



William Rainey Harper College

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2000 • 2001

# catalog

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William Rainey Harper College  
2000-2001 Catalog  
Volume 34  
January 2000

## Accreditation

### **North Central Association of Colleges and Secondary Schools**

30 North LaSalle  
Suite 2400  
Chicago, IL 60602-2502  
312.263.0456  
800.621.7440

### **Commission on Dental Education of the American Dental Association**

### **Community/Junior College Member of the National Association of Schools of Music**

### **American Bar Association**

**Certificate of Real Estate School,**  
Department of Registration and Education  
School Approval #46

### **Commission on Accreditation of Allied Health Education Programs (CAAHEP)**

### **Council on Education**

Division of Accreditation Approval

### **National League for Nursing**

### **American Dietetic Association**

### **National Academy of Early Childhood Programs**

### **Association of Collegiate Business Schools and Programs**

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

## Student Responsibility

It is the responsibility of each student to be aware of and meet the catalog requirements for graduation. Students are also responsible for heeding all other rules, regulations and deadlines published in the Catalog, Student Handbook and Schedule of Classes. Copies of any of these publications are available on request from the Office of Admissions and/or the Campus Information Center.

William Rainey Harper College  
1200 West Algonquin Road  
Palatine, Illinois 60067-7398  
847.925.6000

## About Harper College

### Our roots run deep.

As far back as the early 1960s, when the greater Chicago metropolitan area was just beginning to spread out past O'Hare, the citizens of four fledgling northwest suburban townships already knew what they wanted.

### What they wanted was a college.

And so, on March 27, 1965, with the ink barely dry on the brand new Illinois Community College Act, voters in the townships of Elk Grove, Palatine, Schaumburg and Wheeling overwhelmingly approved a referendum to establish a community college district. Within 34 days, those same voters returned to the polls to elect seven citizens from among 48 candidates to serve as the first Board of Trustees. The college they envisioned had no name, no buildings, no staff, and no curriculum. What it did have, however, was widespread community support and a dedicated board of seven individuals who, from their first meeting in May 1965, began to formulate a plan for what their college would one day become.

Over the next year, the Board of Trustees continued to meet on a regular basis. A president was hired, architects chosen, a site selected. And the college was given its name—William Rainey Harper—in honor of the man who "fathered" the community college concept. In 1967, voters returned again to the polls, this time to approve a \$7,375,000 building referendum by a 4-1 margin. And while ground was being broken for a new campus in Palatine, Harper College was already offering classes at a nearby high school. More than 1,700 students enrolled for that first term in the fall of

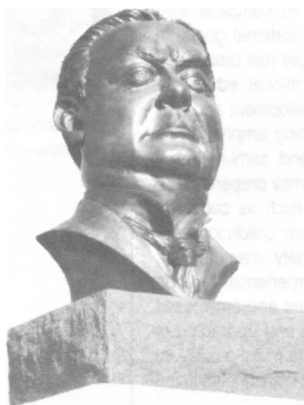
1967. By the following year, enrollment had jumped to 3,700. In the 1999 school year, the College had enrolled approximately 24,000 students!

Harper College was on a roll, so to speak. But steadily increasing enrollment was only one indication of the success that lay ahead. Academic excellence was another. By 1971—just six years after its founding—the College had already received unqualified full accreditation. That was especially good news for students with plans to complete their baccalaureate degrees at four-year colleges and universities. Full accreditation meant they could be assured that credits earned at Harper would readily transfer to other institutions of higher learning.

### Our campus is a special place.

Harper College welcomed its first students in the fall of 1967 without a campus or a classroom to call its own. The first classes were held evenings only at Elk Grove High School. Two years later, classes moved to the initial structures on Harper's rolling 200-acre campus. The 5,400 students enrolled for the fall 1969 term took their seats inside the first of what would one day be 18 buildings with 833,130 square feet of classroom and administrative space on the main campus.

From the very beginning, this was to be a campus like no other. The architects envisioned a "village" atmosphere and so into their plans, they incorporated multi-level plazas, picturesque pedestrian walkways, even a lake with a foot-bridge connecting the campus to the parking lots. The buildings were fashioned from earhtone materials—brick, wood and concrete. Glass window walls offered a variety of interior and exterior views. Thirty years later, this campus remains a stimulating, pleasing environment, ideal for learning and working.



## ABOUT HARPER

The desire to create an aesthetically pleasing atmosphere outside was extended inside as well. Among the original concepts for Harper College was a provision for displaying works of art. By the time the initial buildings were completed and occupied in May 1970, the College had acquired a sizable collection of paintings, prints and sculpture; these were used as display throughout the campus. Over the past three decades, this collection has continued to grow and provide aesthetic enjoyment for students, staff, faculty and the community at large.

Initial campus construction was completed in record time and formally dedicated on May 3, 1970. Among the early structures were a comprehensive library and learning resources center; a science and technology laboratory and classroom complex; a lecture-demonstration center; a fine and applied arts complex; a vocational-technical center; a park management and greenhouse facility; a student activities center; an administrative and data processing center; and a central utility facility designed to serve the entire campus. Later additions have included a physical education building, two classroom-specialized career program buildings, a campus publications building and a liberal arts center, which includes a bookstore, "black box theatre," and three-dimensional art studios devoted to ceramics, sculpture, stagecraft and metal work. In 1990, a privately funded, 784-square foot observatory was constructed. Subsequently, capital improvements were made to the science complex, fine arts wing and central utility facility.

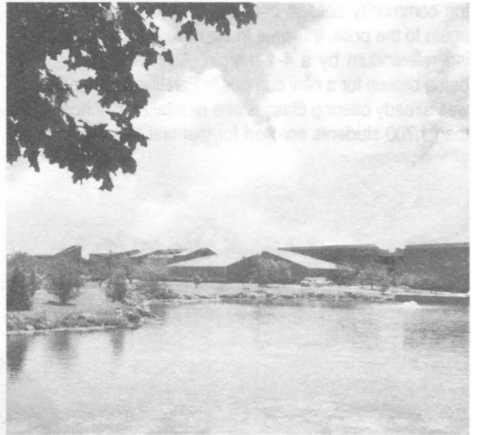
### **Our purpose is clear.**

Harper College was conceived and created by a community that simply wanted more education for more of its citizens. Thus, from its inception in 1965, Harper College has operated with a single mission in mind: We seek to provide the best possible program of higher education at reasonable cost for the community we serve.

As a community college, our primary objective has long centered on providing the first two years of baccalaureate education in liberal arts, sciences and preprofessional curricula so that students can prepare themselves for transfer to four-year colleges and universities to complete their degrees and satisfy their individual educational goals. In recent years, however, the focus at Harper has broadened to include more opportunities for vocational education, training and retraining, professional development and personal enrichment. For example, increasing emphasis has been placed on providing technical and semi-technical education so that non-transfer students may prepare themselves for entry into specific careers, such as computer technology, criminal justice, nursing, early childhood education, park maintenance and hospitality management, directly from their community college experience. In addition, our ability to provide area employers and employees with opportunities for training, retraining and upgrading of skills has become increasingly important as a way to address rapid technological change and adjustments in the work environment.

But there is more to the curriculum at Harper College than courses designed to prepare students for a specific career or to help them earn a particular degree or certificate. We recognize, too, our responsibility to educate all of our students so that they may assume a more active and meaningful role in a free and fluid society...so that they may vote more intelligently, produce more efficiently, adapt more readily to a complex world. As a result, we aim to not only teach students what is known, we strive to teach them where and how to look for knowledge that may not yet be available. And as life becomes more complex, the personal enrichment courses we offer provide increasing numbers of men and women with an outlet for creative energies, a means for cultivating hidden talents and a way to reduce the stress of their day-to-day lives.

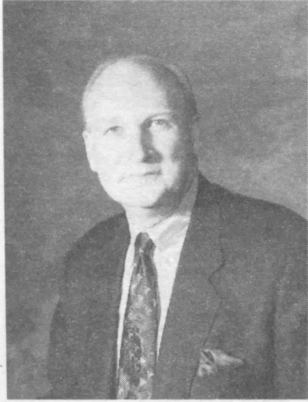
With a firm commitment to the dignity and significance of each individual, Harper College strives to help each student find his or her place in the world. We seek to provide the necessary training so that every student can achieve his or her personal goals. And, above all, we desire to create an environment in which questions may be asked, theories may be tested and every student who passes through our doors may realize his or her full potential. This has been our goal for more than three decades. It will guide us through the new millennium.



**William Rainey Harper**

**A Message from the President**

William Rainey Harper, the renowned scholar, teacher and administrator from whom we take our name, was an innovator...a man of vision to be sure. As first president of the University of Chicago more than a century ago, Dr. Harper was also first to champion the idea of the two-year college. What he conceived simply as a means of increasing access



to college-level learning for all, would—in time—transform the face of higher education in America.

William Rainey Harper was the true father of the community college movement. We are proud to bear his name, proud to be among the 39 public two-year community college districts in

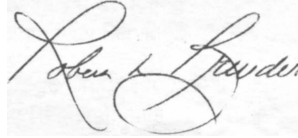
Illinois that today serve more than 1,000,000 citizens statewide. But what we at Harper College are proudest of is our continuing ability to offer a wide array of programs, classes and services designed to meet the specific educational needs of the people we serve.

Whatever your goal—to earn credits toward a degree or certificate, upgrade your skills for a changing work environment, pursue a lifelong interest or cultivate an entirely new one—Harper College has a class for you. We offer a full range of credit and non-credit courses, career training opportunities and continuing education options for professional development and personal enrichment as well as academic transfer programs. Our faculty is among the best. And because, like William Rainey Harper himself, we believe that higher education should be accessible to all, we offer a flexible schedule of daytime, nighttime and weekend classes at our main campus and at several other sites conveniently located throughout our service area.

The following pages contain information about hundreds of ways you can upgrade your knowledge, acquire new skills, broaden your outlook, improve your attitude, perhaps even change your life. I hope you will take time to look them over, then take advantage of the many opportunities we have to offer.

Come to Harper College and you are sure to discover that we share more than a name with William Rainey Harper. We share his commitment to helping students of all ages, experiences, backgrounds and desires achieve success in the college classroom...and beyond.

Sincerely,



Dr. Robert L. Breuder  
President



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# ACADEMIC CALENDAR

## First Semester-FALL 2000

Registration as Scheduled .....	May through August 12
Final Registration Week.....	August 14-19
Faculty Report .....	August 15
Classes Begin .....	August 21
Last Day for Refunds* .....	September 2
Labor Day Observed ( Classes Not in Session) .....	September 4
Midterm.....	October 14
Veteran's Day Observed (Classes Not in Session).....	November 10
Last Day for Withdrawals (16 week classes):** .....	November 11
Thanksgiving Holiday (Classes Not in Session) .....	November 23-November 26
Last Week of Fall Term (Final Exams) .....	December 11-16
Semester Break Begins .....	December 17

## Second Semester-SPRING 2001

Registration as Scheduled .....	November through January 6
Final Registration Week.....	January 8-13
Faculty Report.....	January 10
Martin Luther King's Birthday Observed (Classes Not in Session) .....	January 15
Classes Begin .....	January 16
Last Day for Refunds* .....	January 29
Lincoln's Birthday Observed (Classes Not in Session).....	February 12
Midterm .....	March 10
Spring Break .....	March 26-April 1
Classes Resume.....	April 2
Reading Day (Classes Not in Session) .....	April 13
Last Day for Withdrawals (16 week classes):** .....	April 14
Non Instructional Day (Classes Not in Session) .....	April 15
Last Week of Spring Term (Final Exams).....	May 14-19
Graduation .....	May 20

## Summer Session-2001

Registration as Scheduled .....	April through May 26
Final Registration Week .....	May 28-June 2
Classes Begin .....	June 4
Last Day for Refunds* .....	June 7
Midterm .....	June 28
Independence Day (Classes Not in Session).....	July 4
Last Day for Withdrawals (16 week classes):** .....	July 12
Last Week of Summer Term (Final Exams) .....	July 23-26

\* Per institutional policy on page 20 of College Catalog

\*\*Per institutional policy deadline varies for non 16 week courses

## The Harper Year

The College follows the early semester plan and also offers a summer session. Day, evening and weekend classes are conducted throughout the college year.

## College Hours

Office Hours: The College is open Monday through Thursday from 8:00 am to 8:00 pm, on Friday from 8:00 am to 4:30 pm and 9:00 am to 12 noon on Saturday. Closed Friday and Saturday during summer term. Hours of operation may vary for some areas. Class hours are generally scheduled Monday through Friday from 7:00 am until 11:00 pm, Saturday from 7:00 am until 6:00 pm and Sunday from 1:00 pm until 6:00 pm.



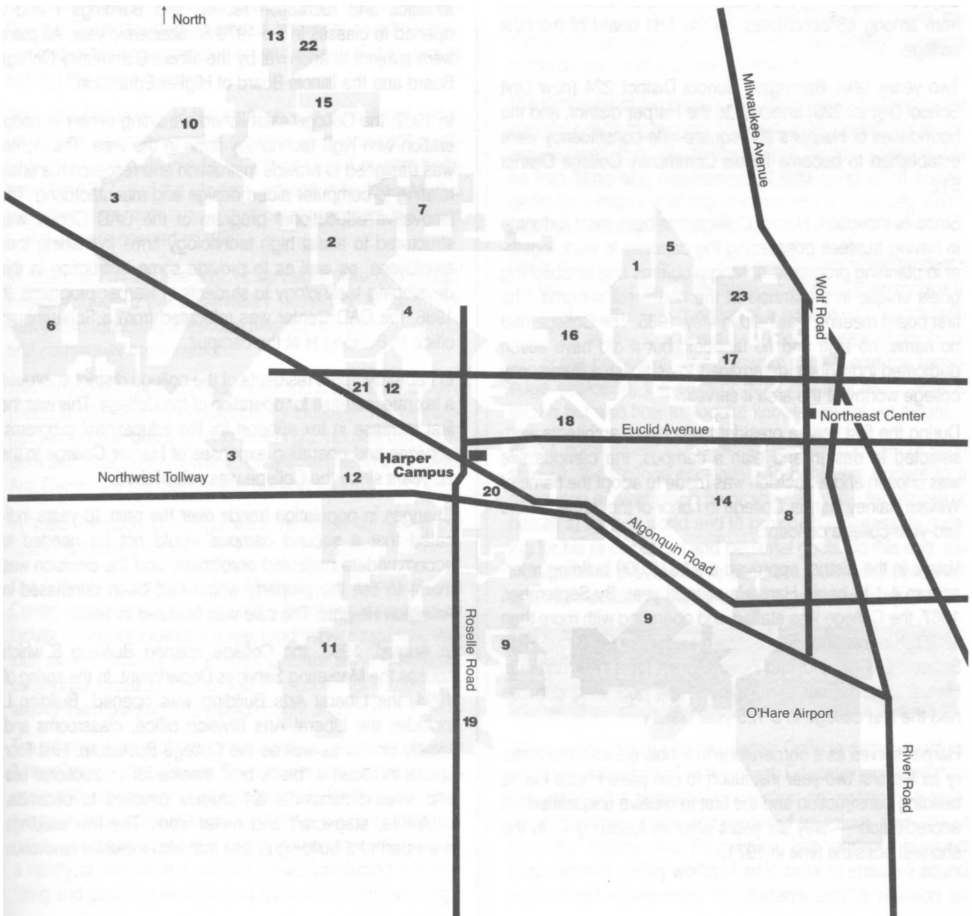
# HARPER DISTRICT

## Communities served by Harper College District No. 512

- 1 Arlington Heights
- 2 Barrington
- 3 Barrington Hills
- 4 Inverness
- 5 Buffalo Grove\*
- 6 Carpentersville\*
- 7 Deer Park\*
- 8 Des Plaines\*
- 9 Elk Grove Village
- 10 Fox River Grove\*
- 11 Hanover Park\*
- 12 Hoffman Estates

- 13 Lake Barrington
- 14 Mount Prospect
- 15 North Barrington
- 16 Palatine
- 17 Prospect Heights
- 18 Rolling Meadows
- 19 Roselle\*
- 20 Schaumburg
- 21 South Barrington
- 22 Tower Lakes
- 23 Wheeling

\*Portions of these communities are included in the district.



### History

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Changes in population trends over the past 10 years indicated that a second campus would not be needed to accommodate projected enrollment, and the decision was made to sell the property which had been purchased in Arlington Heights. The sale was finalized in 1986.

In August, 1993, the College opened Building S which houses the Marketing Services Department. In the spring of 1994, the Liberal Arts Building was opened. Building L includes the Liberal Arts division office, classrooms and faculty offices as well as the College Bookstore. First floor space includes a "black box" theatre for instructional use and three-dimensional art studios devoted to ceramics, sculpture, stagecraft and metal work. The two buildings were part of a building phase that also includes renovation

plans in existing buildings. Renovations completed in 1996 included the addition of a large computer lab in Building I and updating of Building V.

## **Campus Facilities**

With the completion of the initial buildings, the Harper campus was opened to 5,400 students in September, 1969. Additional facilities were needed in order to keep up with the increasing enrollment which eventually led to a complex of 18 informal contemporary buildings totaling 833,130 square feet nestled in the rolling terrain of 200 rural acres. On-time delivery of the buildings marked Harper as the first Illinois public community college to complete its entire Phase I project, which was formally dedicated on May 3, 1970.

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

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

In 1990, a 784 square foot observatory was completed. Privately funded, the observatory houses a 12' diameter Newtonian reflecting telescope and can be used by school and community organizations.

The two most recent facilities, Buildings S and L were completed in 1993 and 1994 respectively. Building S is the campus publication building, and Building L houses the bookstore and Liberal Arts Division. Of special note in the Liberal Arts Center are the theatre and applied arts.

In 1998, campus buildings were renamed to reflect the functions housed within.

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

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

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

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

## **Philosophy**

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

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

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

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

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

## **Harper College Educational Foundation Art Collection**

The original concept for the Harper College campus included public exhibition of works of art. Educational Foundation has acquired a permanent collection consisting of a number of paintings, prints and pieces of sculpture. Throughout Harper's history, the Foundation has actively pursued acquisition of quality works of art in order to ensure a sound educational environment for students and to develop an

## ABOUT HARPER

invaluable cultural resource for the community which Harper serves. In the future, the Foundation will continue to collect works reflecting a variety of aesthetic expressions.

### Mission

William Rainey Harper College is a comprehensive community college dedicated to providing excellent education at a reasonable cost, promoting personal growth, enriching the community and meeting the needs of a changing world.

In the broad range of its offerings, Harper College will

- educate students to assume an active, productive and meaningful role in a free and changing society.
- provide students with the knowledge and experiences required to develop a system of values and the ability to contend with difficult moral choices.
- encourage student success.
- enrich the cultural and economic life of the community.
- lead in individual and community development.
- enable students to recognize the interrelationships of life, education and work.

### Degrees

Harper College offers five degrees: The Associate in Arts, the Associate in Science, the Associate in Applied Science, the Associate in Fine Arts and the Associate in Engineering Science. The A.A., A.S., A.F.A. and A.E.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, although many students transfer to four-year colleges after earning the A.A.S. degree.

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

### Accreditation

All courses and educational programs, including counseling services, are fully accredited by the North Central Association of Colleges and Secondary Schools.

