or consent of instructor.

MTH 207 Mathematics IV (3-0) 3 hrs.

For students in electrical technology. Differentiation of transcendental functions; methods of integration; expansion of functions in series; Fourier series; differential equations; applications.
Prerequisite: MTH 206 with a grade of "C" or better.

MTH 208 FORTRAN Computer Programming (3-0) 3 hrs.

Computer programming using the language of FORTRAN.
Prerequisite: MTH 104 or MTH 107 or MTH 111 with grade of "C" or better.

MTH 212 Differential Equations and Orthogonal Functions (3-0) 3 hrs.

Solutions of first order and first degree differential equations, linear differential equations with constant coefficients, linear differential equations of higher order, special differential equations of second order, and differential equations of first order but not of first degree LaPlace transforms, matrices and determinants, Fourier series. Offered Spring semester.
Prerequisite: MTH 202 with a grade of "C" or better.

MTH 215 Introduction to Automatic Digital Computing (3-0) 3 hrs.

Topics in machine organization, problem formulation, automatic programming, and applications to computers.
Prerequisite: MTH 105 or MTH 107 or MTH 111 with a grade of "C" or better.

MECHANICAL ENGINEERING TECHNOLOGY**MET 101 Elements of Drafting (1-5) 3 hrs.**

Lettering, orthographic projection, dimensioning, auxiliary views, shop drawings, free-hand sketching, and methods of reproducing drawings. (\$5 lab fee.)

MET 102 Technical Drafting (2-4) 4 hrs.

Limits and tolerance dimensioning, machine details, pictorial assembly drafting, product illustration and introduction to computer graphics. Instrument drawings and sketches required.
Prerequisite: MET 101. (\$10 lab fee).

MET 103 Descriptive Geometry (1-3) 2 hrs.

Theory of projections with practical analysis of typical problems involving size, shape and relative position. Common geometric magnitudes of points, lines, planes and curved surfaces.
Prerequisites: Concurrent enrollment MTH 106 and MET 101 or consent of instructor. (\$5 lab fee).

MET 104 Statics (2-0) 2 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.

- MET 105 Basic Machine Shop (1-4)** 3 hrs.
Fundamentals of machine shop theory and practice. Manufacture of iron and steel. Iron and steel types and classification systems. Machinability, cutting fluids and horsepower requirements. Familiarization with tools, equipment and practices of tool, die, and precision metal working industry. Students make working tools and fixtures. (\$10 lab fee).
- MET 108 Manufacturing Processes & Materials I (2-4)** 3 hrs.
Materials, principles, utilization, expectations and evaluation of principal manufacturing processes.
Prerequisite: Concurrent enrollment in MTH 106 or consent of instructor.
- MET 109 Manufacturing Processes and Materials II (0-6)** 3 hrs.
Continuation of MET 108. Emphasis on actual practice in such areas as machining, numerical control, welding and heat treating.
Prerequisite: MET 108. (\$10 lab fee).
- 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. (\$5 lab fee).
- MET 204 Strength of Materials (2-3)** 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; influence of properties of materials.
Prerequisites: MTH 107, MET 104 or consent of instructor. (\$10 lab fee).
- MET 205 Fluid Power and Systems Control (2-6)** 4 hrs.
Technology of the transmission, control and storage of energy by means of pressurized fluids in closed systems; other applications of parallel control technologies.
Prerequisites: MTH 107, PHY 102 or consent of instructor. (\$5 lab fee).
- MET 206 Metallurgy and Heat Treatment (2-3)** 3 hrs.
Selected principles and concepts of physical metallurgy. Principles are applied to heat treatment of metals.
Prerequisite: MET 108 or consent of instructor. (\$7.50 lab fee).
- MET 207 Machine Design (3-6)** 6 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.
Prerequisites: MET 201, 204, 205; concurrent enrollment in MET 206. (\$10 lab fee).
- MET 210 Computer Programming-Fortran (3-0)** 3 hrs.
Fortran computer programming including solution of mechanical and technical problems using modern digital computer techniques.
Prerequisite: MTH 106 or consent of instructor. (\$5 lab fee).

MUSIC

- 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.**
For non music majors. Music from primitive to modern times through listening to outstanding examples of various periods, with explanations of content and structure. Vocal and instrumental works, examples of folk music, church music, and symphonic forms.
- MUS 111 Theory of Music I (3-0) 3-5 hrs.**
Intensive training in fundamentals of musicianship, principally with mechanical aspects of music — clefs, notation, scales, intervals, meters, rhythms, etc. Daily practice in sight singing, melodic, harmonic, and rhythmic dictation, and practice at keyboard.
Prerequisite: successful performance on examination. MUS 101 or equivalent. Corequisite: MUS 115.
- MUS 112 Theory of Music II (3-0) 3 hrs.**
Harmony, counterpoint, and analysis, with emphasis on eighteenth and nineteenth-century techniques; basic principles in 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 Ear Training, Sight Singing and Keyboard Harmony I (0-2) 1 hr.**
Practice in melodic, harmonic, and rhythmic dictation, sight singing, and practice at keyboard.
Corequisite: MUS 111. (\$3 lab fee).
- MUS 116 Ear Training, Sight Singing and Keyboard Harmony II (0-2) 1 hr.**
Practice in melodic, harmonic, and rhythmic dictation, sight singing, and practice at keyboard.
Corequisite: MUS 112. (\$3 lab fee).
- MUS 121 Survey of Music Literature to 1750 (3-0) 3 hrs.**
Primitive Music; music of East and Near East; contribution of Greeks; Middle Ages; Gothic period; Renaissance; Baroque period culminating with Bach, Handel, Rameau, and Scarlatti. Musical illustrations.
Prerequisite for non-majors: MUS 101 or consent of instructor.
- MUS 122 Survey of Music Literature since 1750 (3-0) 3 hrs.**
Classical period; Romantic period; Impressionism; twentieth century. Musical illustrations.
Prerequisite for non-majors: MUS 101 or consent of instructor.
- 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.
Prerequisite: Consent of instructor. Maximum of four credit hours.



- 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. Maximum of four 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.
Prerequisite: Consent of instructor. Maximum of four credit hours.
- 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.
Prerequisite: Consent of instructor. Maximum of four credit hours.
- MUS 150 Orchestra (0-3)** 1 hr.
Open to all students proficient in playing of orchestral instruments. Orchestral music of various types and styles. Sight reading and musicianship stressed.
Prerequisite: Consent of instructor. Maximum of four credit hours.
- MUS 161 Woodwind Instrument Class I (0-4)** 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. Maximum of four credit hours.
- MUS 162 Brass Instrument Class I (0-4)** 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. Maximum of four credit hours.
- MUS 163 Percussion Instrument Class (0-4)** 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. Maximum of four credit hours.
- MUS 165 Class Piano (0-4)** 2 hrs.
Similar to MUS 161. For students who desire to learn to play the piano. Maximum of 4 credit hours. (\$3 lab fee).
- MUS 166 String Instrument Class I (0-4)** 2 hrs.
Similar to MUS 161. For students who desire to learn to play a stringed instrument. Maximum of four credit hours.
- MUS 167 Class Guitar (0-4)** 2 hrs.
Similar to MUS 161. For students who desire to learn to play the guitar. Maximum of 4 credit hours.
- MUS 180-199 Minor Applied Music Subject** 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.
Flute & Piccolo, 180; Oboe & English Horn, 181; Clarinets, 182; Bassoons & Contra Bassoons, 183; Saxophones, 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; Classical Guitar, 199. (\$56 lab fee).
- MUS 211 Theory of Music III (3-0)** 3 hrs.
Harmony, counterpoint, and analysis.
Prerequisite: MUS 112. Corequisite: MUS 215.

- MUS 212 Theory of Music IV (3-0)** **3 hrs.**
Harmony, counterpoint, and analysis.
Prerequisite: MUS 211. Corequisite: MUS 216.
- MUS 215 Ear Training, Sight Singing and Keyboard
Harmony III (0-2)** **1 hr.**
Practice in melodic, harmonic, and rhythmic dictation, sight singing,
and practice at keyboard.
Corequisite: MUS 211. (\$3 lab fee).
- MUS 216 Ear Training, Sight Singing and Keyboard
Harmony IV (0-2)** **1 hr.**
Practice in melodic, harmonic, and rhythmic dictation, sight singing,
and practice at keyboard.
Corequisite: MUS 212. (\$3 lab fee).
- MUS 280-299 Major Applied Music Subject (2-0)** **4 hrs.**
Instruction for those desiring to become professional performers. One
hour lesson per week. Minimum of twelve hours of practice per week.
Jury examination required.
Flute & Piccolo, 280; Oboe & English Horn, 281; Clarinets, 282;
Bassoons & Contra Bassoons, 283; Saxophones, 284; French Horn,
285; Trumpet, 286; Trombone, 287; Baritone, 288; Tuba 289; Per-
cussion, 290; Violin, 291; Viola, 292; Piano, 296; Organ, 297; Voice,
298; Classical Guitar, 299.
Prerequisite: successful audition. (\$112 lab fee).