- The Harper business related programs of Accounting, Computer Information Systems, Financial Services, Hospitality Management, Management, Marketing, Materials/Logistics Management, and Office Careers are accredited by the Association of Collegiate Business Schools and Programs.
- The Harper Dental Hygiene career program is accredited by the Commission on Dental Education of the American Dental Association;
- The Harper Music Department is accredited as a Community/Junior College Member of the National Association of Schools of Music;

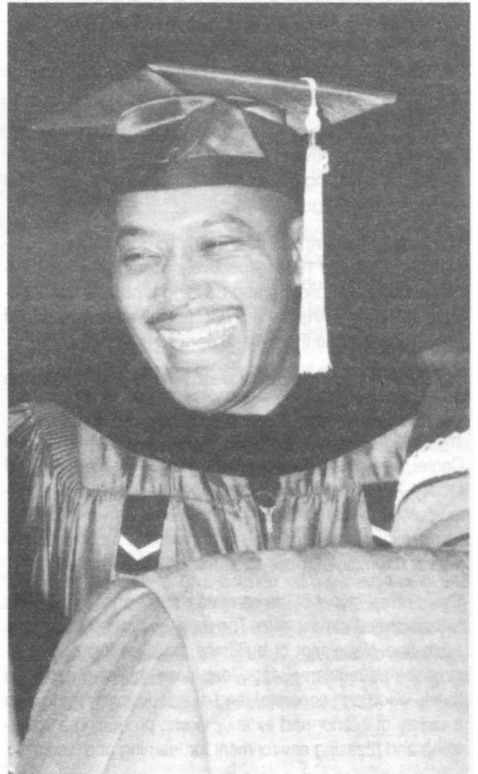
- The Harper Paralegal Studies Program is accredited by the American Bar Association;

- The Harper Real Estate Program holds a Certificate of Real Estate School, Department of Registration and Education School Approval #46;

- The Harper Nursing Program is accredited by the National League for Nursing and approved by the Illinois Department of Professional Regulation;

- The Harper Dietetic Technician Program is granted Developmental Accreditation by the Commission on Accreditation/Approval for Dietetics Education of the American Dietetic Association, a specialized accreditation body recognized by the Commission on Recognition of Postsecondary Accreditation and the United States Department of Education.

- The Medical Office Assistant certificate and degree programs have been accredited by the Commission on Accreditation of Allied Health Education Programs (CAA-HEP), on recommendation of the Committee on Accreditation for Medical Assistant Education, aka The Curriculum Review Board of the American Association of Medical Assistants' Endowment (AAMAE).



**Certifications and Affiliations**

In addition to the accreditation listed in the previous section, the College also has the following certifications and affiliations:

**CERTIFICATIONS**

• **From Microsoft Corporation:**

Microsoft Certified Systems Engineer (MCSE), Microsoft Certified Professional (MCP), Microsoft Certified Systems Engineer and Internet (MCSE and Internet)

• **From Novell:**

Certified NetWare Administrator Administrator (CNA), Certified NetWare Engineer (CNE)

• **From Oracle:**

Individual exams in each specific area (SQL and PL/SQL, Database Administrator, Performance Tuning Workshop, Backup & Recovery Workshop and Net Administration) to be certified by Oracle. If certified in all five areas, the student will receive Database Administration certificate from Oracle.

• **From Solaris:**

Exams to be certified as a Systems Administrator or Network Specialist by Solaris

• **From Computing Technology Industry Association:**

A+ Certification

• **From Premier Autodesk:**

Certified Autocad Trainer

**AFFILIATIONS**

**Academic Enrichment and Language Studies Division**

- Member, International Interchanges for Leaders in Education
- Member, International Teachers of English to Speakers of Other Languages(TESOL)
- Member, Illinois Teachers of English to Speakers of Other Languages(TESOL)/Bilingual Education(BE)
- Member, Network of Intensive English Programs
- Member, NAESA - Association of International Student Educators
- Northeast Palatine Resource Network
- Northwest Suburban Council for Community Services
- Member, Registry of Interpreters for the Deaf(RID)

**Business and Social Science Division**

- Registered by the State of Illinois as a Public Accountant Continuing Professional Education Sponsor (CPA classes)
- Regional Training Center for the NetPrep Networking Program

- Member, National Association of Communication Systems Engineers; Authorized Testing Center
- Student Chapter of American Production and Inventory Control Society
- Member, American Records Management Association
- Member, International Association of Administrative Professionals
- Certified Professional Secretary testing site
- Student Chapter of Lambda Epsilon Chi, the national paralegal honor society
- Member, Northwest Suburban Bar Association
- Member, Illinois Paralegal Association
- Member, American Culinary Federation
- Member, Illinois Foodservice Educators Association

**Continuing Education Division**

- American Heart Association
- Association of Rehabilitative Nurses
- Association for Volunteer Administration
- College for Financial Planning and the Greater O'Hare Chapter of the International Association of Financial Planners

**Corporate Services Division**

- APICS (The Educational Society for Resource Management, originally called the American Production and Inventory Control Society)
- CPIM Review (Certification in Production & Inventory Management) and CIRM Review (Certification in Integrated Resources Management)
- NAPM (National Association of Purchasing Management)
- CPM Review (Certification in Purchasing Management)
- Achieve Global: Leadership 2000; Tools for Performance Leaders

**Library Services Division**

- Member, American Library Association
- Member, Illinois Library Association
- Member, OCLC(On-line Computer Library Center)
- Member, LOEX(Library Orientation Exchange) Clearinghouse for Library Instruction
- Member, North Suburban Library System
- Member, NILRC: A Consortium of Community Colleges, Colleges and Universities

### Life Science and Human Services Division

- Illinois State Florist's Association
- The Society of American Florists
- The American Institute of Floral Designers

### Technology, Mathematics and Physical Sciences Division

- American Electronics Association
- American Mathematics Association of Two Year Colleges
- American Technical Education Association
- Association of Collegiate Schools of Architecture
- AUTOCAD Industry Training Labs
- BOCA (Building Officials and Code Administrators)
- Committee on Chemistry of the Two Year Colleges, Division of Chemical Education, American Chemical Society.
- Illinois Council of Teachers of Mathematics
- Illinois Mathematics Association of Community Colleges
- Illinois Section of the Mathematics Association of America
- Mathematics Association of America
- National Council of Teachers of Mathematics
- National Instruments LabVIEW Industrial Training Lab
- Planetary Studies Foundation
- SDRC (Structural Dynamics Research Corporation) IDEAS Industrial Training Lab

### Compliance Actions

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

Inquiries regarding Affirmative Action should be directed to the Director of Personnel. Inquiries regarding College compliance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act should be directed to the Dean of Academic Enrichment and Language Studies.

### Services for Persons with Disabilities

Reasonable accommodations and services are available for students, staff and visitors with disabilities in accord with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. Information regarding those services or about campus accessibility can be obtained in the Center for Access and Disability Services in the Science, Math and Health Careers Center, D119. New students must apply to receive services and provide information about the nature and extent of their disability so that appropriate accommodations and services can be arranged. The ADS phone number is 847/925-6266, voice or 847/397-7600, TTY.

### College Accessibility

While mandated services will be offered at all Harper College facilities, complete College support services such as tutoring and counseling and others may only be available at the Palatine campus.



**Enrollment Options**

**Baccalaureate Transfer Program**

**Career Programs**

**Continuing Education Programs**

**Other Offerings**

**Admission**

- *Eligibility*
- *General Admission Requirements*
- *Dual Admission Programs*

**Additional Admission Information**

- *Students Applying For Admission to Baccalaureate Transfer Programs*
- *High School Course Requirements For Admission to Baccalaureate Programs*
- *High school course requirements for admission to Baccalaureate Transfer*
- *Graduates of accredited high schools who received a high school diploma on or after January 1, 1993\**
- *GED Recipients*
- *International Students*
- *Graduates of Foreign High Schools*

**Students Applying to Limited Enrollment Programs**

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**Tuition and Fees**

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- *Laboratory and Music Fees*
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**Chargeback Tuition**

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- *Refund Policy for Financial Aid Recipients*

**Withdrawals**

**Enrollment Status Verification**

## Enrollment Options

Students may elect to enroll in individual courses without pursuing a particular program, or may select one of the following programs:

### Baccalaureate Transfer Program

This option is available to students who wish to transfer their coursework to an institution offering bachelor's degree programs.

Students interested in programs in communications, education, liberal arts, or similar programs may pursue the Associate in Arts Degree. Students interested in business, computer science, health, mathematics, science or similar programs may pursue the Associate in Science Degree. Students interested in engineering or similar programs may pursue the Associate in Engineering Science Degree. Students interested in the arts may pursue the Associate in Fine Arts Degree.

Individuals seeking admission to the Baccalaureate Transfer Program should see the Additional Admission Information section for information regarding this Program.

### Career Programs

These sequences of courses are designed for individuals who desire to pursue a specific curriculum to prepare them for immediate entry into a particular career. Career Program coursework may transfer to some baccalaureate-granting institutions.

Career programs provide specific training for a wide variety of occupations in business, technology, human services, health care and related fields. Students may pursue the Associate in Applied Science Degree Program which includes both career preparation and general educational coursework, or a Certificate Program which focuses exclusively on career preparation coursework.

### Continuing Education Programs

A lifelong pursuit of learning is needed to keep abreast of the knowledge explosion and the influence of social and cultural changes. The continuing education (non-credit) department of each division makes available to the community a rich array of courses, seminars and short-term programs that encourage lifelong learning and help students meet their professional, career, civic and personal development goals.

Professional certification and other types of professional continuing education units are available for: computer training, information technology, Autodesk training, LabVIEW, career counseling/ workshops, workforce ESL, Certified

Financial Planning, supervisory/management development, small business management, international trade, hospitality, travel and meeting planning, health services, cosmetology, gerontology, volunteer management and manufacturing.

Personal enrichment offerings include: cultural awareness, fine arts, languages, music, photography, literature and writing, home maintenance, cooking, creative crafts, decorating and fashion, garden/landscape/floral, home ownership, health and wellness, dance, physical fitness, personal finance, Phi Theta Kappa leadership development, self awareness, personal testing review, aviation, astronomy, animal health, women's program, youth programs and senior lecture series.

For more information, call the Office of Continuing Education at 847/925-6300 or e-mail [ce@harper.cc.il.us](mailto:ce@harper.cc.il.us)

### Other Offerings

Courses in developmental English, reading, mathematics, study skills, and English as a Second Language are available for students who need to improve these skills in order to succeed in college studies. Students are placed in these courses based on assessment test scores.

In addition, the Adult Educational Development Department offers instruction in reading, writing, mathematics and non-native literacy as well as preparation for GED and citizenship tests.

## Admission

### ■ Eligibility

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

To be placed in some programs in the College, the applicant may have to meet additional requirements as specified by that program and/ or the Illinois Public Community College Act.

### ■ General Admission Requirements

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



## ADMISSION INFORMATION, TUITION & FEES

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

**Full-time applicants will be required to:**

- A. Complete a Harper College application.
- B. Pay a \$25.00 nonrefundable application fee.
- C. Submit an official copy of their final high school transcript. Students who are enrolled in high school at the time of application must, in addition, submit a current high school transcript. Students who completed the GED must submit an official copy of GED results.
- D. Submit official transcripts from all colleges attended.
- E. Provide ACT scores. Either an official ACT score report or an official high school transcript that includes ACT scores can be submitted to fulfill this requirement. (This requirement will be waived for students who have completed 12 or more semester hours of college level credit and for students who are age 24 or older at the time of application.)

**Degree seeking part-time applicants will be required to:**

- A. Complete a Harper College application.
- B. Pay a \$25.00 nonrefundable application fee.
- C. Submit an official copy of their final high school transcript. Students who are enrolled in high school at the time of application must, in addition, submit a current high school transcript. Students who completed the GED must submit an official copy of GED results.
- D. Submit official transcripts from all colleges attended.

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

- A. Complete a Harper College application.
- B. Pay a \$25.00 nonrefundable application fee.

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

**■ Dual Admission Programs:**

These agreements with selected universities allow students to apply for admission to Harper College and the four-year college to which they plan to transfer simultaneously. Dual admission provides a seamless transition between Harper and participating schools by providing optimum continuity of courses, faculty and resources during all four years of

study. Dual Admissions Programs currently are offered through Harper College and the following four-year institutions: Barat College, Northeastern Illinois University, Northern Illinois University, Roosevelt University and Western Illinois University. Applicants may obtain Dual Admission Application and detailed program information from the Harper College Admissions Office.

### Additional Admission Information

**■ Students Applying For Admission to Baccalaureate Transfer Programs**

The importance of a strong high school background as it relates to college success cannot be overstated. Students who encounter a broad variety of curricular areas in high school increase the likelihood that they will succeed at the college level. Accordingly, and in compliance with Illinois Community College Board policy, Harper College has established minimum high school course requirements for admission to the Associate in Arts, Associate in Science, Associate in Engineering Science and Associate in Fine Arts Baccalaureate Transfer Programs.

Students applying for admission to a Baccalaureate Transfer Program must meet the minimum requirements as outlined in the table below. A student who has not fulfilled these requirements at the time of application will be admitted to the College as a "Pre-Baccalaureate Transfer Student," and upon compensation of the academic deficiencies will be admitted to the Baccalaureate Transfer Program.

**■ High School Course Requirements For Admission to Baccalaureate Programs**

Area	Subject	Minimum # of Units in High School
I	English	4
II	Mathematics	2-3
III	Social Studies	2-3
IV	Science	2-3 including at least one unit of laboratory science
V	Other	1-2 units of foreign language, art, or music
VI	Flexible	0-4 units in areas I-V or <u>in vocational education</u>
<b>Total Required:</b>		<b>15 units</b>

## ADMISSION INFORMATION, TUITION & FEES

### ■ *High school course requirements for admission to Baccalaureate Transfer Programs will be waived for:*

- Students whose final class rank is in the top 25 percent **and** who have an ACT composite score of 23 or higher **or** an SAT Verbal score of 610 or higher and an SAT Math score of 680 or higher;
- Students who have completed 24 semester hours of college coursework (100 level or above) with grades of "C" or better.

Applicants to the Baccalaureate Transfer Program will be classified according to the following system and should note the relevant admission requirements as follows.

### ■ *Graduates of accredited high schools who received a high school diploma on or after January 1, 1993\**

Must fulfill requirements as stated above.

### ■ *GED Recipients*

Must have obtained a minimum standard subscore of 50 on each GED subtest and have completed at least one unit of laboratory science in high school or one semester of laboratory science in college.

### ■ *International Students*

Must have a minimum TOEFL score of 550 (210 for students who completed the test after June 1998) and have graduated from a college preparatory high school for further study in an area of liberal arts or from a technical high school in an area of math, science or engineering.

### ■ *Graduates of Foreign High Schools*

Must have graduated from a college preparatory high school for further study in an area of liberal arts or from a technical high school in an area of math, science or engineering.

\*Note: Students who graduated from high school prior to January 1, 1993 who have not fulfilled the admission requirements will have coursework and/or other academic activities that compensate for course deficiencies incorporated into their curriculum.

## Students Applying to Limited Enrollment Programs

The following career programs have been identified as limited enrollment programs: Cardiac Technology, Dental Hygiene, Emergency Medical Technician Training, Nursing

(RN and LPN) and Basic Nursing Assistant (CNA) training. Each of these programs has special admissions requirements.

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

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

A permanent resident is defined as an individual who:

- a) is a citizen of the United States or has established permanent residence (holds an I-551 alien registration card) **and**
- b) resides in the Harper College district for reasons other than attending Harper College.

The Admissions Office shall make the final determination of permanent residency status in relation to the selection process for limited enrollment programs.

Methods of determining eligibility for admission to Limited Enrollment Programs may differ from methods of computing Harper cumulative grade point average.

## International Students

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

International students must carry a minimum of 12 semester hours or be enrolled in the Intensive English Program. Because no scholarships or grants are available to international students, it is essential that students from outside the United States have sufficient funds to cover their expenses while in this country. The international student tuition is \$274.39 per semester hour (subject to change without notice).

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

International students are required to have health insurance coverage and will be charged an individual health insurance fee each semester. Students can receive a credit for the fee if they provide proof of equivalent coverage.

## ADMISSION INFORMATION, TUITION & FEES

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

1. A completed Harper application with a non-refundable \$25.00 application fee.
2. Official transcripts for at least the last four years of secondary school study and any university-level or postsecondary school work that has been completed or attempted. All these records must list all subjects taken, grades earned or examination results in each subject, minimum and maximum grades possible and all diplomas and certificates awarded. If these documents are not in English, they must be accompanied by authorized English translations.
3. An official Test of English as a Foreign Language (TOEFL) score report. To be considered for admission, students must receive a minimum converted score of 550 (210 for students who completed the test after June 1998). This requirement will be waived for students applying to the Intensive English Program.
4. An affidavit of support signed by the party who will be supporting the student. The affidavit must be accompanied by statements from the bank and employer of the party who will be supporting the student. (If students are able to document sufficient financial resources to support themselves, this will be considered adequate.)
5. A Harper College declaration of intention.
6. A written statement regarding what the student plans to study at Harper. (This requirement will be waived for students applying to the Intensive English Program.)
7. A Harper College "Educational Background Information Sheet."
8. International Student Responsibility Checklist.
9. Copy of passport
10. Photograph
11. Copy of I-20 if student is transferring from another U.S. college or university.

### Concurrently Enrolled High School Students

High school students age 16 and over may enroll concurrently at the College if they obtain written approval of their high school principal or designee and of the designated College admissions official. Parental acknowledgement of the student/college relationship is also required for these students. These students should follow the appropriate general admission requirements as stated above.

### Summer School Students

Students who apply for summer school only should submit an application form and a \$25.00 application fee. Students applying for summer session and planning to continue in the fall semester should follow the appropriate general admission requirements as stated above.

### Readmission

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

### Assessment and Placement

Harper College welcomes all who can benefit from the courses and programs offered. To that end an assessment policy is in place requiring all new full-time students to complete writing, reading and math placement tests. Students entering their first English and/or math courses are also required to complete appropriate placement test(s). The goals of assessment are:

1. To inform students about their competency levels in English, reading/writing and math.
2. To place students in the English and math courses in which they have the best opportunity for success.
3. To help underprepared students whose reading assessment scores are substantially below college level by requiring them to enroll in developmental reading courses prior to or along with their English courses. New full-time students who place into reading must enroll in the reading during their first semester.

Details of the mandatory assessment and placement policy, including options for waiving testing, are available in the Assessment Center

### Residency

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

#### ■ Resident

A student who has resided within the State of Illinois and the Harper College district\* thirty days immediately prior to the start of the term is eligible to be classified as a resident student for tuition calculation purposes. Residency requirements

## ADMISSION INFORMATION, TUITION & FEES

may differ for limited enrollment programs admission. Proof of residence status is required at the time of registration. Proof of residence can include drivers license, voters registration card, library card, lease, utility bill, or tax bill.

### ■ **Non-Resident**

A student who has resided in the State of Illinois, but outside the Harper College district, for thirty days\* immediately prior to the start of the term shall be classified as a non-resident student.

### ■ **Out-of-State**

A student who has resided in the State of Illinois for less than thirty days\*\* immediately prior to the start of the term shall be classified as an out-of-state student.

### ■ **International**

A student whose permanent residence is outside the United States and is attending Harper College on a visa shall be classified as an international student.

\* Communities in Harper College District #512 Arlington Heights, Barrington, Barrington Hills, Buffalo Grove+, Carpentersville+, Deer Park+, Des Plaines+, Elk Grove Village, Fox River Grove+, Hanover Park+, Hoffman Estates, Inverness, Lake Barrington, Mount Prospect, North Barrington, Palatine, Prospect Heights, Rolling Meadows, Roselle+, Schaumburg, South Barrington, Tower Lakes, Wheeling.

+ Portions of these communities are included in the district.

\*\* Students who move from outside the state or district and who obtain residence in the state or Harper district for reasons other than attending the community college shall be exempt from the thirty day requirement if they demonstrate through documentation a verifiable interest in establishing permanent residency. The Registrar's Office shall make the final determination of residency status for tuition purposes.

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

### ■ **Tuition**

#### **Resident Tuition:**

\*(includes employees of companies within Harper district)  
\$54.00 per semester hour

#### **Non-Resident Tuition:**

(see Chargeback) .....\$208.81 per semester hour

#### **Out-of-State Tuition:**

.....\$274.39 per semester hour

#### **International Student Tuition**

.....\$274.39 per semester hour

#### **Senior Citizen Tuition:**

District residents age 60 and older will be assessed a 50 percent tuition discount for credit courses that are **specifically dedicated to senior citizens**. No other discounts apply to these classes.

District residents age 65 and older are eligible for a 100 percent discount for all credit courses (except senior-dedicated) during late registration. Late registration is the first

day of the term or the first day of the session in which the class meets. Students may not drop and re-enroll for the discount.

All tuition and fees are due and payable during registration unless arrangements are made at the Office of Student Financial Assistance, Student and Administration Center, A364, or the Business Office, Student and Administration Center, A213. Failure to do so may result in being withdrawn from classes.

A one-time application fee of \$25.00 is charged to each new student applying for admission for credit courses. The fee, which is nonrefundable, covers the cost of processing the application.

### ■ **Activity Fee**

Students enrolled for 12 or more credit semester hours will pay a \$32.00 activity fee for each semester; students enrolled for less than 12 hours will pay a \$16.00 activity fee. Students enrolled for summer school credit hours will pay a \$16.00 activity fee. No activity fee is charged for students enrolled only in Continuing Education courses or Harper classes taught off-campus (extension courses).

However, students enrolled only in continuing education and extension courses may pay the activity fee and obtain an activity card (see: Student Activities).

### ■ **Special Music Fee**

Students enrolled in minor applied music will pay \$134.00 per semester. This entitles the student to one thirty minute private lesson per week. Major applied music students will pay \$268.00 per semester and will receive one sixty minute private lesson per week.

### ■ **Graduation Fee**

A graduation fee of \$20.00 includes the cost of the diploma (see: Graduation Requirements).

### ■ **Laboratory and Music Fees**

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

### ■ **Registration Fee**

A \$10.00 non-refundable registration fee is charged to all students registering each semester for credit or continuing education courses regardless of course location.

### ■ **Technology Fee**

A technology fee of \$4.00 per credit hour will be assessed for students enrolled in credit courses. The fee will support all technology throughout campus such as computer labs, instructional technology, resources of the library, touchtone, e-mail and Web registration and the student e-mail program.

### ■ **Renovation Fee**

A renovation fee of \$1.25 per credit hour will be assessed to students enrolled in credit courses. The fee will support the College's infrastructure and the renovation of outdated facilities.

# ADMISSION INFORMATION, TUITION & FEES

## Chargeback Tuition

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

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

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

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

## Tuition Refund Policy

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

### Fall and Spring Semesters

16 Week Classes	Percent of Refund
First week through Saturday.....	100%
Second week through Saturday.....	75%
No refund after second week of semester	

12 Week Classes	Percent of Refund
First week through Friday.....	100%
First week Saturday through second week Wednesday.....	75%
No refund after second week of semester	

8 Week Classes	Percent of Refund
First week through Wednesday.....	100%
First week Thursday through Saturday.....	75%
No refund after first week of semester	

Classes offered on the weekend (Friday, Saturday and Sunday) may have separate refund and withdrawal dates.

### Summer Session

8 Week Classes	Percent of Refund
First week through Tuesday.....	100%
First week Wednesday through Thursday.....	75%
No refund after first week of semester	

4 Week Classes	Percent of Refund
(Days are calendar days of semester)	
Prior to second day.....	100%
Second day.....	75%
No refund after second day of semester	

Students who experience extenuating circumstances may request reconsideration of no refund. An appeal form must be completed clearly with an explanation of individual's circumstances and must be accompanied with documentation verifying situation. Appeal forms may be obtained in the Registrar's Office, Student and Administration Center, Room A213.

### ■ Refund Policy for Financial Aid Recipients

Harper students who are financial aid recipients must be aware of federally mandated prorata/refund policies. Students who officially withdraw from all classes on or before 60 percent of the term has elapsed, will receive a proportional refund based upon the official date of withdrawal. The official date of withdrawal is the withdrawal date as recorded by the Registrar's Office and is based on the date that appears on the Student Add/Drop form as filed with that Office.

Harper calculates refunds proportionally and must determine the unearned amount of institutional charges that must be returned to the Student Financial Aid (SFA) program(s). The school bases the amount of unearned tuition, fees, and other charges that must be refunded on the applicable federal calculations. Assessed tuition and fees are refunded on a proportional basis less 5 percent of the assessed amount or \$100.00, whichever is less.

Before any refund is made to the student the Office of Student Financial Assistance must make a refund to the appropriate financial aid program(s). If the student is indebted to the College in any way the amount of this debt will be subtracted from any refund due the student.

## Withdrawals

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

Criteria and procedures for a withdrawal due to significant medical reasons are available in the Health and Psychological Services Office and the Office of the Registrar.

The following guidelines determine grades for an official withdrawal from a 16-week course; the timetable for withdrawing

from other courses (8-week, 4-week, etc.) will be determined on a pro rata basis according to these guidelines:

1. Classes dropped prior to the third week will not become a part of the student's permanent record.
2. A "W" grade will be assigned to a class dropped after the beginning of the third week and prior to the thirteenth academic week,
3. A grade of "F" will be assigned to a class dropped after the twelfth week of a full semester course.
4. The deadline to withdraw from 16-week classes is printed in the official College calendar for the year in question.

### Enrollment Status Verification

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

#### Full-time Status:

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

#### Part-time Status:

A student is considered part-time if he/she is enrolled in less than twelve credit hours (0–11.9).

#### Half-time Status—

A student is considered half-time if he/she is enrolled in six or more credit hours but less than twelve credit hours (6–11.9) (three credit hours for the summer term).

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



**Grading**

Grade Points

**Academic Honors**

Trustees' Honor List

Dean's Honor List

Honors List

**Standards for Academic Achievement**

Rationale for Standards

**Categories of Standards**

- *Good Standing*
- *Academic Caution*
- *Academic Warning*
- *Probation*
- *Suspension*
- *Dismissal*

**Satisfactory Academic Progress Requirements for Financial Assistance**

**Mandatory Advising for Students on Probation**

**Repeat Policy**

**Forgiveness Policy**

**Attendance Policy**

**Academic Honesty Policy**

**Incomplete Grades**

**Auditing a Course**

**Transcripts**

**Transfer of Credit to Harper**

**Student Records Policy**

**Student Complaint Process**

**Non-Solicitation Policy**

# ACADEMIC INFORMATION

## Grading

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

### Grade Points

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

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

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

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

All "P" graded courses

## Academic Honors\*

### Trustees' Honor List

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

### Dean's Honor List

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

### Honors List

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

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

## Standards for Academic Progress

### Rationale for Standards

The Standards of Academic Achievement at Harper College have been established in order to:

- **Guide the student in pursuit of academic success:**

The Standards assure the availability of services which can help students reach success as well as clearly notify them of their progress.

- **Maintain an academic environment that clearly defines expectations for progress:**

The Standards communicate the College's definition of academic progress. The Standards clarify College expectations and afford the student a guideline for setting realistic goals.

- **Clarify the roles and responsibilities of students, faculty and administrators:**

The Standards define the role of the student in terms of academic performance and responsibility as well as the role of College personnel in evaluating academic performance and intervening with special assistance at specific intervals.

- **Allow the institution to maintain its academic integrity.**

### Categories of Standards

#### ■ Good Standing:

Students with a cumulative GPA of 2.0 or higher and students who have attempted\* fewer than seven credit hours are in good standing.

#### ■ Academic Caution:

Students who have attempted\* seven and not more than 15 credit hours and have received a cumulative grade point average (GPA) of less than 2.0 will receive a caution notice and the recommendation to take advantage of various programs and services designed to help them achieve success.

#### ■ Academic Warning:

Students who have a cumulative GPA of less than 2.0 and have attempted\* 16 or more credit hours, or have completed their second successive semester with a cumulative GPA of less than 2.0, are given academic warning. These students will be advised to restrict their enrollment to a maximum of 13 credit hours and may have restrictions imposed upon them.



■ **Probation:**

Students who were academically warned the previous semester and have a cumulative GPA of less than 2.0 will be placed on probation. These students will be restricted to a maximum of 13 credit hours and will be required to participate in success-oriented strategies.

■ **Suspension:**

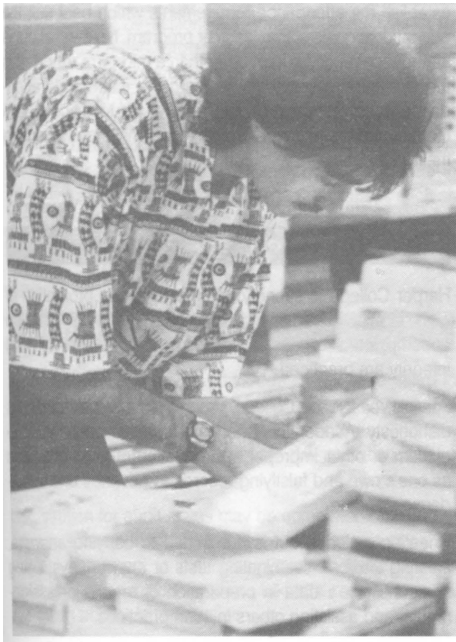
Students who have attempted\* 40 or more credit hours, have had three successive semesters with a cumulative GPA of less than 2.0, with one of those semesters in probation, and earned below a 2.0 semester GPA the last semester they were enrolled are placed on suspension. These students will be suspended from the College for one full semester (fall or spring). Students suspended after spring term will not be allowed to enroll for summer school. Students must be involved in success-oriented strategies upon their return.

■ **Dismissal:**

Students who have returned to the College after one semester of suspension and who receive a semester GPA of less than 2.0 will be dismissed for a minimum of two full semesters (fall/spring or spring/fall). After this dismissal period, these students must petition the vice president of student affairs for reinstatement.

\*Refers to receipt of grades A, B, C, D and F.

Status	Category	Results
<b>Academic Caution</b>	Attempted 7+ credit hours and cumulative GPA less than 2.0	Caution and recommendations of success-oriented strategies
<b>Academic Warning</b>	Attempted 16 or more credit hours with cumulative GPA less than 2.0 or second successive semester with cumulative GPA less than 2.0	Recommend restriction to maximum 13 credit hours. May have restrictions imposed.
<b>Probation</b>	Previous semester with Academic Warning and cumulative GPA less than 2.0	Mandatory restriction to maximum of 13 credit hours. Required success-oriented strategies.
<b>Suspension</b>	Attempted 40 or more credit hours, at least three successive semesters with cumulative GPA less than 2.0 with one of those terms in probation and earned below a 2.0 semester GPA the last semester they were enrolled.	One semester suspension. Required success-oriented strategies upon return.
<b>Dismissal</b>	One semester after suspension with semester and cumulative GPA less than 2.0	Dismissal of two semesters. Must petition for reinstatement.



## ACADEMIC INFORMATION

### Satisfactory Academic Progress Requirements for Financial Assistance

In addition to the Standards for Academic Achievement, federal and state financial aid recipients must also comply with the satisfactory academic progress requirements for financial assistance as follows:

- 1) A student must be enrolled in a program of study leading to an associate degree or a certificate (>23 credit hours) at Harper College.
- 2) A student must have a cumulative grade point average of 2.0 or higher to be eligible for financial assistance.
- 3) A student must complete 66 percent (66%) of the courses attempted throughout his/her entire enrollment at Harper College. Courses in which a student receives an "F" (fail), "X" (incomplete), "W" (withdrawal) or "H" (audit) will not count as completed courses or earned grades.
- 4) A student must complete an associate degree or certificate within a specified time period. A student cannot receive financial assistance beyond the specified time allotted for completion of his/her program. The receipt of financial assistance does not alter the specified time period.

Contact the Office of Student Financial Assistance for complete details of this requirement.

### Mandatory Advising for Students on Probation

As part of the required success-oriented strategies, students on probation are required to see a counselor for educational planning and academic support. Individualized strategies will be developed to assist the student to identify causes of academic difficulties and to achieve satisfactory grade point averages. College services will be utilized to help the student reach his or her educational potential and goals. Students who fail to see a counselor will not be allowed to register for subsequent classes.

Students placed on suspension and dismissal may seek counseling assistance during the semester(s) of non-attendance. Upon returning to school, previously suspended and dismissed students will be placed on probation and required to see a counselor before being allowed to register.

### Repeat Policy

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

Note: In the case of courses that are approved to be taken more than one time, the repeat policy is not in effect until the number of approved repeatable hours is exceeded.

### Forgiveness Policy

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

### Attendance Policy

Regular attendance is necessary for satisfactory college work. Each instructor or program has the responsibility to establish the attendance requirements which best suit the educational goals of that class or program. No central class attendance record is kept other than a mid-term report. It is the students' responsibility to learn the instructor's attendance policy for each course, as well as to discuss with their instructors any extraordinary circumstances affecting their attendance.

### Academic Honesty Policy

Harper College is strongly committed to the promotion of high ethical standards. Such standards can best be accomplished in an environment where honesty and integrity are practiced.

For this reason the College strongly condemns academic dishonesty. Academic dishonesty includes cheating, plagiarism or other improper appropriation of another's work as one's own and falsifying records to advance one's academic standing.

Cheating includes but is not limited to copying answers, stealing and/or disseminating tests or answer keys, using someone else's data in preparation of reports or assignments, and assisting others in such practices.

Plagiarism involves the presentation of another person's words, ideas, or work as one's own. It includes but is not limited to copying any material, (written or non-written) without proper acknowledgement of its source, and paraphrasing another's work or ideas without proper acknowledgement.

Falsifying records includes but is not limited to falsifying or improperly altering college records and documents, or knowingly supplying false or misleading information to others (e.g. the College, other educational institutions, or prospective employers).

Any form of academic dishonesty as defined by the faculty member or department is a serious offense requiring disciplinary measures. Discipline for academic dishonesty involving a specific course shall be first determined by the instructor of the course and may include failure of the specific assignment, project or test or failure of the course. The student may appeal the instructor's decision in accordance with the College's Student Academic Complaint Procedures. In cases of academic dishonesty the faculty assigned grade supersedes a student-initiated withdrawal. In cases where disciplinary measures beyond course failure may be deemed appropriate by the instructor, or dishonesty that is not related to a specific course, the student may be disciplined in accordance with the Student Conduct Policy with the appropriate vice president involved in the decision.

### **Incomplete Grades**

A student may be assigned a grade of "X" for unfinished work in a course provided the work was incomplete because of circumstances deemed to be unavoidable or uncontrollable (to be determined by the instructor). The work to be completed will be assigned by the instructor. The unfinished work must be satisfactorily completed by the midterm of the following 16-week semester. Failure to do so will result in a grade of "F." In certain courses such as CIS open entry courses, it is necessary to meet the instructor deadline specified in the contract for that class.

### **Auditing a Course**

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

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

Upon completion of the course, the instructor will assign an "H" grade if the agreed upon expectations are met.

### **Transcripts**

Official transcripts of a student's academic record will be issued and sent from the Registrar's Office, upon written request, to other educational institutions and prospective employers. Fax transmission of unofficial records is also available. The College reserves the right to withhold transcripts of persons who have past due monetary obligations such as tuition, fees or materials.

### **Transfer of Credit to Harper College**

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

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

## ACADEMIC INFORMATION

6. Effective for students following the 1999-2000 Catalog (and thereafter), transfer students must earn a grade of "C" or better in their courses equivalent to ENG 101-Composition and ENG102-Composition at the collegiate institution previously attended. This requirement will be in place for the AA, AS, AFA, and AES degrees, as well as the IAI core curriculum for students who are not completing the degree.

### Student Records Policy

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

### Student Complaint Process

A Student Grievance policy and procedure is available for students who feel improper, unfair, arbitrary or discriminatory judgements or improper use of procedures have been applied to them directly by the College or a College representative. These procedures are printed in the Student Handbook/Datebook or may be obtained in the offices of the Vice President of Student Affairs or Vice President of Academic Affairs. In addition to these formal procedures, students are encouraged to contact the Ombudsperson at 847/925-6441 to discuss informal problem-solving approaches.

### Non-Solicitation Policy

Employees of the College are required at all times to perform their duties in such a manner that they present a proper and official image to the community and avoid the activities that may result in personal or private gain. Toward that end, class lists and any other data about students are to be utilized solely for College instructional, administrative, advising/counseling and business purposes. Use of this information for personal or business solicitation is strictly prohibited.



**Student Affairs**

**Student Development**

- *Academic Advising And Counseling Center*
- *Center for Multicultural Affairs Academic Advising and Counseling*
- *Assessment Center*
- *Open Test Center for GED*
- *Center for New Students and Orientation*
- *Career Center*
- *Student Development Credit Courses and Seminars*

**Access and Disability Services**

**Health and Psychological Services**

**Women's Program**

- *Continuing Education*
- *Grant Funded Support Services*
- *Special Programming*

**Student Activities**

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**Athletics**

- *Intercollegiate*
- *Intramurals*

**Conduct**

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**LAP Community Services**

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**AE/LS Continuing Education Courses**

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- *Library Services*
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**Harper College Bookstore**

- *Bookstore Refund Policy*
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**Student Financial Assistance**

**Federal Programs**

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**Scholarship**

**Foundation Endowments and Scholarships**

**Business Office**

**Emergency Short-Term Loans**

**Deferred Payment Plan**

**Veteran Services**

**Food Service**

**Child Learning Center**

## Student Affairs

*College can be a positive and enriching experience for students of all ages and backgrounds. Student Affairs at Harper College wants every student to achieve success in his/her college endeavor and to have the opportunity to grow both in and out of the classroom. The programs and services listed below are designed toward this end.*

## Student Development

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

### ■ Academic Advising and Counseling Center

### ■ Center for Multicultural Affairs, Academic Advising and Counseling

The Academic Advising and Counseling Center, located in the Science, Math and Health Careers Center, D142, and the Center for the Multicultural Affairs, Academic Advising and Counseling, located in the Business and Social Science Center, 1117, are specifically designed to help returning students with their educational plans. Those include course selection and transfer information regarding four-year schools, as well as information on Harper's career programs.

The Center for Multicultural Affairs, Academic Advising and Counseling also provides counseling and support services for current and prospective multicultural/minority students and works with existing College programs to foster multicultural awareness. Recognizing the unique development and social needs of multicultural students, the Center for Multicultural Affairs, Academic Advising and Counseling is committed to the advocacy of minority issues throughout the College.

The Minority Student Transfer Center in 1117 was established with the express intent of increasing the number of minority students who are actively pursuing transfer to four-year colleges and universities, as well as assisting minority students in successfully transferring from Harper College to four-year schools to obtain bachelor degrees.

Students are encouraged to see a Student Development counselor each semester to update their educational plans, check for changes in the Harper curriculum and verify information about transfer schools. Progress, a computerized degree audit report which shows degree requirements and courses taken is available upon request from one of the Student Development centers.

Counselors in the Academic Advising and Counseling Center in D142 and the Center for Multicultural Affairs, Academic Advising and Counseling in 1117 offer personal counseling to students, provide counseling designed to meet the needs of adult students and assist students in academic difficulty.

In addition to the services described above, the Student Development centers maintain a collection of information on college selection as well as college catalogs for personal use by students. Up-to-date transfer information on area colleges and universities is available, including specific information on program requirements for transfer to these institutions. Computerized college searches and web-based information on transfer schools are available.

### ■ Assessment Center

This Student Development office is located in the Student and Administration Center, A148 and is responsible for the coordination and administration of academic assessment and other testing programs available to Harper College students and community members. All new full-time students are required to participate in an orientation program that includes academic assessment testing. New students assess their academic strengths in writing, reading and mathematics through a battery of tests. Tests for telecourses, independent study programs, proficiency and CLEP testing and entrance examinations for limited enrollment programs are coordinated in this office. Harper College also participates in national testing programs, either as a test center or as a source of information.