NUMERICAL CONTROL

- NMC 093 Numerical Control Drafting (0-4)** **2 hrs.**
Programming of numerically controlled drafting machines with and
without aid of computer. Applies to problems in manufacturing type
industries. Selected problems to be accomplished on Numerical Control
Drafting Equipment. Primarily for adults. (\$5 lab fee).
- NMC 094 Machine Tools — Numerical Control (0-4)** **2 hrs.**
Practice and theory in operation of Numerical Control machine tool
equipment. Primarily for adults. (\$10 lab fee).
- NMC 095 Machine Tool — Part Programming I (0-4)** **2 hrs.**
Manual programming for Numerical Control machine tools and com-
puter programming for Numerical Control equipment. Students will
prepare and verify selected Numerical Control programs on Numerical
Control machine tools. Primarily for adults. (\$10 lab fee).
- NMC 096 Machine Tool — Part Programming II (0-4)** **2 hrs.**
Continuation of NMC 095. Basic use of computers in preparing Numer-
ical Control programs, use of the Autospot programming language will
be included. Primarily for adults. (\$10 lab fee).
- NMC 097 ADAPT and APT Part Programming (0-4)** **2 hrs.**
Principles and application of APT and ADAPT Numerical Control pro-
gramming language. Selected problems to be written, run on compu-
ter and verified on Numerical Control machines. Primarily for adults.
(\$10 lab fee).
- NMC 101 Introduction to Numerical Control (2-0)** **2 hrs.**
Applications and advantages of Numerical Control. Tapes, tape coding,
tape readers and formats. Control system theory and standard axis
designations in relation to the cartesian and system of dimensioning.
Basic understanding of manual and computer programming for numer-
ically controlled machines.

- NMC 105 Part Programming I (1-3) 3 hrs.**
Manual programming of point-to-point and contouring systems. Discussion and practice in programming of various manufacturers equipment including the running of programs on lathe and mill. Introduction to computer processing of complex programs.
Prerequisite: MTH 106. (\$7.50 lab fee).
- NMC 201 Numerical Controlled Machining (1-4) 3 hrs.**
Numerical Control machines, emphasis to be placed upon their application, maintenance and their justification. Practices in process planning, tooling and fixturing techniques will be discussed and applied.
Prerequisite: MTH 106 and MET 105. (\$7.50 lab fee).
- NMC 210 Computer Programming-FORTRAN (3-0) 3 hrs.**
Familiarization with digital computer. Practical problems will be presented using Fortran IV. Techniques to solve problems involving Numerical Control Manufacturing will be stressed. Students will plan, write, debug and test programs on a digital computer.
Prerequisite: MTH 106. (\$5 lab fee).
- NMC 214 Graphic Display Systems (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, MTH 106 and NMC 210. (\$5 lab fee).
- NMC 215 Part Programming II (1-3) 3 hrs.**
Computer Part Programming Language AD-APT and AUTOSPOT. Basic geometric definitions and contouring problems will be stressed. Students will use the following advanced features: MACRO, LOOP, PATTERN, COPY. Application of these features will be to two and three axis machines.
Prerequisite: NMC 105. (\$10 lab fee).
- NMC 216 Part Programming III (1-3) 3 hrs.**
Continuation of NMC 215, Advanced problems in APT and AD-APT using TRACUT, REFSYS and TABCYL features, multi-axis contouring and efficient use of the languages will be included.
Prerequisite: NMC 215. (\$10 lab fee).
- NMC 220 Special Problems (0-6) 3 hrs.**
Special project required of all sophomores in this curriculum.
Prerequisite: Must be taken during semester of graduation.
(\$5 lab fee).

NURSING

- NUR 101 Foundations of Nursing I (3-7) 5 hrs.**
Knowledge and skill necessary for giving basic care, including the provision and maintenance of patient comfort and safety within a therapeutic regimen. Clinical experience includes the practice of learned skills as well as the care of patients during the maternity cycle.
(\$5 lab fee).
- NUR 102 Foundations of Nursing II (3-7) 5 hrs.**
Continuation of NUR 101, with increasing complexity of knowledge and nursing skills necessary for giving basic care. Clinical experience includes the care of infants, children, and young and aging adults.
Prerequisite: NUR 101. (\$5 lab fee).



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SAFETY ASSURANCE REPORT
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PERFORMANCE & RELIABILITY TEST

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NUR 201 Nursing in Physical and Mental Illness I (5-15) 10 hrs.
Advanced knowledge and skill necessary for giving care to individuals with specific physical and emotional disorders. Clinical experience includes the application of individualized nursing skills.
Prerequisite: NUR 102. (\$5 lab fee).

NUR 202 Nursing in Physical and Mental Illness II (5-15) 10 hrs.
Continuation of NUR 201 and content and skills related to the graduate nurse role. Included also are discussions of moral, legal, and educational issues. Clinical experience includes an emphasis on comprehensive nursing care of persons of all ages.
Prerequisite: NUR 201. (\$5 lab fee).

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 determinism, moral and aesthetic values, 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.
Prerequisite: PHI 105 or MTH 103 or MTH 106 or consent of instructor.

PHI 115 Ethics (3-0) 3 hrs.
Approaches to problems of values and conduct, including such topics as moral goodness, virtue, right, responsibility, goals, and happiness.
Prerequisite: PHI 105 or sophomore standing or consent of instructor.

PHI 205 Religions of the World (3-0) 3 hrs.
Study of selected major religions: Buddhism, Hinduism, Judaism, Islam, and Christianity; their teachings and histories.
Prerequisite: PHI 105 or PHI 110 or PHI 115 or sophomore standing or consent of instructor.

PHYSICAL EDUCATION

100 level courses are service activity courses. Each meets two hours per week for 1 semester hour of credit. These courses satisfy the physical education requirement for graduation. 200 level courses receive 2 semester hours of credit and are designed for students who wish to follow a major, or minor in the fields of physical education.

Physical Education Courses — Men

Developmental Activities:

PED 100 Physical Conditioning (0-2) 1 hr.
Body conditioning through corrective and warm-up exercises, self testing stunts, importance of relaxation and diet, and prescribed practice for further self improvement. (\$1.75 lab fee).

PED 102 Adult Fitness (0-2) 1 hr.
A controlled physical fitness and games activity program. This class will develop and motivate the individuals interest in physical fitness activity and the lifetime sports. (\$1.75 lab fee).

PED 104 Weight Training — Weight Lifting (0-2) 1 hr.

Weight Training — program of activities for the overweight or underweight leading to the development of strength and maintenance of physical fitness.

Weight Lifting — skills, knowledge and safety standards are taught in accordance with A.A.U. weightlifting rules. (\$1.75 lab fee).

Team Sports:**PED 112 Touch Football — Basketball (0-2) 1 hr.**

Touch Football — conditioning, team play, ball handling skills, tactics, strategy, officiating procedures and rules; Intramural competition afforded.

Basketball — skills and attitudes involved in shooting, passing, ball handling, and footwork. Application of team play and strategy in practice games and tournaments. (\$1.75 lab fee).

PED 114 Volleyball — Softball (0-2) 1 hr.

Volleyball — basic skills, team play, practice games, tournaments, and interclass competition.

Softball — skills, knowledge and attitudes essential in playing 16 inch softball, infield and outfield play, pitching and batting, and interclass competition. (\$1.75 lab fee).

Individual Sports:**PED 130 Tennis — Handball (0-2) 1 hr.**

Tennis — theory and practice; rules and scoring. Development of serve, forehand drive, backhand drive, lob, volley and footwork.

Handball — rules, techniques of play in singles, doubles, nomenclature, ethics, sportsmanship, and training methods. (\$1.75 lab fee).

PED 132 Golf — Archery (0-2) 1 hr.

Golf — fundamentals of grip, stance, and swing using irons and woods; terminology, etiquette, scoring and safety standards. Intramural competition afforded.

Archery — maintenance of archery tackle; establishing and adjusting point of aim; shooting at 60, 50, and 40 yards, instinctive shooting and field archery fundamentals. (\$1.75 lab fee).

PED 134 Tumbling — Gymnastics Apparatus (0-2) 1 hr.

Tumbling — skills and knowledge involved in basic individual and partner tumbling and balancing stunts. Development of tumbling routines.

Gymnastics Apparatus — development of individual stunts and routines on the side horse, long horse, rings, parallel bars and horizontal bar. (\$1.75 lab fee).

PED 136 Wrestling (0-2) 1 hr.