A Student Development Program consisting of vocational/interest tests and/or personality measures is available for a minimal fee to students enrolled in at least six credit hours. Students first meet with a counselor to determine appropriate test options. After testing, students again meet with a counselor for interpretation of the test results. This process is intended to assist students by providing information for career and course planning and decision-making.

### ■ Open Test Center for GED

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

### ■ Center for New Students and Orientation

Another Student Development Center, located in the New Student Services and Arts Center, C104, is available to students entering the College for the first time. The purpose of this center is to assist all entering students by providing the preliminary information helpful in their transition to Harper College. The center specializes in helping the adult student as well as the traditional student. Advising is provided by appointment in small groups and individually.

This center is responsible for the organization of New Student Orientation Programs prior to the start of each semester. These programs are designed to help new students with the transition into the College setting. They provide opportunities to meet other students and to become familiar with the campus and services available here. Students begin setting goals and are assisted in the selection of and registration for courses.

Prior to beginning the fall semester, all new students and their parents or guardians are invited to the Freshman Experience. The student program is high spirited and promotes new friendships, a sense of community and a chance to talk to Harper staff and Student Activities representatives. The parents or guardians of new students are invited to a special program that helps familiarize them with Harper College and with some of the experiences the students may have as new College freshmen.

### ■ Career Center

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

The job placement service, located in this center, helps students with their full-time, part-time and seasonal employment needs. Job placement personnel serve as liaisons between Harper College students, faculty/staff and potential employers. This service is designed to help the Harper student acquire the skills necessary for successful job searching as well as connect the student with potential employer contacts. Job search information and employer files are available in the Career Center.

The Career Center also maintains an internet-based job listing called the Collegiate Employment Network. Annually more than 20,000 job listings are targeted to Harper students. In addition, the Career Center offers opportunities for experiential learning from formal cooperative education and internship options to service learning through volunteer programs. The Community Career Services program (for non-students) is located at the Northwest Suburban Employment and Training Center in Arlington Heights. Many free and fee-for-service programs are available to community job seekers and those exploring career transitions.

Through the Cooperative Education program, students are provided with cooperative work experience which integrates classroom with on-the-job-training. The College will assist in securing employment related to the student's major field of study and/or career interest. A training plan is developed by the student, employer and cooperative faculty advisor.

### ■ Student Development Credit Courses and Seminars

#### Credit Courses:

Several different classroom experiences are offered for academic credit by the Student Development Division. Orientation 101 (ORN 101) provides exposure to strategies necessary to adapt to the college environment and assists students in developing initial career and educational goals. Humanistic Psychology (PSY 107) facilitates personal growth and development through the exploration of self-understanding, confidence, motivation, clarification of goals and relationships. Topics in Psychology (PSY 108) allows students the opportunity to examine current issues. Topics covered during a particular semester are listed in the semester course schedule. Career Development (CDV 110) provides students with the opportunity to explore career interests, experiences, skills, abilities and work related values and examine information about the world of work in order to develop educational and career goals. Exploring Diversity in the United States (DIV 101) focuses on culture and other diversity issues and topics; students will have the opportunity to discuss dimensions of their own cultures and cultures of others as well as examine discrimination and prejudice between groups and the impact of these power differences on peoples' lives.

#### Non-credit Seminars:

Non-credit group seminars on a variety of topics are also offered each semester. Mailings, posters and brochures will inform students of these offerings. Students may request additional information by visiting any of the Student Development Centers.

### Access and Disability Services

The mission of the ADS is to create a comprehensively accessible environment where individuals are viewed on the basis of ability, not disability. Harper College complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

An orientation program, academic advising, counseling and support services are available to students with disabilities. The ADS office will assist students in choosing their courses, setting career goals, maintaining good academic standing and planning for after college. Specialized services include instructional support and specialized ESL (English as a Second Language) Program for deaf/hard of hearing students. The Program to Achieve Student Success (PASS), is a fee for service program for students with learning disabilities and ADD that offers one-on-one specialized instruction on a weekly basis. Diagnostic testing for learning disabilities is also available.

A Student Support Services program known as ACHIEVE! is open to students with disabilities who are at risk academically, are seeking a college degree and who need coordinated

## RESOURCES FOR STUDENTS

academic support. First generation college students and students with economic/ financial need are also encouraged to participate. Students will receive counseling, mentoring, in-depth tutoring, transfer assistance and monitoring of academic progress. Contact the counselor for TRIO/SSS students.

New students should identify themselves, apply for supportive services and furnish the ADS office with pertinent information about the nature and extent of their disability. This information will be kept confidential and will be used to plan for appropriate services and accommodations. All new students will be interviewed and will participate in the College assessment program. Testing can be adapted to meet individualized needs (materials in Braille, large print or audio tape) and extended time can be provided. Students are expected to take responsibility for the management of their services. Besides providing services, the ADS office offers students the use of a wide variety of specialized equipment (Arkenstone Open Book System with optical character scanner, Phonic Ear FM Transmission System, computers with large print, speech output and other adaptations). Some equipment may be borrowed for personal use. The ADS office works closely with the faculty and staff of other departments at Harper to insure that the campus is physically and programmatically accessible to students with disabilities. Students are integrated into the mainstream of College life and resolve problems through the ordinary channels as much as possible.

Students interested in securing these services should contact the Center for Access and Disability Services at the earliest possible date 847/925-6266 (voice). The ADS office is located in the Science, Math and Health Careers Center, D119. The TTY number is 847/397-7600. To receive services, students must turn in an ADS schedule form with requests for services noted. Availability of some services may be limited for students who turn in schedules after the last full day of open registration, prior to the beginning of a semester.

ADS also provides information, accommodations and services to employees with disabilities and to campus visitors as needed. Requests for information or services should be made to the director of ADS or to the Supervisor of Support Services.

Midwest Center for Postsecondary Outreach: ADS serves as an outreach site for this center which is based at St. Paul Technical College in St. Paul, Minnesota. The MCPO is funded by the U.S. Department of Education and is committed to increasing access to and opportunity for postsecondary education for Deaf/Hard of Hearing persons in the midwest. ADS works specifically with colleges in Illinois and Missouri.

## Health and Psychological Services and Wellness Programs

Academic achievement and the completion of educational goals are largely dependent upon the physical and psychological well-being of the student. The goal of the Health and Psychological Services, located in the Student Administration Center, A362, is to provide care from a holistic perspective that enhances personal health and wellness, promotes academic success and enables students to realize career aspirations.

Health and Psychological Services is directed by a registered nurse and a licensed clinical psychologist. A nurse practitioner and consulting physician are available to diagnose, treat and refer all Harper College students as necessary. Registered nurses regularly provide assessment and treatment for acute and chronic health issues. They conduct tests for strep, mono, pregnancy, as well as communicable and sexually transmitted diseases. Doctoral level interns and externs in clinical psychology are available to provide evaluation, treatment, and referral to students currently enrolled in 6 or more degree or ESL credit hours in Fall or Spring semesters, or in 3 or more degree or ESL credit hours in Summer semester.

Students are encouraged to use Health and Psychological Services which are CONFIDENTIAL and FREE or low cost.

A certified health educator plans and coordinates a variety of health and wellness activities to meet identified student and employee needs regarding physical and mental health. These include an annual community Wellness Week, flu vaccine program, cholesterol and other health screenings, national awareness and prevention campaigns such as Collegiate Alcohol Awareness and Sexual Awareness Weeks and compliance with the Drug-Free Schools Act. Various health-related programs and speakers are presented every semester offering students and staff the opportunity for lifestyle enrichment and access to self-help and community resources.

## Women's Program

Since its inception in 1969, the Women's Program at Harper College has served more than 50,000 women in the north-west suburbs. The Women's Program helps women learn more about themselves and their options, understand the importance of their place in a global community and participate more effectively in their chosen roles.

The Women's Program is comprised of three major components:

### ■ Continuing Education

Continuing Education courses and workshops are offered on a variety of topics related to personal growth, career, family and women's issues. These offerings are open to men as well as women.



## ■ Grant Funded Support Services

State-funded grant programs allow us to provide career, personal, and academic counseling; job readiness preparation; mentoring experience; information about and referral to appropriate resources; and limited assistance with tuition, books, and childcare expenses. These services are available to students who find themselves in the following circumstances:

- Single parents
- Displaced homemakers
- Nontraditional career seekers
- Economically disadvantaged
- Those with disabilities or other challenges to educational achievement

## ■ Special Programming

Each year the Women's Program sponsors or co-sponsors a variety of speakers and programs related to women's issues. This includes Women Make History Month, which is celebrated each March. Activities include a keynote speaker, seminars, films and performances focusing on the many areas in which women have impacted our history and culture. This event helps us remember, recognize, and learn from the women in our past.

The Women's Center, located in the Music Instruction Center, P127, is a place to relax, talk, and study. Coffee, campus information, women's resources and referral information are available. Men as well as women are welcome to use the facility.

For further information, please contact the Women's Program at 847/925-6558.

## Student Activities

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

Numerous clubs are active, and students are encouraged to begin other organizations within the established guidelines. Among the clubs recognized are: Black Student Union, Asian Student Association, Astronomy Club, Chemistry Club, Chess Club, Club Deutsch, Collegiate Illinois Association of the Deaf, Collegiate Secretaries International, Food Service Club, GOLDS (Guidance

Organization for Learning Disabled Students), Harper College Dance Company, Harper Intervarsity Christian Fellowship, Harper Pride, Harper Students for Environmental Awareness, Harper Wellness Advisors, Harper's Bizarre Fashion Club, Honors Society, Hot Steel Pan Club, Indian/Pakistani Student Association, International Students Club, Lambda Epsilon Chi (Paralegal/Legal Assistant Studies), Latinos Unidos, Le Cercle Francais, Muslim Student Association, Nursing Club, Phi Theta Kappa, Pom Pom/Cheerleaders, S.C.A.I.F.D. (Student Chapter of American Institute of Floral Design), Science Fiction and Fantasy Club, Sign Language Club, Stop AIDS Harper and Student Ambassadors.

More detailed information is available in the Student Handbook/Datebook. The Student Activities office is located in the Student and Administration Center, A336.

## ■ Student Senate

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

## Athletics

### ■ Intercollegiate

Harper College offers 16 intercollegiate athletic teams for men and women. The college is a member of the North Central Community College Conference (N4C), which includes Triton, DuPage, Rock Valley, Joliet Junior College, and Grand Rapids, MI (football only). Harper College is also a member of the National Junior College Athletic Association (NJCAA), which has a membership of approximately 560 junior and community colleges throughout the United States.

To participate in a sport, a student must meet NJCAA eligibility rules. Students must also furnish an acceptable record of a physical examination taken within one year of the ending date of their sport season. Interested students should contact the athletic office to determine eligibility status and receive specific sport information.

## RESOURCES FOR STUDENTS

### ■ **Intramurals**

The structured intramural program includes men's and women's sports leagues, distance runs, contests and tournament clinics. Information on intramural activities is available in the Wellness and Sports Center, M214, and at the Information Center in the Student and Administration Center, or contact the coordinator of intramurals in the Wellness and Sports Center, M219.

### **Conduct**

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

### **Smoking Policy**

It is the policy of William Rainey Harper College to maintain a smoke/tobacco free environment consistent with its efforts to promote wellness and a campus environment conducive to work, study and activities for students, employees and the public.

The College recognizes the rights of those who choose to use tobacco and does not prohibit the use of tobacco products. It does, however, restrict the use of these materials to areas outside College buildings and vehicles. As defined in this policy, tobacco products include cigarettes, cigars, or tobacco in any other form, including smokeless tobacco which is any loose, cut, shredded, ground, powdered, compressed or leaf tobacco that is intended to be placed in the mouth without being smoked.

Implementation of this policy is subject to guidelines determined by appropriate College committees and communicated to students and staff on a regular basis. The guidelines are also printed in appropriate procedures manuals.

### **Learning Achievement Program**

The Learning Achievement Program (LAP) offers academic support to students by providing success services, development courses and tutoring to those who need preparation for college level work.

### **Success Services for Students**

Students can obtain a Test Performance Analysis in any content area. They will be given a complete breakdown on types of errors being made as well as specific strategies that lead to improvement. The Study Behavior Inventory identifies strengths and weaknesses in the following areas: test taking tips, test anxiety, short and long term study skills, time management and writing skills. Follow-up sessions may be scheduled. The Learning Styles Inventory indicates

how a person learns best. Once the learning style is determined, specific strategies will be recommended that will complement that style. Services are free of charge to Harper students. Appointments may be scheduled by coming directly to the Academic Resource Center, F332 or by calling 847/925-6715. All information is confidential.

### **LAP Community Services**

The Learning Achievement Program has extended services to junior high, high school students and students from other colleges. Students may schedule an appointment for test anxiety, study skills, reading strategies or test taking tips with a learning specialist. The fee for an individualized session is \$20. For additional information, call 847/925-6715.

### **Tutoring Center**

Free tutoring is available in more than 60 courses. This assistance is provided by professional and peer tutors. Students must be enrolled in the course for which they are seeking tutoring. Services that are offered include tutoring by appointment, tutoring on a walk in basis and review seminars and workshops. Study guides are also available for certain courses. For additional information, contact the Tutoring Center in the Academic Resource Center, F315 or call 847/925-6539.

### **Community Tutoring Center**

Harper's Community Tutoring Center serves students of all ages in the community. Qualified tutors will offer help to students in various areas including mathematics, accounting, computers, biology, English, chemistry and writing. Cost for the one-on-one tutoring session is \$25.00 per hour.

Tutoring sessions are scheduled by appointment only. Contact the Community Tutoring Center in the Academic Resource Center, F315, 847/925-6888 for more information.

### **Writing Center**

Provides an instructional workshop environment for writers of all levels and disciplines. Writing Specialists advise writers on the use of technology to organize, create, revise and edit academic documents. Available resources include word processing, spelling and grammar checkers, revision and documentation guides, Internet access, a flat bed scanner, and laser printers.

**LAP Courses**

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

ENG	098 <sup>1,2</sup>	.....Composition
RDG	090 <sup>1,2</sup>	.....Fundamentals of Reading
RDG	099 <sup>1,2</sup>	.....Developmental Reading
PSY	106 <sup>3</sup>	.....Practical Psychology (Learning Skills)

**AE/LS Continuing Education Courses**

The LAP offers the following courses which do not transfer and do not count toward graduation, but which are designed to improve basic skills:

LAC	0001	.....Grammar Review
LAC	0004	.....Speed Reading
LAS	0001	.....ACT Test Preparation

- <sup>1</sup> Non-degree credit. Does not transfer. Does not count toward graduation.
- <sup>2</sup> Mandatory enrollment based on Harper assessment test.
- <sup>3</sup> Transfer credit in some programs. Check with college to which you intend to transfer.

**Learning Resources Center**

The primary mission of the LRC is to support the instructional mission of William Rainey Harper College by offering a fully equipped library, media equipment, media production and distance learning facilities.

**Library Services**

Library Services, located in the Academic Resource Center, teaches library patrons how to find and evaluate information for their particular purposes, provides print and electronic resources, and creates a learning environment which encourages active self-inquiry. The goal is to create a dynamic, functional relationship between information and people. The collection contains about 110,000 volumes, more than 800 magazines, and extensive back issues of the *Chicago Tribune* and *New York Times* on microfilm, as well as tapes, CDs, slides, films, videotapes, software and other media formats. The library oversees the circulation of all materials in the collection. Available for patron use are reference services, instruction, interlibrary loan and data base searching, College Archives, reserve materials, copy machines and an automated Catalog. Materials added to the collection are acquired and cataloged using the Library of Congress system of classification. Small group study rooms are also available.

The library has a computerized, on-line Catalog which can be accessed through strategically placed terminals on the first and second floors of the Academic Resource Center. The Catalog can also be accessed from home or office via

a modem and personal computer. Access to the Internet and to numerous computerized indexes (CD-ROM) is also available for patron use.

**Media Services**

The Media Services area is located on the first floor of the Academic Resource Center. The media and equipment provided to students and faculty are aimed at making instruction more effective. Also available is a television studio for instructional and informational productions. A media distribution system provides many classrooms on campus with direct and flexible resources for instructional use. The system provides remote media projection and other electronic resources directly from Media Services. Other self-instructional spaces and the independent study area, each equipped with a variety of media, are used to support individualized instruction.

**Distance Learning Classes**

Credit classes from other institutions:

Other colleges and universities provide courses via two-way interactive video, transmitted live to a Harper classroom. Students who want to enroll in an interactive video class must apply to the institution offering the class. For specific information about interactive video courses offered at Harper College, check the course schedule or call 847/925-6550.

Credit classes from Harper College via Telecourse:

Credit courses in different disciplines are offered as telecourses for students who are self-motivated and can study independently. These courses, which are generally transferable, are shown over regular television on Channel 20 and/or cable. They are also available for viewing on the main campus, Harper's Northeast Center in Prospect Heights and at certain local public libraries. Individual programs may also be checked out overnight for home use. The entire set of tapes can also be rented for a fee. Courses are presently being offered in areas such as business, economics, gardening, geography, history, philosophy, psychology, sociology, political science and health. Due to the costs incurred by offering these courses, a small fee is charged for each telecourse. For specific course title and broadcast channels, check the current semester course schedule. For more information or a brochure, call 847/925-6586.

**Harper College Bookstore**

The Harper College Bookstore, located in the Liberal Arts Center, is a resource for required textbooks, supplies, study aids, dictionaries and other items.

It is recommended that you bring your class schedule with you so the necessary texts can be located easily.

## RESOURCES FOR STUDENTS

Cash, checks, Mastercard, Visa or Discover Card can be used to pay for purchases. If you are paying by check or credit card, you must have a picture ID. If you plan to use financial aid or have a scholarship to purchase books, arrangements should be made with the financial aid office before making any purchases.

### ■ **Bookstore Refund Policy** **Save Your Receipts**

#### **Textbooks:**

You may return new or used textbooks if you purchase the wrong text or drop or withdraw from a class.

Textbooks must be returned within two weeks from the first day of classes in the term for which they were purchased (one week for summer semester and courses which meet for eight weeks or less) or textbooks may also be returned within one week from the date of purchase.

Books must be accompanied by a sales receipt, and if originally purchased new, must be clean, unmarked and undamaged. Textbooks containing software must be in original packaging with software seals intact.

Textbooks purchased the last two weeks of the semester are non-returnable.

#### **General Books:**

General books may be returned one week from date of purchase provided they are in the same condition as purchased and accompanied by a receipt.

Study aids are non-returnable.

#### **Other Merchandise:**

General merchandise may be returned within one week from date of purchase provided it is unopened, in its original packaging and accompanied by a receipt.

#### **Software:**

Software may be returned within one week of purchase provided original packaging and software seals are not broken, and it is accompanied by a receipt.

### ■ **Book Buyback**

#### **End of Semester:**

The Bookstore will purchase textbooks from students at the end of every semester. Dates and times will be posted on campus. Fifty percent of the new price will be paid for books that will be used for the next semester (quantities may be limited). National market value will be paid for all other books. Study guides, workbooks and lab books are acceptable only if pages are intact and contain no writing.

#### **Year-round:**

The Bookstore offers a year-round buyback. Prices are determined by the national market value which is less than price paid at the end of the semester. This will not be offered one week before each semester and during the first two weeks of classes. These books are not kept by the Bookstore.

Hours are posted near the entrance to the Bookstore. For more information, call the Bookstore at 847/925-6275.

## Student Financial Assistance

The Office of Student Financial Assistance administers and coordinates aid funds from the following federal, state, institutional and private sources:

### **Federal Programs**

- Federal Work Study
- Federal Pell Grant
- Federal Supplement Educational Loans
- Veterans and Reservists/GI Bill
- Survivors' and Dependents' Educational Assistance Program
- Federal Educational Loan Programs

### **State-Sponsored Aid Programs**

- Monetary Award Program
- Illinois Incentive for Access Program
- Illinois National Guard
- Illinois State Scholarships for Survivors of Police and Firemen Killed in the Line of Duty
- Dependents of Prisoners of War or Servicemen Missing in Action
- Illinois Merit Recognition Scholarship
- David A. DeBolt Teacher Shortage Scholarship
- Minority Teachers of Illinois Scholarship

### **Scholarships**

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

Additionally, the Harper Educational Foundation has established scholarships for Harper students. Criteria for these scholarships varies. The "Motorola Award for Excellence" is the highest honor a Harper student can achieve. Application for this scholarship is open to students from all College degree programs who meet criteria of grade point average, service and faculty recommendation. Additional scholarships in all areas of study have been provided through local organizations, corporations and private donors. The following is a listing of the Harper College Educational Foundation scholarships and awards:

### **Foundation Endowments and Scholarships**

- A & T Philia Scholarship
- AAUW Scholarship for Women
- Access to Opportunity Grant
- Amersham
- Architectural Technology Scholarship
- Arlington Heights Garden Club Scholarship

## RESOURCES FOR STUDENTS

- Betty and Matt Cockrell Endowed Scholarship
- Beverly Kiss Memorial Scholarship
- Business/Social Science Fund
- Carol Zack Memorial Fine Arts Scholarship Endowment
- Cheryl M. Dwyer Memorial Scholarship
- Chicago Chapter Society CPCU Scholarship
- Chicago North west Suburban Chapter of the CPCU Society Scholarship
- Clear Shield National Endowment Scholarship
- Criminal Justice Scholarship
- Cunningham Memorial Mathematics Scholarship
- Customer Service Certificate Program Scholarship
- Diane Tomcheff Callin Memorial Scholarship Fund
- Displaced Homemaker Scholarship
- Donald and Patricia Torisky Endowment
- Donald G. Albrecht Memorial Endowment Scholarship
- Doriann E. Thompson Scholarship for Women
- Dr. Charles Shaner Memorial Scholarship for Dental Hygiene
- Education to Careers Scholarship
- Edward Moran Memorial Computer Science Scholarship
- Elizabeth Schmik Hull Fund
- Endowment for Student Success
- Eugenia S. Chapman Memorial Scholarship
- Evanston Hospital Nurses Alumnae Scholarship
- Executive Secretary Scholarship
- Fine Arts Scholarship
- Fine Arts Scholarship for Women
- Garden Club of Inverness Plant Science Technology Scholarship
- GED Graduate Scholarship
- Gene and Hildegard Evans Memorial Scholarship for Continuing Education
- General Endowment Scholarship
- Geraldine Cosby Endowed Government Service Scholarship
- Glenda F. Nuccio Memorial
- Glenn A. Reich Computer Science Scholarship Endowment
- Harper 512 IEA/NEA Association Scholarship
- Harper Cardiac Rehab Endowment Fund
- Harper Employee Transfer Scholarship
- Harper Nursing Student Scholarship Endowment Fund
- Henry Meier German Scholarship
- ICCB Foundation Scholarship
- International Air Cargo Association of Chicago Scholarship
- Illinois CPA Scholarship
- International Student Scholarship Fund
- International Study Abroad Student Scholarship
- Jacob and Iris Wolf Sign Language Interpreting Scholarship
- James E. Finke Memorial Scholarship
- James J. McGrath Humanities Scholarship Endowment
- JBM Endowment
- Joanne Heinly Nursing Scholarship
- John Louis Papandrea Liberal Arts Memorial Scholarship
- Joan R. Young Scholarship
- Kathleen Fagan Memorial Nursing Scholarship
- Kathleen Graber Scholarship
- Kathy Johnson Award for Excellence in Nursing Scholarship
- Latinos Unidos Student Organization Scholarship
- Lawrence Francione Memorial Scholarship
- Lou Buchenot Scholarship
- Marilyn Shiely Coste Scholarship
- Mary Ellen Klotz Memorial Scholarship for Art Students
- Math Lab Scholarship
- Midge C. Smith Memorial Scholarship
- Minority Access to Higher Education Grant
- Motorola Award for Excellence
- Music Academy
- Nick Nocchi Scholarship
- Nils Andrew Johnson Memorial Culinary Arts
- Northrop Grumman Engineering Scholarship
- Office Careers Program Scholarship
- Office Re-entry Program
- Palatine Garden Club Scholarship
- Pepper Engineering Scholarship
- Phi Theta Kappa Scholarship
- Renee Windle Danforth Memorial Fine Arts Scholarship
- Robert R. Randall Endowment
- Robert Urbanus Corporate Careers Scholarship
- Rotary Club of Palatine Study Abroad Scholarship
- Roy Kearns Memorial Scholarship
- Royal American Bank Scholarship Award
- Sears Fashion Merchandising Scholarship Endowment
- Sharlene Marchiori Memorial Scholarship
- Steven Bakas Memorial Fund
- Square D Engineering Scholarship
- Stephen Boettcher Memorial Engineering Scholarship
- Timothy A. Kolze Memorial Scholarship Endowment
- UOP Office Careers Scholarship
- Wheeling High School Foundation Scholarship
- William J. Walsh Cooperative Careers Insurance Tech-Prep Scholarship
- Wilford C. Papenthien Memorial Scholarship
- William Simpson Memorial/Wheeling Rotary Scholarship for NEC

In addition, many private and public agencies are ready and able to assist the worthy college student. Students are encouraged to check with the local organizations such as women's clubs, Rotary and chambers of commerce.

Scholarships that are available to transfer students are listed after the section entitled "Transfer to a Senior Institution."

There are many ways to put together needed college funds. Some students receive outright grants or scholarships for a portion of their expenses. Loans up to \$2,625 for the first year and \$3,500 for the second year (interest free and no payments while the student is in college) can be obtained.

## RESOURCES FOR STUDENTS

Last but not least, jobs for students under work-study or other employment programs can be obtained to assist with college financing.

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

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

- 1) Submit an application for admission to Harper College.
- 2) Complete the following applications for financial assistance:
  - A. Free Application for Federal Student Aid (FAFSA)
  - B. Harper College Financial Aid Application

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

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

### Business Office

#### Emergency Short-Term Loans

Loans up to a maximum of \$50.00 may be obtained in the Business Office by Harper students for emergency expenses. These must be repaid in full within ten school days. There is no charge for this service.

#### Deferred Payment Plan

Deferred Payment may be obtained through the Business Office to cover 80 percent of the cost of in-district tuition. There is a \$15.00 charge for this service.

### Veteran Services

Harper College maintains a full-time veterans' assistant who has responsibility for veteran enrollment certification.

Eligible veterans and servicepersons receive a monthly educational allowance to attend school. Veterans and servicepersons pursuing an approved program of study are eligible to apply for (VA) Work Study.

Illinois veterans should inquire about eligibility criteria for the Illinois Veterans Grant.

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

Uncomplicated and non-restrictive admission policies; providing for servicemen or women to pursue educational programs through courses offered on weekends, evenings

and other nontraditional times; and offering maximum credit for educational experiences obtained in the Armed Forces.

Questions concerning veterans' affairs should be directed to the Office of Student Financial Assistance, Student and Administration Center, A364.

### Food Service

The Harper Food Service offers breakfast and lunch Monday through Friday and dinner Monday through Thursday in the Dining Hall in the Student and Administration Center. Operating hours during the regular school year are as follows:

Monday through Thursday . . . . . 7:30 am-6:30 pm

Friday . . . . . 7:30 am-2:15 pm  
(Service hours subject to change without notice)

Food Service also maintains food and vending machines located in buildings throughout the campus. There are snack bars located in the Liberal Arts Center, Business and Social Science Center, Science, Math and Health Careers Center, and the NEC campus. Food Service also provides on-campus catering for breakfast, luncheons, dinners and special events. This service is available to faculty, staff and students. Call 847/925-6250.

### Child Learning Center

#### The Early Childhood Education Program offers:

- A Preschool Room with flexible scheduling for children of Harper students, faculty and staff. Children who are completely toilet trained and three through five years of age will be accepted on a first-come, first-served basis. The room is open Monday-Friday, 7:15 am-4:45 pm. Children can spend a maximum of five hours per day in the Center. Call for current fee information.
- A preschool program for children of students, faculty, staff and the community at large. The children are registered for set sessions which coincide with Harper's calendar.
- Advance registration is required for both programs, and early registration is advised as the centers often reach capacity. For more information, call 847/925-6262. The Child Learning Center is located in the Business and Social Science Center, 1123.

The Northeast Center Campus, located at 1375 S. Wolf Road in Prospect Heights, offers a child care room with flexible hours daily when College is in session, if there is sufficient enrollment to maintain staffing, for parents attending a class or workshop. Morning preschool for the community is also available. For more information, call 847/925-6001.

**Continuing Education**

**Computer Technology**

**TECH - Certified Training for IT Professionals through Technical Education and Consulting @Harper**

**MCP/MSCE**

**Novell**

**UNIX Training**

**Oracle Database Administrator**

**A+ Certification Exam Training**

**NEW for 2000**

**Harper Premier Autodesk Training Center**

**Business Software Training**

**Desktop Publishing Technology**

**Professional Development**

**Animation Art**

**Customer Service Representative**

**Certified Financial Planner (CFP)**

**Real Estate**

**International Trade**

**Institute for Supervisory/Management Development**

**Small Business Management Center**

**B.A.S.S.E.T. - Alcohol Awareness**

**Food Standards and Sanitation**

**Travel Agent/Reservationist**

**Meeting Planning**

**Health Services**

**Cosmetology**

**Volunteer Management**

**Refrigeration and Handling**

**Personal Enrichment**

**Liberal Arts**

**Music Academy**

**The Writing Studio**

**Home and Garden**

**Garden, Landscape and Floral**

**Personal Finance/Investment**

**Wine Appreciation**

**Special Interest**

■ *Older Adult*

■ *Test Reviews* **Women's Program**

**Youth Program**

■ *ChILL*

■ *Music Academy*

■ *Sports Camps*

**Physical Fitness**

**Health and Wellness**

■ *Cardiopulmonary Rehab*

■ *Mind/Body*

**CE Certificate Programs**

**Extension Centers**

**Workforce Development**

**Workforce and Organizational Development**

■ *Harper College Corporate Services*

**Technical Education and Consulting @Harper (TECH)**

■ *Information Technology and AutoCAD non-credit courses and certificates*

**Northwest Education to Careers Partnerships**

■ *High School Shared Courses*

■ *High School Dual Credit Program*

**Community Services**

**Community Orientation and Involvement**

**College/Community Programs**

**Northwest 2001 Economic Development**

**Northwest Leadership Academy**

**Community Career Services**

**Weekend Services**

**Senior Discounts**

## Continuing Education

*A lifelong pursuit of learning is needed to keep abreast of the knowledge explosion and the influence of social and cultural changes. The Continuing Education (non-credit) department of each division makes available to the community a rich array of courses, seminars and short-term programs that encourage lifelong learning and help students meet their professional, career, civic and personal development goals.*

- Non-Credit Programs are available in Computer Technology, Professional Development, Personal Enrichment and Health and Wellness. Continuing education units can be earned for continuing education courses, satisfying the needs of many professional development requirements.
- Continuing Education instructors are teaching professionals who possess practical, up-to-date work experience.
- Courses are offered in a variety of traditional and alternative learning formats that include workshops, seminars, and extended training sessions, videotaped, televised and online courses.
- Courses are scheduled at all Harper College extension sites as well as main campus.
- The majority of programs provide year-round start dates and are offered during the day, in the evenings and on weekends.

*Schedules for Continuing Education courses are published and distributed to district homes five times a year. A full schedule of classes and program information is also available on the Harper website at [www.harper.cc.il.us](http://www.harper.cc.il.us). For any questions, please contact the Continuing Education Information Office at 847/925-6300 or e-mail [ce@harper.cc.il.us](mailto:ce@harper.cc.il.us).*

## Computer Technology

Professional certification and professional continuing education units are available for: computer business software, desktop publishing technology, e-commerce, certified training for information technology professionals, Autodesk training, National Instruments LabView training, and animation art.

## TECH - Certified Training for IT Professionals through Technical Education and Consulting @Harper

Technical Education and Consulting @Harper (TECH) provides the training and education necessary to pass certification testing that will make the difference in your career. TECH offers the most current certified training available through comprehensive, quality training programs, delivered by certified instructors, using certified materials, running on high-end computers. For more information, call 1-888-BE-A-TECH (1-888-232-8324) or visit our website

[tech.harper.cc.il.us](http://tech.harper.cc.il.us) to learn more about our programs, schedule of information meetings and listing of upcoming classes.

## MCP/MSCE

An Employee with Microsoft Certification has the edge in the job market. The title MCPS (Microsoft Certified Product Specialist) communicates expertise in at least one Microsoft operating system, while an MSCE (Microsoft Certified Systems Engineer) gains thorough knowledge of all Microsoft programs.

## Novell

Novell is offered in partnership with a Novell Authorized Education Center. These industry recognized certifications prepare individuals for a career in computer network administration, teaching the skills needed to install, configure, and maintain Novell networks. Training includes Certified Netware Administrator (CNA) or the more advanced Certified Netware Engineer (CNE).

## UNIX Training

A student already skilled in computer operation systems can augment his or her resume by earning certification as a UNIX Administrator or UNIX Network Engineer.

## Oracle Database Administrator

Successful completion of four separate tests leads to professional certification by Oracle. The training teaches individuals how to develop and implement computer systems for corporate use. An emphasis on trouble-shooting in "real world" scenarios gives individuals the computer knowledge necessary to be a valuable asset in the business world.

## A+ Certification Exam Training

A+ Certified students have an advantage in career advancement. A passing grade on the A+ Certification exam demonstrates expertise in a broad range of computer hardware and software, and testifies that the individual possesses the knowledge, ability, and customer relations skills essential for a successful career as a computer service technician.

## NEW for 2000

TECH plans to introduce for 2000 new programming in e-commerce, Oracle Developer, Java, Lynx and Router training. Please contact 1-888-232-8324 or visit [tech.harper.cc.il.us](http://tech.harper.cc.il.us) for the latest information on programs and class schedules.

## Harper Premier Autodesk Training Center

Designed to increase skills in AutoCAD 2000, AutoCAD LT, Mechanical Desktop, Studio VIZ and Studio Max.



## **Business Software Training**

From fundamental to advanced applications, Harper offers the latest and most popular business computer training for the PC and Macintosh. Students can choose seminar or extended training in PC Essentials, Windows 95/NT, Microsoft Word, Excel, Access, PowerPoint, Microsoft Project 4.0, and ACT! for Windows, Quickbooks Pro, MS Outlook and Internet tools.

## **Desktop Publishing Technology**

This is a complete hands-on training program for the graphic designer or business professional who is working with desktop publishing software. Instruction is offered in Quark, Adobe PhotoShop, Adobe Illustrator, Pagemaker, Pagemill, and portfolio preparation workshop and web design.

## **Professional Development**

Training is offered for industry recognized certification, certificates and continuing education units for: animation art, customer service, real estate, Certified Financial Planning, supervisory/management development, small business management, international trade, travel and meeting planning, health services, cosmetology, volunteer management, and refrigeration handling EPA/CFC Certification.

In conjunction with professional training, Harper College provides career guidance and assistance through community career counseling and workshops, industry specific job fairs and Workforce English as a Second Language (ESL).

## **Animation Art**

This two-year certificate focuses on traditional art (drawing, figure drawing, figurative sculpture, classical cell animation, color and composition) along with computer skills using texture mapping, image manipulation, three dimensional drawing, modeling and animation using AliasWavefront MAYA software. In addition to the core animation certificate, Harper College offers three-year Technical Animator and Character Animator certificates.

## **Customer Service Representative**

Harper College and participants from several area corporations have developed the CSR Certificate, a skill-based career program of professional customer service representatives. This three-month program and internship prepares individuals with the essential communication and computer skills necessary to qualify for job placement.

## **Certified Financial Planner (CFP)**

Developed by the College for Financial Planning in Denver, Colorado, this curriculum covers all aspects of test preparation to take the CFP examination in readiness for the comprehensive CFP certification exam. CFP applicants must also have three years full-time relevant work experience.

## **Real Estate**

This new program is designed for those who desire to excel as licensed real estate salespersons or those who wish to expand their career opportunities to include managing or owning a real estate business.

## **International Trade**

The professional and the beginner in international trade will gain insight into all aspects of the importing and exporting industry. Course topics include: adherence to import regulations, a custom broker's exam review, export documentation, letters of credit and export finance, spotlighting specific world business sectors and the appropriate protocols for conducting international business.

## **Institute for Supervisory/Management Development**

New supervisors/managers and those wishing to update their supervisory, leadership and teambuilding skills will gain the knowledge and confidence to succeed. This curriculum may be taken as individual seminars or as a certificate program.

## **Small Business Management Center**

Both start-up and seasoned businesses will benefit from workshops led by successful entrepreneurs. They cover finance, marketing, legal questions, business plan development, consultant practice development and home-based business issues. Appointments to discuss personal business issues can also be arranged with a Small Business Counselor.

## **B.A.S.S.E.T.-Alcohol Awareness**

The State of Illinois requires that all present and future employees of the food service industry who wish to serve liquor complete this training. This course covers alcohol-related laws, potential liabilities, and medical emergency techniques.

## **Food Standards and Sanitation**

This program provides reviews in English and Spanish for the Food Service Sanitation Exam, as well as HACCP training and food service sanitation essentials for kitchen staff. The Illinois Department of Public Health requires a Certified Food Service Sanitation Certificate holder on every shift in a food service facility.

## **Travel Agent/Reservationist**

Through this intensive job skills certification training program, students learn technical as well as sales skills in preparation for entry positions with travel agencies, airlines, and tour operations. Classroom training includes 80 hours of experience on the Apollo/Focalpoint reservation system.

## Meeting Planning

Students will learn the skills necessary to plan, promote, and execute successful meetings and conventions. This certification program is intended for those with no meeting planning experience and those looking to hone their existing talents.

## Health Services

Harper College provides courses and seminars for health care professionals seeking to earn continuing education units. Career education is offered for Allied Health Care, Dental Hygiene, Dietetic Technician, Medical Office Personnel, Nursing, Nursing Rehabilitation and Cardiopulmonary Resuscitation.

## Cosmetology

In connection with the Arlington Academy Cosmetology Career Center, this evening program prepares candidates for the Illinois Licensing Examination for Beauticians. The 1500-hour curriculum covers theoretical and practical aspects of hair dressing and treatment, skin and nail care, and personal grooming.

High school students in Districts 211 and 214 may take these courses through the Northwest Suburban Career Cooperative for high school credit and should contact a high school counselor for additional details.

## Volunteer Management

Earn credentials and improve your professional skills in volunteer recruitment and management. This is one of three certificate programs nationwide that is endorsed by the Association for Volunteer Administration (AVA). Two levels of certification require basic and enrichment coursework with a final paper for Level I and a project paper for Level II.

## Refrigeration and Handling

Harper College is certified by the EPA to administer the official technician certification examination for handling and recovering refrigerants at all technician levels. In addition to administering the EPA exam, the College is authorized to provide the test preparation workshop.

## Personal Enrichment

Personal enrichment offerings include: cultural awareness, fine arts, language studies, music instruction/appreciation, photography, philosophy, theatre, writing, home maintenance, cooking/wine/dining, creative crafts, woodworking, decorating, fashion, garden/landscape/floral, aviation, astronomy, animals and nature, personal finance, Phi Theta Kappa leadership development, personal finance/investment and academic testing reviews.