Development of basic skills, knowledge, attitudes and conditions of wrestling; offensive and defensive maneuvers, pinning combinations and rules. (\$1.75 lab fee).

PED 138 Personal Defense — Badminton (0-2) 1 hr.

Personal Defense — development of skills in non-weapon defense of rushing, grasping, strangling, fist attacks, and kicking maneuvers. Protection from upright, ground, frontal, rear attacks.

Badminton — recreational and conditioning activity; singles and doubles play, strategy, serving, rules and interclass competition. (\$1.75 lab fee).

PED 140 Track and Field (0-2) 1 hr.

Development of skills, knowledge, and attitudes involved in track and field athletics; sprint start, baton exchange, hurdle form, high jump, long jump, shot put, discus. Intramural competition afforded. (\$1.75 lab fee).

PED 142 Fencing (0-2) 1 hr.

Development of skills, knowledge, and attitudes involved in foil fencing. Practice in fundamental positions, footwork, attacks, defensive action, counter and compound attacks. Intramural competition afforded. (\$1.75 lab fee).

PED 149 Restricted Activities (0-2) 1 hr.

For students restricted by health limitations; individual programs adapted to meet specific requirements. Required for students with medical excuses. (\$1.75 lab fee).

Physical Education Courses — Co-ed**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. (\$6.00 lab fee).

PED 152 Small Craft Boating — Fly & Bait Casting (0-2) 1 hr.

Small Craft Boating — skills and safety practices in handling small craft; practical experience in canoeing, rowing and small sail craft rigging.

Fly & Bait Casting — skills in casting and angling; practical experience in nearby waters. (\$1.75 lab fee).

PED 154 Swimming (0-2)

All-levels class with beginners grouped separately for special attention. Red Cross standards of achievement are followed. (\$1.75 lab fee).

PED 156 Folk and Square Dance (0-2) 1 hr.

Folk Dance — folk dances from foreign countries and America; including basic steps and history.

Square Dance — typical steps and figures used throughout the country. (\$1.75 lab fee).

PED 160 Modern Dance I (0-2) 1 hr.

Opportunity to explore movement potential, increase technical proficiency, broaden rhythm background; skills in technique and composition stressed. (\$1.75 lab fee).

PED 162 Modern Dance II (0-2) 1 hr.

Intermediate techniques and composition; performance ability and skill tested. (\$1.75 lab fee).



Physical Education Courses — Women

Developmental Activities:

PED 170 Conditioning (0-2) **1 hr.**
 Body conditioning through corrective and warm-up exercises self testing stunts, importance of relaxation and diet, and prescribed practice for further self improvement. (\$1.75 lab fee).

PED 172 Gymnastics & Free Exercise (0-2) **1 hr.**
 Gymnastics — basic skills on side horse, uneven parallel bars, balance beam, and trampoline.
 Free Exercise — study of skills and stunts necessary to perform a routine of free exercise. (\$1.75 lab fee).

Individual and Team Sports:

PED 180 Field Hockey — Basketball (0-2) **1 hr.**
 Field Hockey — fundamentals of team play based on development of individual game skills; including rules, strategy, history and officiating.
 Basketball — skills and attitudes involved in shooting, passing, ball handling, and footwork. Team play and strategy applied in practice games and tournaments. (\$1.75 lab fee).

PED 182 Tennis I — Volleyball (0-2) **1 hr.**
 Tennis — Theory and practice, rules of scoring and strategy, development of individual game skills — serve, forehand, backhand, and footwork.
 Volleyball — basic skills, history, importance of team play and strategy; practice games and tournaments. (\$1.75 lab fee).

PED 184 Softball — Badminton (0-2) **1 hr.**
 Softball — fundamental skills, rules and strategy in team play.
 Badminton — skills of serving, strategy, play, rules of game and history; practice games and tournaments. (\$1.75 lab fee).

PED 186 Soccer — Badminton (0-2) **1 hr.**
 Soccer — fundamental skills, rules, strategy, and officiating techniques in team play.
 Badminton — skills of serving, strategy, play, rules of game and history; practice games and tournaments. (\$1.75 lab fee).

PED 188 Golf — Volleyball (0-2) **1 hr.**
 Golf — fundamentals of grip, stances, and swing using irons and woods; terminology, etiquette, scoring and safety precautions.
 Volleyball — basic skills, history, importance of team play and strategy; practice games and tournaments. (\$1.75 lab fee).

PED 190 Track and Field (0-2) **1 hr.**
 Development of skills, knowledge, and attitudes involved in track and field athletics. Intramural competition afforded. (\$1.75 lab fee).

PED 192 Archery (0-2) **1 hr.**
 Maintenance of archery tackle; establishing and adjusting point of aim; shooting at 50, 40, and 20 yards, instinctive shooting and field archery fundamentals. (\$1.75 lab fee).

PED 194 Fencing (0-2) **1 hr.**
Development of skills, knowledge, and attitudes involved in foil fencing. Practice in fundamental positions, footwork, attacks, defensive action, counter and compound attacks. Intramural competition afforded. (\$1.75 lab fee).

PED 199 Restricted Activities (0-2) **1 hr.**
Physical education activities for students restricted by health limitations, adapted to specific requirements of students with medical excuses. (\$1.75 lab fee).

Physical Education Courses — Theory — For Major and Minor Students

PED 200 Introduction to Physical Education (2-0) **2 hrs.**
Orientation and history of physical education from ancient times to present day. Objectives and aims of physical education and their applications.

PED 201 First Aid (2-0) **2 hrs.**
Regulation American Red Cross instruction in First Aid; principles and practices; immediate and temporary treatment in case of accident or sudden illness before physician arrives. Official certification given to students who qualify.

PED 203 Health (2-0) **2 hrs.**
Problems involved in personal and community health; study of the maintenance of a high degree of individual mental and physical health. Prerequisite: BIO 101 or BIO 110 or consent of instructor.

PED 210 Sports Officiating (2-0) **2 hrs.**
Comprehensive instruction on rules and officiating techniques in interscholastic sports; practical experience required in the College intramural program.

PED 220 Track and Field (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 (2-0) **2 hrs.**
Analysis, instruction and theories of coaching fundamental skills, coaching and officiating styles, play and team strategy.

PED 224 Basketball (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 (2-0) **2 hrs.**
Analysis, instruction and demonstration of fundamental skills; theory of coaching and officiating; styles of play and team strategy.

PED 228 Aquatics (2-0) **2 hrs.**
Introduction to skills and safety standards involved in swimming, life saving and survival in water; study of the recreational value of water sports. Certification in Red Cross Lifesaving programs may be attained. Prerequisite: ability to swim 100 yards. (\$1.75 lab fee).

PHYSICAL SCIENCE

- PHS 101 Physical Science Survey (3-0)** **3 hrs.**
 A course designed to give the non-science major an understanding and appreciation of the universe, earth, energy, and matter. (Primarily for students in Career Programs).
- 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. (\$5 lab fee).
 Prerequisite: High school chemistry or physics or consent of instructor.
- PHS 112 Physical Science II (3-2)** **4 hrs.**
 Continuation of PHS 111 considering basic chemistry, materials of the earth, earth forms and history, sun and stars, the universe.
 Prerequisite: PHS 111. (\$5 lab fee).

PHYSICS

- PHY 101 Technical Physics I — Mechanics, Heat and Sound (3-2)** **4 hrs.**
 Statics, dynamics, energy, calorimetry, gas laws, waves, and sound. Primarily for students in Career Programs. (See PHY 121 or PHY 201). (\$5 lab fee).
 Prerequisite: MTH 106 or concurrent enrollment.
- PHY 102 Technical Physics II — Electricity and Magnetism, Light (3-2)** **4 hrs.**
 Electricity and magnetism: fields, induction, capacitance, direct and alternating current theory and circuits, elements of electronics. Light: reflection, interference, resonance, lenses, diffraction, polarization and Doppler Effect. Primarily for students in Career Programs. (\$5 lab fee).
 Prerequisite: PHY 101.
- PHY 121 Introductory Physics I (4-3)** **5 hrs.**
 Mechanics, heat and sound. Lectures, demonstrations, and laboratory. For students in Arts, Sciences, and Architecture. Others see PHY 201. Prerequisite: Trigonometry. (\$5 lab fee).
- PHY 122 Introductory Physics II (4-3)** **5 hrs.**
 Electricity, magnetism, and light. Continuation of PHY 121. Prerequisite: PHY 121. (\$5 lab fee).
- PHY 201 General Physics I — Mechanics, Heat, and Sound (3-5)** **5 hrs.**
 Foundations of statics, dynamics, hydraulics, thermodynamics, wave motion. For science, engineering, architecture, and university transfers. Prerequisite: MTH 201 or concurrent enrollment. (\$7.50 lab fee).
- PHY 202 General Physics II — Electricity, Magnetism, Light (3-5)** **5 hrs.**
 Electric and magnetic fields, potentials, geometrical and physical optics.
 Prerequisites: PHY 201, MTH 202. (\$7.50 lab fee).
- PHY 210 Introduction to Modern Physics (3-0)** **3 hrs.**
 Wave-particle duality, "old" and "new" quantum theory, scattering, elementary particles.
 Prerequisite: PHY 202.