Meeting special interests are programs for the older adult, the Women's program, summer youth enrichment and sports camps programs.

## Liberal Arts

The Liberal Arts Division of Continuing Education offers courses that allow individuals to participate in a variety of learning experiences in the areas of career, civic and personal development, enabling them to expand their cultural and personal awareness as well as their knowledge base. Courses and seminars are offered in Cultural Awareness, Fine Arts (Ceramics, Drawing, Painting, Fabric Art, Print Making, Jewelry and Glass), Languages, Music Academy, Photography and Writing. For further information, please contact the Program Coordinator at 847/925-6653.

## Music Academy

The Harper Music Academy was established in 1980 as the non-credit division of the Music Department. Through its various group and private programs, the Academy endeavors to offer exceptional music instruction to the average and above average student. No entrance auditions are required. All students are accepted on a space available basis.

## The Writing Studio

The Writing Studio at Harper College offers an extensive variety of classes and seminars for adult students on the writing of fiction, poetry and creative nonfiction, all taught by leading area writers. In addition, the Studio hosts special events such as readings series, writing tours, and "open mike" gatherings at local cafes. For more information call 925-6593.

## Personal Finance/Investment

Courses offered in Personal Finance/Investment include starting an investment club, stock market strategies, selecting mutual funds, retirement planning, money management, and financial planning for small business owners.

## Garden, Landscape and Floral

The Garden, Landscape and Floral program presents to the homeowner, hobbyist and those currently employed in the green industry, information about floral designing, caring for plants, gardening and landscaping. For further information, please contact the Coordinator of Continuing Education, Life Science and Human Services Division, 847/925-6687.

## Home Ownership

Courses offered in Home Ownership include those for the condo and homeowner association member, and how to buy and finance a home.

## Wine Appreciation

Identify the world's most beloved wines and learn about great food matches for various geographical regions through wine sampling lectures, wine dinners and educational tours.

## Special Interest

In addition to those courses listed below, we also offer classes in Amateur Radio, Astronomy, Aviation, Personal Finance/Investment, Phi Theta Kappa Leadership Development, Self Awareness/ Personal Growth, Wonders of Nature and Animal Health, educational tours and outdoor adventures. For information, please call 847/925-6300 or e-mail ce@harper.cc.il.us.

### ■ Older Adult

Existing services and programs are available to persons 50 years and older. The program promotes Continuing Education and credit classes of interest to them. Older persons are welcome and encouraged to attend cultural events sponsored by the Student Activities office. There may be non-discounted service charges or fees.

### ■ Test Reviews

Included in this series are the LSAT, GRE, GMAT, ACT and offerings related to test anxiety.

## Women's Program

The Women's Program works to facilitate the education and understanding of women's issues. Our classes focus on how individuals can work to facilitate change within themselves and their community and how they can participate more effectively in this chosen role. For information, call 847/925-6300 or e-mail us at ce@harper.cc.il.us.

## Youth Program

### ■ ChILL

The Children's Institute of Learning and Living (ChILL) is for 8 to 16 year olds and provides an exciting addition to the similar academic enrichment courses for adults. This exclusive summer program includes classes and camps in various time formats, as well as academically and school-to-work related field trips and all-day excursions. Call 847/925-6300 for more information on the variety of offerings and exact time and dates of the program.

### ■ Music Academy

The acclaimed Harper Music Academy offers dedicated children's programming in infant and pre-school Kindermusik for infants through pre-school and summer offerings for ages 8 and up in choir and instrument ensembles. Private instruction is open to all ages.

### ■ Sports Camps

Sports Camps are mainly summer programs, but selected courses are also offered throughout the year. It is geared toward children ages 8 to 15. Classes are offered in 1 to 4 week formats in such areas as basketball, in-line skating, tennis and soccer.

## Physical Fitness

A full array of physical fitness and wellness offerings include: aerobics, aquacise, fitness training, dance, martial arts, mind/body, sports, sports camps, swimming and div-

ing. The Cardiac Rehabilitation Center provides physician supervised exercise therapy, assessment, physical conditioning and nutrition consultation.

## Health and Wellness

### ■ Cardiopulmonary Rehab

Harper College and Alexian Brothers Medical Center in Elk Grove Village are co-sponsors of a comprehensive cardiac rehabilitation program for individuals who have been diagnosed with a heart problem or who are at risk for heart disease, based upon lifestyle and coronary risk factors. The center supports the private physician in safely and effectively returning the cardiac patient to a productive and enjoyable lifestyle. The program is open to all, regardless of their physician's hospital affiliation. For information, call 847/925-6468.

### ■ Mind/Body

Learn how to use your mind for better health, and the theories of traditional and non-traditional medicine.

## CE Certificate Programs

- PC Service Technician (A+ Certification)
- Desktop Publishing Technology Certificate
- Novell Certified Netware Engineer (CNA/CNE)
- Microsoft NT Certified Training (MCSE)
- Cosmetology Licensing
- Certified Financial Planner
- Food Standards and Sanitation Certificate
- B.A.S.S.E.T. Training
- Dietetic Technician Refresher
- RN Refresher
- CPR/Instructor/Instructor Trainer
- Travel Agent/Reservationist
- Refrigerant Handling- EPA/CFC Certification Examination
- Volunteer Management Certificate
- Lifeguard Training
- Animation Art

## Extension Centers

Harper College operates seven major sites and more than 50 minor neighborhood centers as a convenience to students. A wide variety of credit and continuing education courses are available at these extension centers. Neighborhood sites include:

- Northeast Center. Prospect Heights
- NSET (Northwest Suburban Employment and Training Center), Arlington Heights
- Barrington High School
- Conant High School, Hoffman Estates
- Elk Grove High School
- Hoffman Estates High School
- Palatine High School
- Winston Park Junior High School, Palatine
- Wheeling High School

## CONTINUING EDUCATION & COMMUNITY SERVICES

Northeast Center (NEC), the largest of the extension centers, is located at 1375 South Wolf Road in Prospect Heights. This center features 9 classrooms, 19 computer labs, 1 distance learning room and a preschool. Offerings at the NEC include non-native literacy, general education development (GED), IT certification, computer training, The Premier Authorized Autodesk Training, The Travel Academy and a variety of professional and personal development courses.

NSET Center (Northwest Suburban Employment Training Center) is located at 723 West Algonquin Road in Arlington Heights. Career services for the community, many computer training classes and an electronic lab are offered at this site.

Import/Export Development Program courses are offered at Elk Grove High School. Language, art and many professional development courses are held at our nine extension sites.

For information about classes held at any of the extension sites, call the Extension Information Center at 847/925-6001. Office hours are Monday-Friday 8:00 am to 9:30 pm and Saturday 8:00 am to 3:30 pm.

### Workforce Development

#### Workforce and Organizational Development

##### ■ Harper College Corporate Services

Customized training, education and consulting for business and industry at their location, at their convenience.

Harper College Corporate Services is dedicated to serving the training, education and consulting needs of area employers. All of these solutions can be customized to meet each organization's specific business objectives and can be flexibly scheduled and delivered at the organization's location. Additionally, Corporate Services can deliver college credit, continuing education and certification courses onsite; it serves as the gateway to the vast resources and learning opportunities Harper College has to offer.

For more information about how Harper College can provide the training, education or consulting learning opportunity that will help you develop your people and your organization, please call 847/925-6000, extension 7480. or e-mail: [corpserv@harper.cc.il.us](mailto:corpserv@harper.cc.il.us), or visit our website at [www.harper.cc.il.us](http://www.harper.cc.il.us).

#### Technical Education and Consulting @Harper (TECH)

##### ■ Information Technology and AutoCAD non-credit courses and certificates

Technical Education and Consulting @Harper (TECH) provides non-credit, certified Information Technology (IT) and AutoCAD training. TECH's certified instructors deliver certi-

fied curriculum in certified computer labs located at the Northeast Center campus of Harper College in Prospect Heights.

TECH serves both individuals and organizations. Classes are offered during the day, evening and on weekends and can be flexibly scheduled for as few as five students.

For more information about the wide variety of IT and AutoCAD courses and certificates offered through TECH, please call #1-888-BE-A-TECH, e-mail: [ce\\_tech@harper.cc.il.us](mailto:ce_tech@harper.cc.il.us), or visit our website at [www.harper.cc.il.us](http://www.harper.cc.il.us)

#### Northwest Education to Careers Partnership

##### ■ High School Shared Courses

The Northwest Education to Careers Partnership coordinates high school shared courses which provide opportunity for high school students from Districts 211, 214 and 220 to earn high school credit while exploring the requirements and skills needed for selected career areas. Career study areas include Computer Repair, Fire Science, Food Service Management, and Introduction to Health Occupations. For further information, call 847/758-2380.

##### ■ High School Dual Credit Program

The high school dual credit program provides an opportunity for qualifying high school students from Districts 211, 214, and 220 to earn both high school and college credit while exploring career options. The program includes courses in: Basic Nursing Assistant, Computer Information Systems (for NetPrep™ courses only), Computer Networking, Electronics, Fashion Merchandising, Food Service Management, Law Enforcement, Machining Processes, and Refrigeration/Air Conditioning. For further information, call the Northwest Education to Careers Partnership at 847/758-2380.

### Community Services

#### Community Orientation and Involvement

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

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

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

In the early 1990s, the College enhanced its efforts to provide educational and training opportunities to employees of companies throughout the district. An Education Service Agreement allows in-district companies' employees to attend Harper at in-district tuition. The College's Corporate Services Department provides customized on-site training in everything from basic skills to new technologies. In addition, classes continue to grow in areas of English as a Second Language, citizenship preparation and Adult Educational Development.

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

## College/Community Programs

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

## Northwest 2001 Economic Development

Northwest 2001 is a volunteer coalition of community leaders whose mission is to raise public awareness and build a regional partnership to address issues impacting the northwest suburbs. Now an official non-profit organization, Northwest 2001 initiates discussion and builds alliances to address the needs of business, education, social service and civic organizations in the region. Additional information is available by calling 847/537-5196.

## Northwest Leadership Academy

Created in the fall of 1986 by the Northwest Suburban Association of Commerce and Industry (NSACI), the Northwest Leadership Academy is currently cosponsored by Harper College. The Academy seeks to develop a source of informed civic-oriented leaders who are interested in directing the future of the northwest suburban area. This will be accomplished by assembling current and emerging leaders from diverse backgrounds and experiences and involving them in a series of thought-provoking educational programs. For additional information, call NSACI at 847/517-7110.

## Community Career Services

Community Career Services provides outreach services to local businesses and residents. Offerings include:

- Career counseling and workshops and support groups to assist individuals who are looking for a job or career change, who have lost a job or want to manage their current career successfully.
- Corporate Career Services to assist companies and organizations desiring career management or outplacement for their employees.

The Community Career Services is located at the Northwest Suburban Illinois Employment Training Center, 723 West Algonquin Road, Arlington Heights. For further information, call 847/758-2370.

## Weekend Services

For detailed weekend course and event information or resources, contact the Office of Continuing Education, 847/925-6383, or the reception desk, New Student Services and Art Center, C102. Information resources are usually available through this office if other offices are closed.

A continuing education information specialist is available to help you with specific Continuing Education questions at 847/925-6300.

## Senior Discounts

District residents ages 60-64 are eligible for reduced tuition rates, but not fees, for specially designated courses and workshops offered by the College. District residents 65 and older may attend tuition-free when space is available at late registration. Senior citizens will be charged for material and lunch fees when applicable. Some programs are placed at locations in the community, including senior citizen centers, churches and nursing homes. Other services of Harper College, including the Student Development Center, Dental Hygiene Clinic, Cardiac Rehabilitation Center and Learning Resources Center are all open to senior citizens.

For information on these programs, please call Harper College Continuing Education Information: 847/925-6300, or e-mail [ce@harper.cc.il.us](mailto:ce@harper.cc.il.us).

**Community Career Services**

Community Career Services is a division of the Career Center at the University of North Carolina at Charlotte. It provides a variety of services to help students and graduates find employment.

• Career counseling and workshops and support groups  
 • Career fairs and job fairs  
 • Career assessment and job search strategies  
 • Career development and job search assistance

• Corporate Career Services to assist companies and organizations in recruiting and managing their workforce  
 • Career development and job search assistance for students and graduates

The Community Career Services is located in the North Carolina Building, Room 100, on the University campus. For further information, contact the Career Center at 704.773.3333.

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**Associate Degrees**

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- *Open Entry Classes*
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- *XLR8*

**International Studies Program**

**Honors Program**

**English as a Second Language**

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**Alternative Credit Programs/  
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# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

## Associate Degrees

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

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

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

## Graduation Requirements

- 1) For associate degrees, attainment of a minimum of 60-67 semester hours of credit, at least 18 of which must be earned in attendance at Harper College and be in courses numbered 100 or above. For certificates of completion, 50 percent of required credit hours must be earned at Harper. Up to two hours credit in physical education activity courses (100 level) may be included as free electives in the minimum 60 required hours for an associate degree. A maximum of four semester hours of Independent Study credit may be included as free electives in the minimum 60 required hours for an associate degree.
- 2) Attainment of a minimum grade point average of 2.0 for all work required for the associate in arts and the associate in science, associate in fine arts and associate in engineering science degrees. Attainment of a minimum grade point average of 2.0 for any applicable 60 semester hours work for the associate in applied science degree and certificates.
- 3) Meet the constitution requirement of the Illinois State School Code. This can be met by (1) submitting an official Illinois high school transcript stating the requirement has been met, or (2) successfully completing PSC 101, or (3) passing a college administered test of the U.S. Constitution, Illinois Constitution, the proper use and display of the American flag and the principles of American democratic government.
- 4) Requirement of 60 hours must be in courses numbered 100 or above for the degrees of associate in arts, associate in science, associate in fine arts or associate in engineering science. (Courses below 100 level may be used only where A.A.S. program requires.)

- 5) Fulfillment of appropriate associate degree requirements as listed in the College catalog **at the time the student first enrolled or any catalog thereafter except for courses no longer offered.**
- 6) In addition to the above requirements, students enrolled in a specific career program will fulfill the requirements outlined in that program. Any changes in program requirements necessitated by licensing and/or accrediting agencies must be observed by students who are already admitted and in process in their programs.
- 7) A student must petition for graduation and pay the graduation fee of \$20.00. Notification of the student's intent to graduate will be accepted in the Registrar's Office no later than one week after the midterm of the semester in which the student intends to graduate. Students are encouraged to participate in the formal graduation ceremony in May. Students are encouraged to complete their petition for graduation when registering for the semester in which their graduation requirements will be fulfilled.

## General Education

General education is that part of the college education that provides students with the foundations essential to lead personally fulfilling and responsible lives as productive citizens. General education cultivates the knowledge, skills and attitudes that educated persons use to shape their lives. It fosters the desire and capacity to continue learning throughout life. A general education "produces persons who are open-minded and free from provincialism, dogma, preconception, and ideology; conscious of their opinions and judgments; reflective of their actions; and aware of their place in the social and natural worlds."

An educated person is able to think clearly, communicate effectively, make reasoned and ethically aware judgments, respect human diversity, and connect and apply fields of knowledge. These general abilities are required by all areas of specialization. The breadth of general education complements the rigor and depth of specialized education.

If education is a journey, as many have conceived it, then the curriculum is a map. The Harper College general education curriculum requirements provide a selection of diverse courses. Following the map of general education ensures that a student's education is a coherent, comprehensive journey.



## Transfer Programs

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

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

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

In most cases, students are better served by earning an A.A., A.S., A.F.A., or A.E.S., degree before transfer. Individual baccalaureate-oriented credits earned at Harper College are also transferable to other institutions of higher learning.

Transfer students are responsible to know the specific requirements of the institutions they are considering for transfer and should consult with those institutions directly. In addition, students should make an appointment with a student development faculty member at Harper College. Ideally students should see a counselor to discuss their transfer plans prior to registering for courses each semester. Resource materials and counseling assistance are available in Harper's Student Development Centers in the Business and Social Science Center, 1117 and in the Science, Math and Health Careers Center, D142.

Recommended programs of study are provided for the following areas:

- |                           |                        |
|---------------------------|------------------------|
| • Art                     | • Liberal Arts         |
| • Biological Sciences     | • Mass Communications  |
| • Business Administration | • Mathematics          |
| • Computer Science        | • Music                |
| • Criminal Justice        | • Physical Education   |
| • Education               | • Psychology           |
| • Engineering             | • Social Science       |
| • Foreign Languages       | • Speech Communication |
| • Health Education        | • Theatre Arts         |

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

## Harper-Designated Transfer Scholarships

Most four-year institutions offer scholarships designated for community college students. The following are some that have scholarship resources available to Harper students. Information is available in the Office of Student Financial Assistance.

- Bradley University, Peoria, Illinois
- Columbia College, Chicago, Illinois
- DePaul University, Chicago, Illinois
- Drake University, Des Moines, Iowa
- Illinois Institute of Technology, Chicago, Illinois
- Kendall College, Evanston, Illinois
- Knox College, Galesburg, Illinois
- Loyola University, Chicago, Illinois
- Marquette University, Milwaukee, Wisconsin
- Northern Illinois University, DeKalb, Illinois
- Ripon College, Ripon, Wisconsin
- Roosevelt University, Chicago and Schaumburg, Illinois
- Southern Illinois University, Carbondale, Illinois
- University of Illinois, Champaign, Illinois
- University of Illinois at Chicago

## Transfer Agreements

### Illinois Articulation Initiative

Harper College is a participant in the Illinois Articulation Initiative (IAI), a statewide articulation effort to help Illinois college students transfer easily. This effort involves public community colleges, public universities and private colleges and universities, and includes the articulation of lower-division general education and major field courses. This agreement is in effect for students entering college as first-time freshmen in summer of 1998 (and thereafter). The following summary highlights the major features of the initiative.

- 1) One of the main features of the IAI is the General Education Core Curriculum and a list of statewide articulated general education courses that will be accepted for transfer by all participating colleges and universities in Illinois.
  - a. Students who complete the A.A., A.S. degree that contains the General Education Core Curriculum at a community college will have their lower-division general education core requirements satisfied at the participating Illinois university to which they transfer.
  - b. Students who complete the General Education Core Curriculum at any participating college or university in Illinois will have their lower-division general education requirements met upon transfer to another participating college or university in Illinois.
  - c. The General Education Core Curriculum and the list of statewide articulated general education courses will be a great advantage for students who are undecided about what university they want to attend after transfer as well as for students who are undecided about their major because the "core" will transfer to all participating colleges and universities in Illinois.

## COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

- 2) Another main feature of the Initiative is a program guide and list of statewide articulated lower-division courses for each baccalaureate degree major field that will transfer and satisfy major field requirements at any colleges or universities in Illinois that offer that degree.
- Students who complete the list of major field courses in the program guide will be assured that these courses will transfer and satisfy major field requirements at any participating university in Illinois that offers that baccalaureate degree.
  - The program guide and the list of acceptable courses that are identified and described for each major field will be very useful to students in planning their educational program prior to transfer.
- 3) The General Education Core Curriculum, the program guides for the major fields, and the statewide list of articulated courses will greatly help counselors and advisors provide accurate information on the articulation of courses to students planning to transfer.

See the IAI website at [www.ITransfer.org](http://www.ITransfer.org) for more information.

### IAI General Education Core Curriculum Requirements

The IAI General Education Core Curriculum consists of courses that colleges and universities consider essential for students' success in college and life. Students are permitted to transfer this portion of an associate or a bachelor's degree program from one participating institution to another without loss of credit and with assurance that lower-division general education requirements have been satisfied. The curriculum comprises about two-thirds of an associate degree and about one-third of a bachelor's degree. This transferable curriculum is included within Harper's 1998 (and thereafter) A.A. and A.S. degrees.