POLITICAL SCIENCE

- PSC 201 American Government: Organization, Powers and Functions** **3 hrs.**
 Institutional structure and organization of main parts of national, state (Illinois) and local government in modern America.
- PSC 205 Comparative Government (3-0)** **3 hrs.**
 Important governments of Europe, such as France, Germany, Italy, Russia, and England. Essential features of parliamentary and presidential systems as in England and United States. Broad understanding and appreciation of the common governmental problems of the world.
- PSC 206 International Relations** **3 hrs.**
 Critical analysis of international problems of our day — power, role of American foreign policy, and proposals for substitute for war. Emphasis on principles underlying international relations and on locating reliable sources for making informed opinions.

PRACTICAL NURSING

- PNR 060 Practical Nursing I (25-10 1st 9 weeks 8-27 2nd 9 weeks)** **14 hrs.**
 Designed to acquaint the student with the nursing theory and to develop nursing skills necessary for giving simple nursing care. Includes basic concepts of body structure and function, human development, nutrition, personal and community health and an introduction to patient care. Identification of the role of the student practical nurse and other members of the health team, as well as standards of conduct in vocational nursing are explored. (\$5 lab fee).
- PNR 070 Practical Nursing II (8-27)** **13 hrs.**
 This course stresses application of scientific principles learned in PNR 060 with progressive complexity of vocational nursing skills and function. In accordance with specified objectives, students are given selected patient care experiences in the nursing home and hospital setting. (\$5 lab fee).
- PNR 080 Practical Nursing III (8-32)** **11 hrs.**
 Provides content in the area of maternal and child health. Classroom instruction and clinical experience in care of the mother, before, during, and after delivery is included. Theory and practice in the care of the newborn and an introduction to health deviations in children comprise part of this course. Also, the legal aspects of practical nursing are examined, practical nursing organizations identified and career opportunities are presented. (\$5 lab fee).

PSYCHOLOGY

- PSY 099 Learning and Adjustment to College (3-0)** **3 hrs.**
 Designed for developmental students; covers topics essential to successful college adjustment — study techniques, educational and vocational planning, social adjustment, and general aspects of college life.
- PSY 101 Introduction to Psychology (3-0)** **3 hrs.**
 Human behavior with reference to perception, learning, individual differences, intelligence, and personality. Developmental method stressed rather than experimental. Reference made to daily life and everyday problems.

PSY 102 Conference Course **1 hr.**

Designed to meet interests and needs of qualified majors in psychology. Must be taken concurrently with PSY 101. Specific topics will vary from semester to semester.

Prerequisite: Consent of instructor.

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 or consent of instructor.

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.**

Continuation of development of the human through adolescence into middle and later life. Emphasis on continual adjustment required to master new developmental tasks. Importance of fixated behavior stressed where personality growth is arrested. Emphasis on manifested behavior in attempt to understand fellow man in our complex society.

Prerequisite: PSY 101.

READING**RDG 099 Development Reading (2-0)** **2 hrs.**

Individualized work towards improvement of comprehension and rate in reading, through practice materials, timed essays, films, and mechanical aids.

RDG 104 Reading Acceleration (2-0) **2 hrs.**

Survey of basic reading techniques designed to accelerate reading rates. Emphasis placed on comprehension drills, skimming, and critical reading. Mechanical aids used to eliminate fixations, remove vocalizing habits, and accelerate present reading rates through perceptual training.

REAL ESTATE**RES 120 Principles of Real Estate (3-0)** **3 hrs.**

Fundamental principles of real estate for: the real estate practitioner; those seeking to qualify for real estate licensing examination; the occasional participant in the real estate market — the buyer, seller, or owner of real estate; and the person who has contact with the business in his 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 Real Estate Marketing and Brokerage (3-0) 3 hrs.**
Marketing communications as applied to the real estate business including sales, advertising and other promotional techniques. Sales strategy, obtaining and qualifying prospects, securing listings, showing properties, and motivating factors are considered. Procedural matters pertaining to the brokerage business such as office location, staffing, and office systems are discussed.
Prerequisite: RES 120 or consent.
- RES 122 Real Estate Appraisal I (3-0) 3 hrs.**
A course covering the functions and purposes of appraisal, designed to examine the nature of real property value, the various functions and methods of estimating values with emphasis on residential market.
Prerequisite: RES 120 or consent.
- RES 123 Real Estate Law and Finance (3-0) 3 hrs.**
Examination of legal aspects of real estate transactions and forms related thereto: contracts, deeds, mortgages, notes, exclusive sales contracts, leases. The role of the legal profession in such transactions is also considered. Also discussed are methods and sources of real estate financing, terminology, risk factors, taxation, and instruments related to financing.
Prerequisite: RES 120 or consent.
- RES 230 Property Management Methods (3-0) 3 hrs.**
A course covering 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.
- 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 lease-back arrangements, highest and best use of property, distressed properties, characteristics of urban structure and growth, commercial and industrial properties as investments, and the role of syndicates, developers, builders, and financial institutions in promoting and managing income properties.
Prerequisite: Nine semester hours in real estate or consent.
- RES 232 Real Estate Appraisal II (3-0) 3 hrs.**
Depreciation factors, interest rates, capitalization rates and techniques, leasehold 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 such as apartments, commercial and industrial developments; professional appraisal standards.
Prerequisite: RES 122.
- RES 233 Real Estate Problems Seminar (3-0) 3 hrs.**
Contemporary issues in the real estate industry possibly including tax foreclosures, tax deeds, tax titles, special assessments, assessing methods and practices, legislative and judicial influences upon the industry, and effects of the current economic situation upon the real estate industry. Directed readings and analysis of case studies will be used extensively.
Prerequisite: Previously completed nine semester hours of Real Estate Certificate Curriculum course work.

SECRETARIAL SCIENCE

SEC 099 Typewriting Review (2-0) 1 hr.

Designed for those with limited skill at the keyboard. Work will help correct deficiencies in speed, accuracy, or manipulative skills on the electric typewriter.

Prerequisite: Limited knowledge of typewriting. (\$3 lab fee).

SEC 121 Elementary Typing (4-0) 2 hrs.

Operation use and care of the typewriter. Typing by the touch system, emphasizing basic typing problems. Drills for speed and accuracy building will be used throughout the course. (\$5 lab fee).

SEC 122 Intermediate Typing (4-0) 2 hrs.

Development of production work in typing manuscripts, business letters, forms and tables.

Prerequisite: SEC 121 with a grade of "C" or 1 year of high school typing. Minimum speed of 40 net words per minute. (\$5 lab fee).

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

Theory leading to development of skill in reading and fluency in writing Gregg shorthand. (\$3 lab fee).

Prerequisite: Prior or concurrent enrollment in ENG 101 and Typing.

SEC 126 Intermediate Shorthand (4-0) 3 hrs.

Continued development of skill and speed dictation with emphasis on vocabulary development, mechanics of English, and transcription techniques. (\$3 lab fee).

Prerequisite: SEC 125 or equivalent, SEC 121 or equivalent, and ENG 101, with a grade of "C". If advanced placement is given in shorthand, prior or concurrent enrollment in ENG 101 is required.

SEC 131 Business Machines (2-0) 2 hrs.

Development of skill necessary to operate the 10-key adding machines, rotary calculator, printing calculator, and the electronic calculator. (\$5 lab fee).

SEC 132 Office Practice (2-3) 3 hrs.

Designed to acquaint the student with those duties usually given to new office workers, such as the preparation of stencils and the operation of duplicating machines; use of the executive typewriter; key-punch; transcribing machine; switchboard (PBX); copy machines; and knowledge of records management.

Prerequisite: SEC 121 or equivalent. (\$5 lab fee).

SEC 221 Advanced Typing (4-0) 2 hrs.

Development of high speed and proficiency in typing from rough drafts, tabulations, and statistics.

Prerequisites: SEC 122 with a grade of "C" or proficiency test with instructor. (\$5 lab fee).

SEC 225 Dictation and Transcription (4-0) 3 hrs.

Strengthening of the dictation speed and developing competence in transcribing mailable letters.

Prerequisite: SEC 126 and SEC 122 or proficiency test with instructor and ENG 101. (\$3 lab fee).

SEC 235 Legal Dictation and Procedures (3-2) 4 hrs.