### Specifically, the General Education Core Curriculum requires:

#### Communications

- 3 courses (9 semester credits)  
Must include a two-course sequence in writing completed with grades of "C" or better (6 semester credits), and one course (3 semester credits) in oral communication.

#### Social and Behavioral Sciences

- 3 courses (9 semester credits)  
Must include courses selected from at least two disciplines.

#### Humanities and Fine Arts

- 3 courses (9 semester credits)  
Must include at least one course selected from humanities and at least one course from the fine arts.

#### Mathematics

- 1 to 2 courses (3 to 6 semester credits)

#### Physical and Life Sciences

- 2 courses (7-8 semester credits)  
Must include one course selected from the life sciences and one course from the physical sciences. One course must be a lab.

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**TOTAL: 12 to 13 courses (37-41 credits)**

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Refer to specific approved courses under course descriptions listed in the back of the catalog or see the IAI website at [www.ITransfer.org](http://www.ITransfer.org)

### Illinois Articulation Initiative Transcripting Requirements

As a participant of the Illinois Articulation Initiative (IAI), William Rainey Harper College requires the following for completion of the core to be noted on the official transcript:

- Enrollment date effective summer of 1998 (and thereafter).
- Completion of the Associate in Arts (A.A.) or Associate in Science (A.S.) degree starting with the 1998-99 Catalog and/or Completion of the General Education Core Curriculum requirements and attainment of a minimum of 37 semester hours.
- Attainment of a minimum grade point average of 2.0 in the courses which count toward the core.
- Students must formally request the Registrar's Office to certify the completion of the core by submitting a Petition to Certify the Illinois Transferable Education Core Curriculum.

### Transfer Compact Agreements

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

- Barat College
- Chicago State University
- Eastern Illinois University
- Governors State University
- Illinois State University
- Northeastern Illinois University
- Northern Illinois University
- Southern Illinois University
- University of Illinois at Springfield
- Western Illinois University

## COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

### Other Transfer Agreements

In addition to the Compact Agreement, Harper College has developed course transfer agreements with the following public and private colleges and universities.

- Alverno College
- Benedictine University
- Bradley University
- Chicago College of Pharmacy
- College of St. Francis
- Columbia College–Chicago
- Concordia University
- DePaul University
- DeVry Institute of Technology
- Drake University
- Elmhurst College
- Gallaudet University
- Illinois Institute of Technology
- International Academy of Merchandising and Design
- Iowa State University
- Kendall College
- Lake Forest College
- Lewis University
- Loyola University
- Loyola University of Chicago School of Nursing
- Marquette University
- Michigan Technological University
- Midwestern University
- Millikin University
- Milwaukee School of Engineering
- National College of Chiropractic
- National Louis University
- North Central College
- North Park College
- Northern Michigan University
- Northwood University
- Quincy University
- Robert Morris College
- Roosevelt University
- Rosary College
- Rush University
- St. Joseph's College
- St. Mary's College
- St. Xavier University
- University of Illinois–Chicago
- University of Illinois–Urbana/Champaign
- University of Iowa
- University of Kansas
- University of Southern California
- University of Wisconsin–Stout
- University of Wisconsin–Whitewater
- Valparaiso University

Contact the Student Development Center in D142 or I117 for more information.

### Degree Requirements Overview

AREA	DEGREE TYPE					
	AA	AS	AES	AAS	AFA ART	AFA MUSIC
Communications	9	9	6	6	9	9
Mathematics	3-6	6	17	3	3	3
Computer Science	–	–	4	–	–	–
Physical and Life Science	7-8	8	12	0-9*	7	7
Humanities and Fine Arts	9	9	3-6	0-9*	6	6
Social and Behavioral Sciences	9	9	3-6	0-9*	6	3
Engineering	–	–	19	–	–	–
Technical Requirements and Electives	–	–	–	42-45	–	–
Music	–	–	–	–	–	39
Art	–	–	–	–	33	–
Special Electives	6	3	–	–	–	–
Other Electives	17	20	–	–	–	–
<b>Total Minimum Hours Required:</b>	<b>60</b>	<b>64</b>	<b>67</b>	<b>60</b>	<b>64</b>	<b>67</b>

\* Nine hours must be taken from a minimum of two groups.

# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

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

These requirements apply to students who first enrolled for Fall 2000 or later. Students who first enrolled prior to Fall 2000 should obtain the appropriate sheet of requirements from Student Development Center.

Fall 2000	IAI Core Curriculum	Hours Required	Harper Courses
<b>Group 1</b> <b>Communications</b> 3 courses. A grade of "C" or better is required for ENG 101 and 102.		9	ENG 101, 102 & SPE 101
<b>Group 2</b> <b>Mathematics</b> 1 to 2 courses. MTH 124 may be used if taken Spring '99 or later.		3-6	MGT 225 or MTH 165; MTH 101, 124, 131, 134 or 200, 201, 202, 203, 212, 220, 265
<b>Group 3</b> <b>Physical and Life Sciences</b> 2 courses with 1 course from the Life Sciences and 1 from the Physical Sciences. 1 course must be a lab science (marked with an *). With appropriate prerequisites an initial course for science majors or advanced level course may be substituted.		7-8	<b>Life Science:</b> BIO 101, 103, 104*, 105, 110*, 120*, 130*, 135, 136, 140*, 150*, 151*, 152*, 153*, 154*, 160*, 210*  <b>Physical Sciences:</b> AST 101*; CHM 100*, 110*, 121*, 122*, 131*, 132*; GEG 121*; GEO 101*, PHS 101, 105*, 111*, 112*; PHY 121*, 122*, 201*, 202*
<b>Group 4</b> <b>Humanities and Fine Arts</b> 3 courses with at least 1 course selected from the Humanities and at least 1 from the Fine Arts. Interdisciplinary courses may be used for both categories.		9	<b>Humanities:</b> FRN 202 or GER 202 or JPN 202 or SGN 210 or SPA 202; HST 141, 142; HUM 120; LIT 105, 110, 115, 206, 207, 208, 210, 221, 222, 223, 224, 231, 232; PHI 105, 110, 115, 160, 205, 220, 231, 232; FRN 210 or GER 210 or SPA 210  <b>Fine Arts:</b> ART 105; FNA 111, 112 or 113; FNA 114 or LIT 112; MUS 103, 104, 120; SPE 111  <b>Interdisciplinary Studies:</b> HUM 101, 102, 103, 110
<b>Group 5</b> <b>Social and Behavioral Sciences</b> 3 courses with courses selected from at least 2 departments. May <u>not</u> choose SOC 215 and two PSY courses.		9	ANT 101, 202, 205, 206; ECO 200, 211, 212; GEG 101 or 108, 103, 104, 210; HST 111, 112, 121, 243; PSC 101, 220, 250, 270, 280; PSY 101, 216, 217, 218, 228; SOC 101, 120, 205, 215

**Total General Education** 37-41

Group 6 Special Electives	6	<u>Creative Expression</u>			<u>Languages</u>		<u>Wellness</u>		<u>Work and Life Skills</u>		
		ART	MUS		FRN	JPN	DIT	PED	CDV	DIV	ORN
		110	101	165	101	101	101	100	110	101	101
		111	102	166	102	102		203	<b>CIS</b>	<b>ECO</b>	<b>PHI</b>
		121	130	167	201	201		213	100	115	150
		122	136	169	<b>GER</b>	<b>SPA</b>			101	<b>MGT</b>	<b>PSY</b>
		201	140	180-199	101	101			120	111	106
		206	145	265	102	102			<b>CSC</b>	140	107
		225	150	280-299	201	201			121	160	<b>SPE</b>
		236		<b>SPE</b>					208	170	115
		240		107					<b>CWE</b>	204	200
		261		212					220		205
		291		216							
		296									
<b>Group 7</b> <b>Approved Electives</b>	17	<u>Courses must be selected from:</u> 1) Additional credit hours from Groups 1-6 from the A.A. or A.S. degree. 2) Up to ten (10) credit hours from 100 to 200 level courses from any department. 3) Up to two (2) hours of PED activity courses (100 level) may be used to fulfill either Group 6 or Group 7 electives. 4) Up to four (4) hours of Independent Study Credit. 5) Credit hours from approved elective courses (listed after A.S. degree requirements).									

**Total Hours Required** 60

† No more than two GEG or two HST courses may be used to fulfill Groups 1-5. Credit will not be granted for both MGT 225 and MTH 165.

# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

## Requirements for Associate in Science Degrees (A.S.)†

These requirements apply to students who first enrolled for Fall 2000 or later. Students who first enrolled prior to Fall 2000 should obtain the appropriate sheet of requirements from Student Development Center.

Fall 2000	IAI Core Curriculum	Hours Required	Harper Courses
<b>Group 1</b> <b>Communications</b>	3 courses. A grade of "C" or better is required for ENG 101 and 102.	9	ENG 101, 102 & SPE 101
<b>Group 2</b> <b>Mathematics</b>	2 courses. MTH 124 may be used if taken Spring '99 or later.	6	MGT 225 or MTH 165; MTH 124, 131, 134 or 200, 201, 202, 203, 212, 220, 265
<b>Group 3</b> <b>Physical and Life Sciences</b>	2 courses with 1 course from the Life Sciences and 1 from the Physical Sciences. 1 course must be a lab science (marked with an *). With appropriate prerequisites an initial course for science majors or advanced level course may be substituted.	8	<b>Life Science:</b> BIO 101, 103, 104*, 105, 110*, 120*, 130*, 135, 136, 140*, 150*, 151*, 152*, 153*, 154*, 160*, 210*  <b>Physical Sciences:</b> AST 101*, CHM 100*, 110*, 121*, 122*, 131*, 132*; GEG 121*; GEO 101*, PHS 101, 105*, 111*, 112*; PHY 121*, 122*, 201*, 202*
<b>Group 4</b> <b>Humanities and Fine Arts</b>	3 courses with at least 1 course selected from the Humanities and at least 1 from the Fine Arts. Interdisciplinary courses may be used for both categories.	9	<b>Humanities:</b> FRN 202 or GER 202 or JPN 202 or SGN 210 or SPA 202; HST 141, 142; HUM 120; LIT 105, 110, 115, 206, 207, 208, 210, 221, 222, 223, 224, 231, 232; PHI 105, 110, 115, 160, 205, 220, 231, 232; FRN 210 or GER 210 or SPA 210  <b>Fine Arts:</b> ART 105; FNA 111, 112 or 113; FNA 114 or LIT 112; MUS 103, 104, 120; SPE 111  <b>Interdisciplinary Studies:</b> HUM 101, 102, 103, 110
<b>Group 5</b> <b>Social and Behavioral Sciences</b>	3 courses with courses selected from at least 2 departments. May <u>not</u> choose SOC 215 and two PSY courses.	9	ANT 101, 202, 205, 206; ECO 200, 211, 212; GEG 101 or 108, 103, 104, 210; HST 111, 112, 121, 243; PSC 101, 220, 250, 270, 280; PSY 101, 216, 217, 218, 228; SOC 101, 120, 205, 215

**Total General Education** **41**

Group 6 Special Electives	3	<u>Creative Expression</u>		<u>Languages</u>		<u>Wellness</u>		<u>Work and Life Skills</u>			
		ART	MUS	FRN	JPN	DIT	PED	CDV	DIV	ORN	
		110	101	165	101	101	101	100	110	101	101
		111	102	166	102	102		203	<b>CIS</b>	<b>ECO</b>	<b>PHI</b>
		121	130	167	201	201		213	100	115	150
		122	136	169	<b>GER</b>	<b>SPA</b>			101	<b>MGT</b>	<b>PSY</b>
		201	140	180-199	101	101			120	111	106
		206	145	265	102	102			<b>CSC</b>	140	107
		225	150	280-299	201	201			121	160	<b>SPE</b>
		236		<b>SPE</b>					208	170	115
		240		107					<b>CWE</b>	204	200
		261		212					220		205
		291		216							
		296									
<b>Group 7</b> <b>Approved Electives</b>	20	<u>Courses must be selected from:</u>									
At least 6 hours, 100-level or above, must be selected in mathematics, science or computer science (CSC only).		<ol style="list-style-type: none"> <li>1) Additional credit hours from Groups 1-6 from the A.A. or A.S. degree.</li> <li>2) Up to ten (10) credit hours from 100 to 200 level courses from any department.</li> <li>3) Up to two (2) hours of PED activity courses (100 level) may be used to fulfill either Group 6 or Group 7 electives.</li> <li>4) Up to four (4) hours of Independent Study Credit.</li> <li>5) Credit hours from approved elective courses (listed after A.S. degree requirements).</li> </ol>									

**Total Hours Required** **64**

† No more than two GEG or two HST courses may be used to fulfill Groups 1-5. Credit will not be granted for both MGT 225 and MTH 165.

# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

## Associate in Arts (A.A.) and Associate in Science (A.S.) Degree Programs

### Approved Elective Courses

Course or credit hours for Group 7 electives must come from:

- 1) Extra credit hours from Group 1-6 from the A.A. or A.S. degrees.
- 2) Up to 10 credit hours from 100 to 200 level courses from any department.
- 3) Up to two (2) hours of PED activity courses (100-level courses) may be used to fulfill either Group 6 or Group 7 electives.
- 4) Up to four (4) hours of Independent Study credit.
- 5) Credit hours from the list of approved electives below.

<b>ACC</b>	<b>BIO</b>	<b>CSC</b>	<b>FRN</b>	<b>LIT</b>	<b>MUS</b>	<b>PHI</b>	<b>RDG</b>
101	161	122	205	216	111	120	105
102	220	211		217	112	170	106
201	240	216	<b>GEO</b>	219	115	180	
202		217	102	241	116	190	<b>SGN</b>
203	<b>CCA</b>		201		211	210	101
211	102	<b>CWE</b>		<b>LNG</b>	212		102
212	219	221	<b>GER</b>	105	215	<b>PSC</b>	103
213			205	205	216	210	104
	<b>CHM</b>	<b>DIT</b>			223	260	201
<b>ANT</b>	125	110	<b>HPI</b>	<b>MGT</b>	224		202
203			102	218	266	<b>PSY</b>	205
207	<b>CIS</b>	<b>ECO</b>		275	271	108	
208	130	210	<b>HST</b>		272	145	<b>SOC</b>
209	142	225	151	<b>MKT</b>		150	210
220	150		152	245		210	220
250	160	<b>EDU</b>	153		<b>PED*</b>	220	230
255		201	210	<b>MTH</b>	200	225	
	<b>CRJ</b>	202	214	103	201	230	<b>SPA</b>
<b>ART</b>	101	211		104	205	235	205
100	201		<b>HUM</b>	107	206		
	202	<b>EGR</b>	115	120	207	<b>PST</b>	<b>SPE</b>
	205	100		130	208	110	102
	210	120	<b>IDS</b>	206	209		180
	220	121	290		210		213
		205			220		
		212	<b>JNM</b>		222		
		260	130		224		
		262	131		226		
		270	234		228		
					230		
		<b>ENG</b>			246		
		103			270		
		130					
		201					
		220					

\*All 100 level courses.

## **COLLEGE CREDIT PROGRAMS AND REQUIREMENTS**

### **Requirements for Associate in Engineering Science Degree (A.E.S.)†**

These requirements apply to students who first enrolled for Fall 2000 or later. Students who first enrolled prior to Fall 2000 should obtain the appropriate sheet of requirements from Student Development Center.

Fall 2000	Hours Required	Harper Courses
<b>Group 1</b> <b>Communications</b> A grade of "C" or better is required for ENG 101 and 102	6	ENG 101, 102
<b>Group 2</b> <b>Mathematics</b>	17	MTH 200, 201, 202, 212
<b>Group 3</b> <b>Computer Science<sup>4</sup></b>	4	CSC 208
<b>Group 4</b> <b>Physical and Life Sciences<sup>1</sup></b>	12	CHM 121; PHY 201, 202
<b>Group 5</b> <b>Humanities and Fine Arts<sup>2</sup></b> Minimum of 3 hours required from Group 6. Must have a minimum of 9 hours from Humanities and Fine Arts and Social and Behavioral Sciences combined.	3-6	<b>Humanities:</b> FRN 202 or GER 202 or JPN 202 or SGN 210 or SPA 202; HST 141, 142; HUM 120; LIT 105, 110, 115, 206, 207, 208, 210, 221, 222, 223, 224, 231, 232; PHI 105, 110, 115, 160, 205, 220, 231, 232; FRN 210 or GER 210 or SPA 210  <b>Fine Arts:</b> ART 105; FNA 111, 112 or 113; FNA 114 or LIT 112; MUS 103, 104, 120; SPE 111  <b>Interdisciplinary Studies:</b> HUM 101, 102, 103, 110
<b>Group 6</b> <b>Social and Behavioral Sciences<sup>2</sup></b> Minimum of 3 hours required from Group 5. Must have minimum of 9 hours from Humanities and Fine Arts and Social and Behavioral Sciences combined.	3-6	ANT 101, 202, 205, 206; ECO 200, 211, 212; GEG 101 or 108, 103, 104, 210; HST 111, 112, 121, 243; PSC 101, 220, 250, 270, 280; PSY 101, 216, 217, 218, 228; SOC 101, 120, 205, 215
<b>Group 7</b> <b>Engineering</b> Specialty courses approved in consultation with the Engineering Chair.	19	CSC 122; EGR 100, 120, 205, 212, 260, 262, 270; CHM 122, 204, 205; MTH 220; PHY 203
<b>Total Hours Required</b>	67	

<sup>1</sup> CHM 131 and CHM 132 may be substituted where required for specialized curricula as chemical engineering. Students should contact the engineering chairperson for information.

<sup>2</sup> Students are encouraged to select at least one course in either the humanities/fine arts or the social/behavioral sciences that emphasizes non-Western cultures or minority cultures within the United States. A two-semester sequence in the same discipline from either the humanities/fine arts or the social/behavioral sciences is recommended.

<sup>3</sup> Completion of the Associate in Engineering Sciences degree does not fulfill the requirements of the Illinois General Education core curriculum. After transfer, AES students will need to complete the general education requirements of the institution to which they transfer.

<sup>4</sup> Computer engineering and computer science students should select CSC 121 instead.

† No more than two GEG or two HST courses may be used to fulfill Groups 1-6.

# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

## Requirements for Associate in Fine Arts Degree (A.F.A.): Art Emphasis†

These requirements apply to students who first enrolled for Fall 2000 or later. Students who first enrolled prior to Fall 2000 should obtain the appropriate sheet of requirements from Student Development Center.