Development of speed and facility with legal terminology and legal forms and procedures.

Prerequisite: SEC 225 or equivalent with a grade of "B" or higher. Shorthand speed of at least 110 words per minute and typing speed of at least 70 words per minute. (\$3 lab fee).

- SEC 236 Secretarial Procedures (2-0)** **2 hrs.**
 Secretarial responsibilities in the office, grooming, human relations, office ethics and business etiquette, exploring job opportunities, and interviewing.
 Prerequisite: Consent of instructor.
- SEC 237 Secretarial Seminar and Internship I (1-2)** **3 hrs.**
 Cooperative work experience in Secretarial Science. Enrollment in this course is restricted to students in the secretarial science program. Part of the credit for this course will be given for participation in supervised cooperative work experience programs wherein an organized training plan will be followed in a college approved training station. One lecture hour per week for seminar.
 Prerequisite: Consent of instructor.
- SEC 238 Secretarial Seminar and Internship II (1-2)** **3 hrs.**
 Continuation of SEC 237.
 Prerequisite: Consent of instructor.

SOCIOLOGY

- SOC 101 Introduction to Sociology (3-0)** **3 hrs.**
 Introductory analysis and description of 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 102 Conference Course** **1 hr.**
 Designed to meet interests and needs of qualified majors in Sociology. Must be taken concurrently with SOC 101. Specific topics will vary from semester to semester.
 Prerequisite: Consent of instructor.
- SOC 120 Social Patterns of Courtship and Marriage (3-0)** **3 hrs.**
 Courtship, marriage, rearing the family, and various factors contributing to changes in family organization or disorganization.
 Prerequisite: SOC 101 or consent of instructor.
- SOC 205 Social Problems (3-0)** **3 hrs.**
 Analysis of contemporary social problems. Investigation of theories dealing with conformity and deviance, racial and minority group prejudice, crime and delinquency, personality problems, urbanization, and fundamental institutional problems due to social change.
 Prerequisite: SOC 101.
- SOC 210 Social Institutions (3-0)** **3 hrs.**
 Primary social institutions: 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 institution on the society.
 Prerequisite: SOC 101 and Sophomore standing.
- SOC 215 Group Dynamics (3-0)** **3 hrs.**
 An investigation of the social and psychological processes which motivate individuals to behave in predictable ways; depending on their positions in social structures, organizations, and groups. To focus on those processes which reveal the reciprocal relationship between man's behavior and society.
 Prerequisite: Sophomore standing, SOC 101 or PSY 101, an adult, or by special permission.



SPANISH

SPA 101 Elementary Spanish (4-0) 4 hrs.
Beginning course in the language skills of listening, understanding, speaking, reading and writing.

SPA 102 Elementary Spanish (4-0) 4 hrs.
Continuation of SPA 101. Situational conversations in Spanish; reading and writing stressed.
Prerequisite: SPA 101 or one year of high school Spanish.

SPA 201 Intermediate Spanish (4-0) 4 hrs.
Conversation with emphasis on pronunciation, intonation, stress and rhythm. Grammar review.
Prerequisite: SPA 102 or two years of high school Spanish or consent of instructor.

SPA 202 Intermediate Spanish (4-0) 4 hrs.
Continuation of SPA 201, plus accuracy and speed in reading, study of syntax, and extensive composition.
Prerequisite: SPA 201 or three years of high school Spanish or consent of instructor.

SPA 205 Intensive Oral Practice (3-0) 3 hrs.
Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern Spanish works discussed in class. Written and oral compositions based on readings.

SPA 210 Introduction to Modern Spanish Literature (3-0) 3 hrs.
Reading of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and diction. Speaking based on discussions of works read. Writing based on readings and class discussions.
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 in 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.
A performance course offering opportunities for selection, preparation and presentation of various types of literature; development of facility in use of body and voice in oral reading.
Prerequisite: SPE 101 or consent of instructor.

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 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.
Prerequisite: SPE 111 or consent of instructor.

HARPER COLLEGE ACADEMIC CALENDAR 1971-72

First Semester

New Faculty Orientation	September 1-3
Labor Day	September 6
All Faculty Report	September 7
Registration	September 9-11
Classes Begin	September 13
Last Day for Late Registration	September 17
Last Day for Adding Classes	September 17
Last Day for Refunds	October 8
Columbus Day	October 11
Veterans Day	October 25
Mid-Term	November 5
Last Day for Withdrawals	November 19
Thanksgiving Vacation	November 25-26
Classes Resume	November 29
Christmas Vacation Begins.....	December 18 (12 noon)
Classes Resume	January 3
Final Examinations	January 17-22

Second Semester

Registration	January 26-28
Classes Begin	January 31
Last Day for Late Registration	February 4
Last Day for Adding Classes	February 4
President's Day	February 7
Last Day for Refunds	February 25
Mid-Term	March 24
Good Friday	March 31
Easter Sunday	April 2
Spring Vacation	April 3-9
Classes Resume	April 10
Last Day for Withdrawals	April 14
Memorial Day	May 29
Final Examinations	May 30-June 3
Graduation	June 4

Summer Session (8 weeks)

Registration	June 8-9
Classes Begin	June 12
Last Day for Late Registration	June 14
Last Day for Refunds	June 23
Independence Day	July 4
Classes Resume	July 5
Mid-Term	July 7
Last Day for Withdrawals	July 14
Final Examinations	August 3-4



ADMINISTRATION

Lahti, Robert E.	President
Schauer, Clarence H.	Vice-President of Academic Affairs
Mann, William J.	Vice President of Business Affairs
Harvey, James	Vice-President of Student Affairs
Cormack, Robert B.	Dean of Career Programs
Olson, Omar L.	Dean of Evening and Continuing Education
Fischer, Guerin	Dean of Guidance
Voegel, George H.	Dean of Learning Resources
Birkholz, John R.	Dean of Transfer Programs
Falk, Charles F.	Chairman of Business Division
Bartos, Michael W.	Chairman of Communications Division
Warren, John T.	Chairman of Engineering and Related Technologies Division
Thobe, Urban	Chairman of Humanities and Fine Arts Division
DePalma, Ray L.	Chairman of Life and Health Sciences Division
Collister, Larry M.	Chairman of Mathematics and Physical Sciences Division
King, S. Larry	Chairman of Social Sciences Division
Meyers, Theodore J.	Director of Accounting Systems
Stansbury, Donn B.	Director of Admissions and Registrar
Gelch, John A.	Director of Athletics
Klingenberg, Walter D.	Director of Bookstore
Hughes, Robert J.	Director of Buildings and Grounds
Misic, Donald M.	Director of Business Services
Andries, Donald	Director of Community Relations
Sedrel, Roy A.	Director of Computer Services
Dolejs, Anton A.	Director of Finance
Goodwin, Edward A.	Director of Food Services
Savard, Marc A.	Director of Governmental Relations and Project Development
Stockman, Calvin L.	Director of Instructional Services
Easterly, Ambrose	Director of Library Services
Von Mayr, Wilfred E.	Director of Personnel
Vaisvil, Fred A.	Director of Placement and Student Aids
Lucas, John A.	Director of Planning and Development
Borelli, Frank L.	Director of Student Activities
Rankin, Gary E.	Director of Testing and Community Counseling Center
Miller, Richard L.	Assistant Director of Admissions and Registrar
Fuller, Jack W.	Assistant to the Dean, Continuing Education
Groth, David A.	Assistant to the Dean, Continuing Education
Januszko, John	Assistant Director of Food Services
Herron, Suzanne	Catering Manager
McKay, Elizabeth	College Nurse
Parker, Kenneth W.	Manager of Systems and Operations
Dunikoski, Alfred A.	Graphic Design Coordinator
Vandever, Frank A.	Supervising Dentist, Dental Hygiene Program
Vander Haegen, Peter P.	TV Producer/Director



FULL-TIME FACULTY

ALTER, SHARON Z., Instructor
History
B.A., University of Illinois
M.A., University of Illinois

ANDRIES, DONALD, Instructor
Director of Community Relations
B.S., Marquette University

BARTON, CHARLES KELLY
Associate Professor, Engineering
B.S., University of Tulsa
M.S., Case Institute
P.E., Oklahoma

BARTOS, MICHAEL W., Associate Professor
Chairman, Communications Division
Ph.B., DePaul University
M.Ed., DePaul University
M.A., Northwestern University

BAUER, JOSEPH M., Assistant Professor
Chemistry
B.S., Loyola University
M.S., Loyola University

BERNSTEIN, RICHARD M., Assistant Professor
Electrical Engineering and Physics
B.S., University of Illinois
M.S.E.E., University of Illinois
Ph.D., Illinois Institute of Technology

BESSEMER, RONALD N., Instructor
Physical Education
B.S., Illinois State University
M.S., Illinois State University

BEST, JUDITH ANN, Instructor
Counselor
B.A., Coe College
M.A., University of Iowa

BIRKHOLZ, JOHN R., Associate Professor
Dean of Transfer Programs
B.S., Wisconsin State
M.S., Northern Illinois University
C.A.S., Northern Illinois University

BOEKE, ROBERT M., Instructor
Mathematics and Physical Science
B.S., University of Dayton
M.A.T., Northwestern University

BOLT, MARTHA LYNN, Assistant Professor
Physical Education
B.S., Eastern Illinois University
M.S., Eastern Illinois University

BORELLI, FRANK L., Assistant Professor
Director of Student Activities
B.A., University of Minnesota, Duluth
M.S.E.D., Southern Illinois University

BROKKE, DENNIS B., Instructor, Counselor
B.A., University of Minnesota
M.Ed., University of Hawaii

BUSS, PAULINE, Instructor
English
B.A., Mundelein College
M.A., Northwestern University

BUTZEN, THERESE, Instructor
Mathematics
B.S., Western Illinois University
M.A.T., University of Illinois, Chicago Circle

CALLIN, DIANE T., Assistant Professor
English
B.A., University of Illinois
M.A., Northwestern University

CARROLL, MICHAEL W., Assistant Professor
Mechanical Design
B.S.M.E., Tri-State College
M.S., Western Michigan University

CHRISTENSEN, FRANK, Instructor
Developmental Counseling
B.S., Morningside College
M.S., Kansas State College

CLOUSER, JOSEPH L., Associate Professor
Chemistry
B.S., Northern Illinois University
M.S., University of Wisconsin

COHEN, DANIEL J., Assistant Professor
Psychology
B.A., Roosevelt University
M.A., University of Utah

COLLINS, DONALD W., Assistant Professor
Architectural Technology
B. of Arch., Virginia Polytechnic Institute

COLLISTER, LARRY M., Associate Professor
Chairman, Mathematics and
Physical Sciences Division
B.S., Iowa State University
M.A., University of Chicago

CONNOLLY, PATRICIA L., Instructor
Dental Hygiene - Life Sciences
B.S., University of Michigan

CORMACK, ROBERT B., Associate Professor
Dean of Career Programs
A.A., Wright Junior College
B.S., Northern Illinois University
M.S., Indiana University
Ed.D., Indiana University

- CUNNINGHAM, HAROLD C., Professor
Mathematics
B.S., Wayne State University
M.S., Wayne State University
- DANIS, DANIEL M., Assistant Professor
Accounting & Business Law
B.S., University of Notre Dame
M.B.A., DePaul University
Juris Doctor - DePaul University
C.P.A. State of Illinois
- DAVIDSON, JERRY F., Instructor
Music
B.Mus., University of Arkansas
M.S.M., Union Theological Seminary
A.A.G.O., American Guild of Organists
- DAVIS, JOHN WILLIAM, Associate Professor
Spanish
B.A., University of Illinois
M.A., Loyola University
- DeGEETER, DARRELL W., Instructor
Data Processing and Business
B.S.E., Northern Illinois University
- DePALMA, RAY L., Associate Professor
Chairman, Life and Health Sciences Division
B.S., Rocky Mountain College
M.S., Northwestern University
- DINKELMANN, SARAH J., Instructor
Practical Nursing
B.S., University of Cincinnati
- DIONISIO, FRANCES L., Instructor
Assistant Librarian
B.A., University of Minnesota
M.A., Rosary College
- DOLEJS, ANTON A., Instructor
Director of Finance
B.S., University of Illinois
M.B.A., Northwestern University
- DUNIKOSKI, ALFRED A., Instructor
Graphic Design Coordinator
B.A., University of Maryland
M.S.E.D., Indiana University
- EASTERLY, AMBROSE, Associate Professor
Director of Library Services
B.A., Berea College
M.A., Peabody College
M.S. in L.S., Peabody College
- EDWARDS, MARY C., Assistant Professor
Dental Hygiene
B.S., University of California
M.Ed., University of San Francisco
- FALK, CHARLES F., Associate Professor
Chairman of Business Division
B.S.B.A., Elmhurst College
M.S., Northern Illinois University
- FEINBERG, DAVID L., Instructor
Art
B.S., State University of New York
M.F.A., Cranbrook Academy of Art
3 Year Certificate, Parsons School of Design
- FISCHER, GUERIN, Associate Professor
Dean of Guidance
B.A., Seattle Pacific College
M.A., Eastern Washington State
Ed.D., Colorado State College
- FISHER, MARSHALL, Instructor
Assistant Librarian
A.A., Wright Junior College
B.E., Chicago Teachers College-North
M.A., Rosary College
- FLANIGAN, JOHN F., Assistant Professor
Mathematics
B.S., St. Mary's College
M.S., DePaul University
- FLANIGAN, MARY LOU, Instructor
Practical Nursing
B.S.N., Loyola University
- FOUST, WILLIAM R., Associate Professor
Art
B.A.E., School of the Art Institute of Chicago
M.A., Northern Illinois University
- FRANKLIN, GREGORY C., Associate Professor
Counselor
B.S., Northern Illinois University
M.Ed., University of Illinois
Ed.D., University of Illinois
- FRANKLIN, STEPHEN T., Assistant Professor
Philosophy
B.A., North Park College
M.A., University of Chicago
- FRIEDMAN, SANDER, Assistant Professor
Coordinator of Mechanical Engineering
Tech. Program
B.S.M.E., Purdue University
P.E., U. of the State of New York
- FULLER, JACK W., Assistant Professor
Assistant to the Dean,
Continuing Education
B.A., Southern Illinois University
M.S., Southern Illinois University
M.A., California State College
Ed.D., University of Wyoming
- GELCH, JOHN A., Associate Professor
Director of Athletics
B.S., Southern Illinois University
M.S., Southern Illinois University

GENSTER, JEAN H., Instructor
Nursing
B.S., University of Delaware

GIALDINI, ELIZABETH S., Assistant Professor
Coordinator of Fashion Design Program
B.S., University of Cincinnati College of
Applied Arts
M.F.A., School of the Art Institute of Chicago

GOLDSMITH, HALINA Z., Assistant Professor
Nursing
R.N., Grace Hospital School of Nursing
B.S., Wayne State University
M.Litt., University of Pittsburgh

GOODWIN, EDWARD A., Instructor
Director of Food Services
B.A., Michigan State University

GROTH, DAVID, Assistant Professor
Assistant to the Dean,
Continuing Education
B.S., Iowa State University
M.S., Iowa State University
Ph.D., Michigan State University

HACK, WILLIAM F., Assistant Professor
Coordinator of Numerical Control
Tech. Program
B.S.I.E., LeTourneau College
M.S., Northern Illinois University

HARVEY, JAMES, Professor
Vice-President of Student Affairs
B.A., Hope College
M.A., Michigan State University
Ph.D., Michigan State University

HEINLY, JOANNE L., Associate Professor
Coordinator of Associate Degree
Nursing Program
B.S., Columbia University
M.A., Teachers College, Columbia University

HEISLER, JAMES A., Instructor
Numerical Control
B.S., Western Michigan University
M.A., Western Michigan University

HELD, ROBERT G., Instructor
Accounting Aide Coordinator
Accounting
B.S., Northern Illinois University
M.S., Northern Illinois University

HERRON, SUZANNE M., Instructor
Food Service Management
Catering Manager
B.S., University of Minnesota

HINTON, CLETE H., Associate Professor
Counselor
B.S., Milliken University
M.Ed., University of Illinois

HOLLAND, DONALD R., Instructor
Business
B.S., Northern Illinois University
M.B.A., Northern Illinois University

HOOK, LESTER N., Assistant Professor
History
B.S., Northern Illinois University
M.S., Northern Illinois University

HUGHES, ROBERT J., Instructor
Director of Buildings and Grounds
A.A., Wilson Jr. College
B.S., Kansas State College
M.S., Kansas State College

HYLANDER, RAYMOND A.,
Associate Professor, Counselor
B.S., Northern Illinois University
M.A., Northwestern University
C.A.S., University of Illinois

JANUSZKO, JOHN, Instructor
Food Service Management
Assistant Director of Food Services
B.A., Michigan State University

JAUCH, KENNETH E., Assistant Professor
Electronics Technology
B.S., Illinois Institute of Technology
M.S., University of Dayton

JENNESS, PAULINE P., Assistant Professor
Mathematics
B.A., University of Maine
M.Ed., University of Maine

JOLY, CHARLES L., Assistant Professor
Psychology
B.A., St. Mary's University
M.A., Loyola University

KAUFMAN, BARBARA E., Instructor
Dental Hygiene
Certificate of Dental Hygiene,
University of Pennsylvania
B.S.Ed., West Chester State College

KEARNS, ROY G., Associate Professor
Coordinator of Intramural Athletics
Physical Education
B.S., Bradley University
M.S., George Williams College

KERBIS, GERTRUDE, Associate Professor
Architectural Technology
B.S., University of Illinois
M.A., Illinois Institute of Technology

KERES, KAREN LYNNE, Instructor
English
B.A., St. Mary's College
M.A., University of Iowa

KIMMET, GENE F., Assistant Professor
Economics & Business Administration
B.A., Ohio Northern University
M.A., Case-Western Reserve University

KING, S. LARRY, Associate Professor
Chairman, Social Sciences Division
B.A., Roosevelt University
M.A., Roosevelt University

KNUDSEN, JOHN A., Associate Professor
Art
B.A., Luther College
M.F.A., University of Iowa

KOKALIS, SOTER G., Associate Professor
Chemistry
B.S., Purdue University
M.S., University of Illinois
Ph.D., University of Illinois

KOLZOW, LEE CAROLYN, Instructor
Reading
B.S., Concordia Teachers College
M.S., Southern Illinois University

LAHTI, ROBERT E., Professor
President
B.S., Black Hills State College
M.A., University of Wyoming
Ph.D., University of Wyoming

LEHMANN, GUENTER M., Assistant Professor
Architectural Technology
B.Arch., University of Illinois
M.Arch., University of Toronto, Canada

LEWIS, C. PATRICK, Assistant Professor
History
B.A., University of Maryland
M.A., University of Maryland

LISKA, EDWARD, Assistant Professor
Counselor
B.S.Ed., Northern Illinois University
M.S.Ed., Northern Illinois University
M.S., California State College

LOCKWOOD, RICHARD H., Professor
Humanities
B.A., Yale University
M.M., Northwestern University
Ph.D., Michigan State University

LUCAS, JOHN A., Assistant Professor
Director of Planning and Development
B.S.E., University of Michigan
M.B.A., University of Akron
Ph.D., University of Tennessee

LYTLE, JEAN, Instructor
Nursing
R.N., Columbia Hospital School of Nursing
B.S.N., Marquette University

MAGUIRE, FRANCES, Instructor
English
B.S., Central Missouri State College
M.A., University of Missouri

MAKAS, GEORGE P., Professor
B.A., University of Chicago
M.A., University of Minnesota
D.Mus.Ed., Chicago Musical College

MANN, WILLIAM J., Assistant Professor
Vice-President of Business Affairs
B.S., Northern Illinois University
M.S., Northern Illinois University
C.A.S., Northern Illinois University

McCABE, THOMAS R., Associate Professor
Mathematics
B.S., University of Notre Dame
M.S., Northern Illinois University
M.A., Louisiana State University

McCLINTOCK, FRANKLYN G.,
Assistant Professor, Business
B.S., Long Island University
M.B.A., University of Chicago

McKAY, ELIZABETH, Instructor
College Nurse
B.S., Ohio State University
M.S., Ohio State University

McLOUGHLIN, REBECCA H., Instructor
Business
B.S., Indiana University
M.S., Columbia University

MEIER, HENRY C., Assistant Professor
German
B.A., University of Montana
M.A., University of Colorado

MEYERS, THEODORE J., Instructor
Director of Accounting Systems
B.S., Iowa State University
M.B.A., Utah State University

MICKINA, MARY ANN, Instructor
Secretarial Science
B.S. Ed., Northern Illinois University
M.S. Ed., Northern Illinois University

MILLER, RICHARD L., Assistant Professor
Assistant Director of Admissions and Registrar
B.S., California State College, Pennsylvania
M.A., University of Iowa

MILLER, WILLIAM E., Instructor
History
B.A., Coe College
M.A., Southern Illinois University

MILLER, WILLIAM H., Associate Professor
Biology
B.S., Upper Iowa University
M.S., University of Michigan

MOEHLIN, RAYMOND M.,
Associate Professor, Mathematics
B.S., Concordia Teachers College
M.S., Illinois Institute of Technology

MOORE, PAUL H., Assistant Professor
Law Enforcement
A.A., Montgomery Junior College
B.S., Towson State College
M.A., Washington State University

MORIARTY, ROBERT, Assistant Professor
Counseling
B.A., St. Mary's College
M.S., Northern Illinois University
Ed.D., Northern Illinois University

MUCHMORE, JOHN, Associate Professor
Speech
B.S., Eastern Illinois University
M.S., Eastern Illinois University
C.A.S., Northern Illinois University

MUSSELL, ROGER A., Associate Professor
Coordinator of Electronics Program
B.S., Stout State University
M.S., Stout State University

NAMBU, CHIEKO, Instructor
Fashion Design
Kobe College, Nishinomiya
Fashion Design Institute, Osaka
B.A., School of the Art Institute, Chicago

NELSON, WILLIAM E., Assistant Professor
Counselor
B.S., University of Illinois
M.S. Ed., Northern Illinois University

NOLAN, ROBERT LEE, Assistant Professor
Physical Education
B.S., University of Illinois
Ed.M., University of Illinois

NOLEN, JOYCE A., Assistant Professor
Counselor
B.S., Manchester College
M.M.Ed., Northwestern University
M.S.Ed., Northern Illinois University

NORRIS, CHARLES E., Instructor
Anthropology and Sociology
B.A. Shimer College
M.A., University of the Americas, Mexico

OESTER, MICHAEL, Assistant Professor
Chemistry-Mathematics
B.S., Notre Dame
M.S., Notre Dame

OLIVER, FRANK L., Assistant Professor
Sociology
B.A., Andrews University
M.S., Illinois Institute of Technology

OLSON, OMAR L., Professor
Dean of Evening and Continuing Education
B.A., Gonzaga University
M.A., Gonzaga University
Ph.D., University of Washington

OSTROWSKI, MICHAEL V.,
Associate Professor, Psychology
B.A., Roosevelt University
M.A., Roosevelt University
M.Ed., Illinois Teacher's College

OWENS, E. LEE, Assistant Professor
English
B.A., Friends University
M.A., University of Wichita

PAGELER, JOHN CHARLES
Assistant Professor, Philosophy
A.B., Wheaton College
Ph.D., Claremont Graduate School

PAPANDREA, JOHN M., Instructor
Developmental Counselor
B.A., North Park College
M.A., Roosevelt University

PASEN, ROBERT, Instructor
Psychology
B.A., Rutgers University
M.A., Bowling Green University

PAWLAK, ELIZABETH ANN, Instructor
Dental Hygiene
B.S., Marquette University

PIKE, MARGARET M., Instructor
Nursing
B.S., Hunter College

PONCZEK, EDWARD, Instructor
Sociology
B.A., Indiana University
M.A., Indiana University

POWELL, ROBERT M., Associate Professor
English
B.A., Roosevelt University
M.A., Northwestern University

PROKOP, LEOTA JEAN, Assistant Professor
English
B.A., College of St. Catherine
M.A., DePaul University

PUNKAY, WILLIAM R., Assistant Professor
Mechanical Eng. Tech.
B.S., University of Illinois
M.Ed., University of Illinois

RANKIN, GARY, Associate Professor
Director of Testing and Community
Counseling Center
B.S., University of Kansas
M.S., University of Kansas
Ph.D., Colorado State College

RODGERS, ANNE, Instructor
Counselor
B.S., Northwestern University
M.A., Northwestern University

ROEPKEN, HENRY, Associate Professor
Journalism
B.A., Roosevelt University
M.S., Northwestern University

ROLL, JAMES, Instructor
Psychology
B.A., DePaul University
M.A., Roosevelt University

ROLOFF, JOAN G., Instructor
English
B.A., Occidental College
M.A., California State College at Long Beach

RUDOFF, MEYER, Associate Professor
Architectural Technology
M. of Arch., Harvard University
Grad. School of Design

RUPAR, RUTH B., Assistant Librarian
B.A., Oberlin College
M.S.L.S., University of Illinois

RYAN, MARTIN J., Assistant Professor
English
Ph.B., Northwestern University
M.A., University of Chicago

SANDERSON, IRENE Y., Assistant Professor
French
B.A., Faculte de Droit, France
M.A., Roosevelt University

SAVARD, MARC A., Instructor
Director of Governmental Relations and
Project Development
B.A., Loyola University

SAVIN, JANET, Instructor
English
B.A., Carleton College
M.A., Northwestern University

SCHAUER, CLARENCE H., Professor
Vice-President of Academic Affairs
B.A., Kansas State Teachers College
M.S., Kansas State Teachers College
Ph.D., University of Texas

SCHLAGEL, RICHARD T., Instructor
Data Processing & Business
B.S., Northern Illinois University
M.B.A., Northern Illinois University

SCHOOLEY, WILLIAM R., Instructor
Mathematics
B.S., Pennsylvania State University
M.A., Bowling Green State University

SEDIK, DONALD T., Assistant Professor
Business
A.A., Del Mar College
B.S., University of Illinois
M.B.A., DePaul University

SEDREL, ROY A., Assistant Professor
Director of Computer Services
B.S., Drake University
M.S., Northern Illinois University

SHAVER, MARILYN M., Instructor
Nursing
B.S., State University of Iowa
M.S., University of California

SIEDBAND, JORDAN H., Associate Professor
Physics
E.E., University of Cincinnati
B.S., University of Chicago
M.S., University of Chicago

SINGELMANN, JAY C., Instructor
Coordinator of Data Processing Program
B.S., Northern Illinois University
M.S.Ed., Northern Illinois University

SMITH, FRANK E., Instructor
English
B.A., Gannon College

SMITH, PATRICIA ANDERSON, Instructor
Speech
B.A., Ohio State University
M.A., University of Utah

STANSBURY, DONN B., Associate Professor
Director of Admissions and Registrar
B.S., Upper Iowa University
M.A., University of Iowa

STEWART, DARLENE, Assistant Professor
Nursing
B.S.N., University of Michigan
M.S.N., Wayne State University

STEWART, RONALD G., Associate Professor
Sociology
B.S., Texas Technological College
M.S., Illinois Institute of Technology

STOCKMAN, CALVIN LEE, Instructor
Director of Instructional Services
B.S., Eastern Illinois University
M.S., Eastern Illinois University

STURDEVANT, JAMES R., Assistant Professor
English
B.A., Olivet College
M.A.L.S., Wesleyan University

SWANSON, MARILYN LAVERNE, Instructor
English
B.S., Northern Illinois University
M.A., Northwestern University

TAPP, GERALD R., Instructor
Business Administration
B.S., University of Illinois
M.S., University of Illinois

THIEDA, ROBERT W., Assistant Professor
Librarian
M.A., University of Chicago

THOBE, URBAN A., Associate Professor
Chairman, Humanities and Fine Arts Division
B.A., St. Joseph College
M.B., University of Notre Dame
Ph.D., University of Notre Dame

THOMPSON, JOHN H., Associate Professor
Biology
B.A., University of Illinois
B.S., University of Illinois
M.S., Northwestern University

THOMPSON, SUE ELLEN, Instructor
Physical Education
B.A., University of Iowa
M.A., Northern Illinois University

TIERNEY, GILBERT F., Assistant Professor
English
B.A., University of Chicago
M.S., Northern Illinois University

TILLOTSON, J. ROBERT, Assistant Professor
Music
B.F.A., University of New Mexico
M.M., University of New Mexico

TIPPENS, JACK D., Instructor
Art
B.F.A., Kent State University
M.F.A., Kent State University

TRUNK, ROSE M., Associate Professor
B.S.C., DePaul University
M.B.A., DePaul University

TYSL, ROBERT W., Associate Professor
Speech and Theatre
Ph.B., University of Chicago
B.A., Westminster College
M.A., University of Michigan
Ph.D., Michigan State University

VAISVIL, FRED A., Assistant Professor
Director of Placement and Student Aids
B.A., University of Illinois
M.A., University of Chicago

VANDER HAEGHEN, PETER P., Instructor
TV Producer/Director
B.S., Central Missouri State
M.S., Central Missouri State

VANDEVER, FRANK A., Associate Professor
Supervising Dentist, Dental Hygiene Program
D.D.S., St. Louis University School
of Dentistry

VOEGEL, GEORGE H., Associate Professor
Dean of Learning Resources
B.A., Ursinus College
M.Ed., Temple University
D.Ed., Indiana University

VON MAYR, WILFRED, Instructor
Director of Personnel
B.A., Loyola University
M.A., University of Maryland

WACHLIN, DONOVAN C.,
Assistant Professor, Biology
B.A., Ripon College
M.A., State University of South Dakota
Ed.S., Kansas State Teachers College

WARREN, JOHN T., Associate Professor
Chairman, Engineering and
Related Technologies Division
B.S., University of Nebraska
M.A., University of Nebraska

WILLIAMSON, WILLARD F., Instructor
Philosophy
A.B., Gonzaga University
M.A., Gonzaga University (Philosophy)
M.S.T., University of Santa Clara (Theology)
M.A., University of Southern California, L.A.

WINDHAM, BETTY M., Assistant Professor
Physics
B.S., Fontbonne College
M.S., St. Louis University

YOHANAN, JOSEPH J., Associate Professor
Coordinator of Architectural Technology
Program
B. of Arch., Illinois Institute of Technology

ZILKOWSKI, ROBERT, Assistant Professor
Business
B.S., Ball State Teachers College
M.S., Indiana University

STAFF

INSTITUTIONAL SERVICES

Inden, Fred F.	Buyer
Mandarino, Joseph	Supervisor of Campus Safety
Wilkes, Lloyd	Supervisor of Campus Services
Kurowski, Henry J.	Supervisor of Custodians
Helin, Richard D.	Supervisor of Heating and Ventilating
Klug, Richard W.	Supervisor of Maintenance
Dudley, Ronald	Supervisor of Roads and Grounds
Asche, Ronald	Computer Operator
Schuh, William	Computer Operator
Novak, John S.	Electronic Engineer
Kroschel, Nancy	Key Punch Operator
Mirs, Elizabeth	Key Punch Operator
Brandt, Polly	Key Punch Supervisor
Dunn, Ron	Operation Supervisor
White, Raymond	Photographer
Hill, Thomas	Programmer
Williams, Robert	Programmer
Aguero, Andrew	Systems Analyst
Lentz, John	Systems Analyst
Garmathy, Edward	Baker
Stober, Siegfried	Chef
Lewis, Betty	Faculty Dining Room Manager

**SUPPLEMENT TO
1971-1972 COLLEGE CATALOG
VOLUME 5
APRIL, 1971
WILLIAM RAINEY HARPER COLLEGE**

INTERIOR DESIGN

Interior Design is a two-year program leading to an Associate in Applied Science degree. The curriculum is designed to prepare students for retail sales positions in the home furnishings field.

FIRST SEMESTER	Credit Hours
English Elective ¹	3
SPE 101 Fundamentals of Speech	3
PSY 101 Intro. to Psychology	3
BUS 140 Salesmanship	3
IND 101 Basic Interior Design I	4
PED Elective	1
TOTAL	<u>17</u>

SECOND SEMESTER	Credit Hours
ENG 130 Business Writing	3
SPE 102 Public Speaking	3
ECO 115 Consumer Economics	3
FNA 112 History of Art-II	3
IND 102 Basic Interior Design II	4
PED Elective	1
TOTAL	<u>17</u>

THIRD SEMESTER	Credit Hours
IND 210 Planning Interiors	3
IND 212 Uses of Color	3
IND 214 Applied Interior Design (Portfolio)	4
JNM 133 Feature Writing	3
or	
JNM 134 Media Adjuncts	4
Free Elective or ECO 200 Intro. to Economics	3
TOTAL	<u>16 or 17</u>

FOURTH SEMESTER	Credit Hours
SOC 101 Intro. to Sociology	3
BUS 111 Intro. to Business Organization	3
IND 240 Interior Design Seminar	6
Free Elective	3
TOTAL	<u>15</u>

¹ Students will take ENG 099, ENG 101, or ENG 102, depending upon their test scores and the advice of their counselor.

INTERIOR DESIGN

IND 101 Introduction to Basic Interior Design I (3-3) 4 hrs.
Profile of today's customer; room plan and furniture arrangement;
furniture styles; color schemes.

IND 102 Introduction to Basic Interior Design II (3-3) 4 hrs.
Continued consideration of color plans; fabrics for furniture and
windows; floor coverings, lamps, lighting and accessories.
Prerequisite: IND 101.

IND 210 Planning Interiors (2-2) 3 hrs.
Planning homes that are livable and suitable within family budgets.
Practice in making floor plans. How to read blueprints and symbols.
Prerequisites: IND 101, 102. Corequisites: IND 212, 214.

IND 212 Uses of Color (2-2) 3 hrs.
Detailed analysis of selected interiors. Practice in the preparation of
color schemes and pattern plans.
Prerequisites: IND 101, 102. Corequisites: IND 210, 214.

IND 214 Applied Interior Design (portfolio) (2-4) 4 hrs.
Preparation of floor plans, appropriate color schemes, and pattern
plans to be included in the student's portfolio.
Prerequisites: IND 101, 102. Corequisites: IND 210, 212.

IND 240 Interior Design Seminar (4-4) 6 hrs.
A final critique of the student's portfolio and an introduction to the
home furnishings commercial and manufacturing field.
Prerequisites: IND 101, 102, 210, 212, and 214.