Fall 2000	Hours Required	Harper Courses												
<b>Group 1 Communications</b> 3 courses. A grade of "C" or better is required for ENG 101 and 102.	9	ENG 101, 102 & SPE 101												
<b>Group 2 Mathematics</b> 1 course	3	MGT 225 or MTH 165; MTH 101, 124, 131, 134 or 200, 201, 202, 203, 212, 220, 265												
<b>Group 3 Physical and Life Sciences</b> 2 courses with 1 course from the Life Sciences and 1 from the Physical Sciences. 1 course must be a lab science (marked with an *).	7	<b>Life Science:</b> BIO 101, 103, 104*, 105, 110*, 120*, 130*, 135, 136, 140*, 150*, 151*, 152*, 153*, 154*, 160*, 210*  <b>Physical Sciences:</b> AST 101*; CHM 100*, 110*, 121*, 122*, 131*, 132*; GEG 121*; GEO 101*, PHS 101, 105*, 111*, 112*; PHY 121*, 122*, 201*, 202*												
<b>Group 4 Humanities and Fine Arts</b> 3 courses with at least 1 course selected from the Humanities and at least 1 from the Fine Arts. Interdisciplinary courses may be used for both categories.	6	<b>Humanities:</b> FRN 202 or GER 202 or JPN 202 or SGN 210 or SPA 202; HST 141, 142; HUM 120; LIT 105, 110, 115, 206, 207, 208, 210, 221, 222, 223, 224, 231, 232; PHI 105, 110, 115, 160, 205, 220, 231, 232; FRN 210 or GER 210 or SPA 210  <b>Fine Arts:</b> FNA 111, 112 or 113; FNA 114 or LIT 112; MUS 103, 104, 120; SPE 111  <b>Interdisciplinary Studies:</b> HUM 101, 102, 103, 110												
<b>Group 5 Social and Behavioral Sciences</b> 2 courses, with courses selected from at least two departments	6	ANT 101, 202, 205, 206; ECO 200, 211, 212; GEG 101 or 108, 103, 104, 210; HST 111, 112, 121, 243; PSC 101, 220, 250, 270, 280; PSY 101, 216, 217, 218, 228; SOC 101, 120, 205, 215												
<b>Total General Education</b>		31												
<b>Group 6 Core Courses</b>	24	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;"><b>ART</b></td> <td style="text-align: left;"><b>FNA</b></td> </tr> <tr> <td>110</td> <td>111</td> </tr> <tr> <td>111</td> <td>112</td> </tr> <tr> <td>121</td> <td>113</td> </tr> <tr> <td>122</td> <td></td> </tr> <tr> <td>225</td> <td></td> </tr> </table>	<b>ART</b>	<b>FNA</b>	110	111	111	112	121	113	122		225	
<b>ART</b>	<b>FNA</b>													
110	111													
111	112													
121	113													
122														
225														
<b>Group 7 Approved Electives</b>	9	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;"><b>ART</b></td> </tr> <tr> <td>206</td> </tr> <tr> <td>240</td> </tr> <tr> <td>261</td> </tr> <tr> <td>291</td> </tr> <tr> <td>296</td> </tr> </table>	<b>ART</b>	206	240	261	291	296						
<b>ART</b>														
206														
240														
261														
291														
296														
<b>Total Hours Required</b>		64												

**Notes:**

- <sup>1</sup> Completion of the Associate in Fine Arts degree does not fulfill the requirements of the Illinois General Education core curriculum. After transfer, A.F.A. students will need to complete the general education requirements of the institution to which they transfer.
- <sup>2</sup> A portfolio review is required with an art advisor after the completion of the first two semesters of art course requirements before starting any other art courses. The Art Department strongly recommends that A.F.A. candidates also take two semesters of ART 100 for its professional career content.
- <sup>3</sup> Credit will not be granted for both MGT 225 and MTH 165.
- <sup>4</sup> Check with a Student Development faculty member regarding the maximum number of credits that will be accepted in transfer.
- <sup>†</sup> No more than two GEG or two HST courses may be used to fulfill Groups 1-5. Credit will not be granted for both MGT 225 and MTH 165.



# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

## Requirements for Associate in Fine Arts Degree (A.F.A.): Music Emphasis†

These requirements apply to students who first enrolled for Fall 2000 or later. Students who first enrolled prior to Fall 2000 should obtain the appropriate sheet of requirements from Student Development Center.

Fall 2000	Hours Required	Harper Courses
<b>Group 1</b> <b>Communications</b> 3 courses. A grade of "C" or better is required for ENG 101 and 102.	9	ENG 101, 102 & SPE 101
<b>Group 2</b> <b>Mathematics</b> 1 course. MTH 101, 124 or 134 preferred.	3	MGT 225 or MTH 165; MTH 101, 124, 131, 134 or 200, 201, 202, 203, 212, 220, 265
<b>Group 3</b> <b>Physical and Life Sciences</b> 2 courses with 1 course from the Life Sciences and 1 from the Physical Sciences. 1 course must be a lab science (marked with an *).	7	<b>Life Science:</b> BIO 101, 103, 104*, 105, 110*, 120*, 130*, 135, 136, 140*, 150*, 151*, 152*, 153*, 154*, 160*, 210* <b>Physical Sciences:</b> AST 101*; CHM 100*, 110*, 121*, 122*, 131*, 132*; GEG 121*; GEO 101*, PHS 101, 105*, 111*, 112*; PHY 121*, 122*, 201*, 202*
<b>Group 4</b> <b>Humanities and Fine Arts</b> 3 courses with at least 1 course selected from the Humanities and at least 1 from the Fine Arts. Interdisciplinary courses may be used for both categories.	6	<b>Humanities:</b> FRN 202 or GER 202 or JPN 202 or SGN 210 or SPA 202; HST 141, 142; HUM 120; LIT 105, 110, 115, 206, 207, 208, 210, 221, 222, 223, 224, 231, 232; PHI 105, 110, 115, 160, 205, 220, 231, 232; FRN 210 or GER 210 or SPA 210 <b>Fine Arts:</b> ART 105; FNA 111, 112 or 113; FNA 114 or LIT 112; SPE 111 <b>Interdisciplinary Studies:</b> HUM 101, 102, 103, 110
<b>Group 5</b> <b>Social and Behavioral Sciences</b> 1 course	3	ANT 101, 202, 205, 206; ECO 200, 211, 212; GEG 101 or 108, 103, 104, 210; HST 111, 112, 121, 243; PSC 101, 220, 250, 270, 280; PSY 101, 216, 217, 218, 228; SOC 101, 120, 205, 215

**Total General Education** 28

Group 6 Core Courses	Music Theory	Music Literature/History	Keyboard Skills <sup>2</sup>	Aural Skills	Ensemble	Applied Instruction
Core Music Courses:						
Music Theory	12	111	120	165	115	130
Music Literature/History	3	211	265	215	140	280-299
Keyboard Skills <sup>2</sup>	8	212	266	216	150	
Aural Skills	4					
Ensemble	4					
Applied Instruction	8					

**Total Hours Required** 67

- Notes:**
- <sup>1</sup> Completion of the Associate in Fine Arts degree does not fulfill the requirements of the Illinois General Education core curriculum. After transfer, A.F.A. students will need to complete the general education requirements of the institution to which they transfer.
  - <sup>2</sup> All music majors must demonstrate piano proficiency; MUS 165, 166, 265 and 266 may be passed by proficiency exam. Music majors are also advised to take MUS 100 as part of their elective credit.
  - <sup>3</sup> Credit will not be granted for both MGT 225 and MTH 165.
- † No more than two GEG or two HST courses may be used to fulfill Groups 1-5. Credit will not be granted for both MGT 225 and MTH 165.

# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

## Requirements for Associate in Fine Arts Degree (A.F.A.): Piano Pedagogy†

These requirements apply to students who first enrolled for Fall 2000 or later. Students who first enrolled prior to Fall 2000 should obtain the appropriate sheet of requirements from Student Development Center.

Fall 2000	Hours Required	Harper Courses
<b>Group 1</b> <b>Communications</b> 3 courses. A grade of "C" or better is required for ENG 101 and 102.	9	ENG 101, 102 & SPE 101
<b>Group 2</b> <b>Mathematics</b> 1 course	3	MGT 225 or MTH 165; MTH 101, 124, 131, 134 or 200, 201, 202, 203, 212, 220, 265
<b>Group 3</b> <b>Physical and Life Sciences</b> 2 courses with 1 course from the Life Sciences and 1 from the Physical Sciences. 1 course must be a lab science (marked with an *).	7	<b>Life Science:</b> BIO 101, 103, 104*, 105, 110*, 120*, 130*, 135, 136, 140*, 150*, 151*, 152*, 153*, 154*, 160*, 210*  <b>Physical Sciences:</b> AST 101*; CHM 100*, 110*, 121*, 122*, 131*, 132*; GEG 121*; GEO 101*, PHS 101, 105*, 111*, 112*; PHY 121*, 122*, 201*, 202*
<b>Group 4</b> <b>Humanities and Fine Arts</b> 3 courses with at least 1 course selected from the Humanities and at least 1 from the Fine Arts. Interdisciplinary courses may be used for both categories.	6	<b>Humanities:</b> FRN 202 or GER 202 or JPN 202 or SGN 210 or SPA 202; HST 141, 142; HUM 120; LIT 105, 110, 115, 206, 207, 208, 210, 221, 222, 223, 224, 231, 232; PHI 105, 110, 115, 160, 205, 220, 231, 232; FRN 210 or GER 210 or SPA 210  <b>Fine Arts:</b> ART 105; FNA 111, 112 or 113; FNA 114 or LIT 112; SPE 111  <b>Interdisciplinary Studies:</b> HUM 101, 102, 103, 110
<b>Group 5</b> <b>Social and Behavioral Sciences</b> 1 course	3	ANT 101, 202, 205, 206; ECO 200, 211, 212; GEG 101 or 108, 103, 104, 210; HST 111, 112, 121, 243; PSC 101, 220, 250, 270, 280; PSY 101, 216, 217, 218, 228; SOC 101, 120, 205, 215

**Total General Education** 28

Group 6 Core Courses	Music Theory	Music Literature/History	Keyboard Skills <sup>2</sup>	Aural Skills	Ensemble	Applied Instruction
Core Music Courses:						
Music Theory	12	111	266	115	130	180-199
Music Literature/History	3	120		116	140	280-299
Keyboard Skills <sup>2</sup>	2	211		215	145	
Aural Skills	4	212		216	150	
Ensemble	4	271				
Applied Instruction	8	272				
Piano Pedagogy	6					

**Total Hours Required** 67

**Notes:**

- <sup>1</sup> Completion of the Associate in Fine Arts degree does not fulfill the requirements of the Illinois General Education core curriculum. After transfer, A.F.A. students will need to complete the general education requirements of the institution to which they transfer.
- <sup>2</sup> All music majors must demonstrate piano proficiency; MUS 266 may be passed by proficiency exam. Music majors are also advised to take MUS 100 as part of their elective credit.
- <sup>3</sup> Credit will not be granted for both MGT 225 and MTH 165.
- † No more than two GEG or two HST courses may be used to fulfill Groups 1-5. Credit will not be granted for both MGT 225 and MTH 165.

# COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

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

Fall 2000	Hours Required	Harper Courses
<b>Group 1 Communications</b> ENG 101 or 130 and a second course, as approved for your curriculum.	6	ENG 100, 101, 102, 103, 130; JNM 130, 131, 133; SPE 101
<b>Group 2 Mathematics</b> The mathematics requirement may be satisfied by demonstrated competency on an exam given by the College.*	3	MGT 150; MTH 060, 061, 062, 063, 080, 086, 087, 100, 101, 103, 104, 106, 107, 120, 124, 130, 131, 134, 165, 200, 201, 202, 206; EMF 111, 112, 113, 114; MTH 220
<b>Group 3 Natural Sciences</b> 9 hrs. must be taken from a minimum of two of Groups 3, 4 and 5.		AST 101, 201; BIO 101, 103, 104, 105, 110, 120, 130, 135, 136, 140, 150, 151, 152, 153, 154, 160, 161, 210, 220, 240; CHM 100, 110, 121, 122, 125, 131, 132, 201, 204, 210; DIT 101; GEG 121; GEO 101, 102, 201, 202; PHS 101, 105, 111, 112; PHY 101, 102, 115, 116, 121, 122, 201, 202
<b>Group 4 Humanities</b> 9 hours must be taken from a minimum of two of Groups 3, 4 and 5.		ART 105, 110, 111, 121, 122, 201, 206, 225, 236, 261, 291, 296; FNA 111, 112, 113, 114; FRN 101, 102, 201, 202, 205, 210; GER 101, 102, 201, 202, 205, 210; HST 105, 111, 112, 121, 141, 142, 151, 152, 153, 210, 212, 214, 243; HUM 101, 102, 103, 105, 110, 115, 120; JPN 101, 102, 201, 202; LNG 105; LIT 105, 110, 112, 115, 206, 207, 208, 210, 216, 217, 219, 221, 222, 223, 224, 231, 232, 241; MUS 101, 103, 104, 120, 130, 136, 140, 145, 150, 165, 166, 167, 169, 180-199; PHI 105, 110, 115, 120, 150, 160, 170, 180, 190, 205, 210, 220, 231, 232; SGN 101, 102, 201, 202, 205, 210; SPA 101, 102, 201, 202, 205, 210; SPE 107, 111, 212, 216
<b>Group 5 Social Sciences</b> 9 hours must be taken from a minimum of two of Groups 3, 4 and 5.		ANT 101, 202, 203, 204, 205, 206, 207, 208, 210, 220; ECO 115, 200, 211, 212, 225; EDU 211; GEG 101, 103, 104, 108, 210; LNG 205; PSC 101, 220, 250, 270, 280; PSY 101, 107, 108, 145, 150, 210, 216, 217, 218, 220, 225, 228, 230, 235; SOC 101, 120, 205, 210, 215, 220, 230
<b>Total General Education</b>	*15-18	
<b>Group 6 Technical Requirements and Electives</b>	42-45	
<b>Total Hours Minimum</b>	60**	

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

Note:

Completion of the Associate in Applied Science degree does not fulfill the Illinois General Education Core Curriculum. After transfer, AAS students will need to complete the general education requirements of the institution to which they transfer.

## Harper College Career Programs

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

### Arts and Communication

- Fashion Design
- Fashion Merchandising<sup>2</sup>
- Interior Design<sup>2</sup>
- Journalism:
  - Journalism<sup>2</sup>
  - Media Design<sup>1</sup>
  - Media Writing<sup>1</sup>
  - Media Writing and Design<sup>1</sup>
- Sign language Interpreting<sup>1</sup>

### Business, Management and Computer Technology

- Accounting Associate
- Accounting Clerk<sup>1</sup>
- Accounting-Payroll, State and Local Taxes<sup>1</sup>
- Administrative Technology:
  - Administrative Assistant<sup>1</sup>
  - Certified Professional Secretary<sup>1</sup>
  - Executive Assistant<sup>2</sup>
  - General Office<sup>1</sup>
  - Office Technology<sup>1</sup>
  - Secretarial<sup>1</sup>
- Computer Information Systems:
  - Advanced LAN Management<sup>1</sup>
  - C Programming<sup>1</sup>
  - Computer Operator<sup>1</sup>
  - LAN Management<sup>1</sup>
  - Microcomputer Support Specialist<sup>1</sup>
  - Microcomputers in Business
  - Midrange<sup>1</sup>
  - NetPrep™ Network Specialist<sup>1</sup>
  - NetPrep™ Senior Network Specialist<sup>1</sup>
  - Technology
  - Web Development
  - Web Visual Design<sup>1</sup>
- Financial Services:
  - Commercial Credit Management<sup>1</sup>
  - Financial Management<sup>1</sup>
  - Financial Services<sup>2</sup>
  - Real Estate Broker's License Preparation<sup>1</sup>
  - Real Estate Sales Professional<sup>1</sup>
- Hospitality Management:
  - Bread and Pastry Arts<sup>1</sup>
  - Culinary Arts<sup>1</sup>
  - Hotel Management<sup>1</sup>

- International Business
- Law Office Administrative Assistant
- Management:
  - Advanced Management<sup>1</sup>
  - General Management<sup>1</sup>
  - Human Resource Management<sup>1</sup>
  - Management<sup>2</sup>
  - Small Business Management<sup>1</sup>
- Marketing:
  - Marketing<sup>2</sup>
  - Retail Merchandising<sup>1</sup>
  - Sales Management<sup>1</sup>

### Health Services

- \* Cardiac Technology<sup>2</sup>
- \* Dental Hygiene<sup>2</sup>
- Dietary Manager<sup>1</sup>
- Dietetic Technician<sup>2</sup>
- \* Emergency Medical Technician<sup>3</sup>
- Medical Office Administration:
  - Health Care Office Manager<sup>2</sup>
  - Health Care Secretary<sup>1</sup>
  - Health Insurance Billing Specialist<sup>1</sup>
  - Medical Office Assistant
  - Medical Transcriptionist<sup>1</sup>
- Nursing:
  - \* Nursing<sup>2</sup>
  - \* Certified Nursing Assistant<sup>1</sup>
  - \* Licensed Practical Nursing<sup>1</sup>
- Pharmacy Technician

### Human Services

- Criminal Justice:
  - Criminal Justice
  - Industrial and Retail Security<sup>1</sup>
- Early Childhood Education:
  - Before and After School Care<sup>1</sup>
  - Early Childhood Administration<sup>1</sup>
  - Early Childhood Education<sup>2</sup>
  - Early Childhood Education Assistant Teacher<sup>1</sup>
  - Early Childhood Education Teacher<sup>1</sup>
  - Family Child Care<sup>1</sup>
  - Infant/Toddler<sup>1</sup>
  - Special Education Para-professional<sup>1</sup>
- Fire Science Technology
- Paralegal Studies

\* Enrollment program is limited. See Limited Enrollment Programs section of this catalog for guidelines.

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

<sup>2</sup> Associate degree program only.

<sup>3</sup> Offered as a 6-credit hour course; see HSC 110 (Emergency Medical Technician Training)

**Harper College Career Programs continued....**

**Industrial and Engineering Technology**

- Architectural Technology
- Architectural CAD<sup>1</sup>
- Automation Skills<sup>1</sup>
- Building Codes and Enforcement<sup>1</sup>
- Digital Electronics and Microprocessor Technology
- Electrical Maintenance<sup>1</sup>
- Electronics Manufacturing Technician<sup>2</sup>
- Electronics Technology
- Manufacturing Engineering:
  - CNC/CAM Technician<sup>1</sup>
  - Machinist<sup>1</sup>
  - Manufacturing Technology<sup>2</sup>
  - Manufacturing Technology/Machining<sup>2</sup>
  - Production Engineering Technician<sup>1</sup>
  - Production Welding<sup>1</sup>
  - Quality Assurance<sup>1</sup>
- Material /Logistics Management
- Mechanical Engineering Technology:
  - CAD Technician<sup>1</sup>
  - Mechanical Drafting<sup>1</sup>
  - Mechanical Engineering Technology<sup>2</sup>
- Refrigeration and Air Conditioning:
  - Domestic Refrigeration and Heating<sup>1</sup>
  - Heating Service<sup>1</sup>
  - Refrigeration and Air Conditioning<sup>2</sup>
  - Refrigeration and Air Conditioning Service<sup>1</sup>
  - Refrigeration Service<sup>1</sup>
  - Residential Comfort Systems<sup>1</sup>

**Natural Resources/Environment**

- Park and Golf Maintenance:
  - Arboriculture<sup>1</sup>
  - Golf Course Maintenance<sup>1</sup>
  - Grounds Equipment Operator<sup>1</sup>
  - Nursery Operations<sup>1</sup>
  - Park and Golf Maintenance<sup>2</sup>
  - Turfgrass Maintenance<sup>1</sup>
- Plant Science Technology:
  - Advanced Floral Design<sup>1</sup>
  - Floral Design<sup>1</sup>
  - Garden Center Operations<sup>1</sup>
  - Greenhouse Operations<sup>1</sup>
  - Grounds Maintenance<sup>1</sup>
  - Landscape Design<sup>1</sup>
  - Pesticide Applicator<sup>1</sup>
  - Plant Propagation<sup>1</sup>
  - Plant Science Technology<sup>2</sup>

Enrollment program is limited. See Limited Enrollment Programs section of this catalog for guidelines.

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

<sup>2</sup> Associate degree program only.

<sup>3</sup> Offered as a 6-credit hour course, See HSC 110 (Emergency Medical Technician Training).

**Cooperative Programs**

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

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

**College of DuPage**.....630/858-2800

Lambert Road and 22nd Street  
Glen Ellyn, Illinois 60137

- Advertising Design and Illustration
- Automotive Technology
- Communication Art and Sciences
- Graphic Arts
- Human Services
- Library Technical Assistant
- Media
- Medical Records Technology
- Nuclear Medicine
- Occupational Therapy Assistant
- Photography
- Plastics Technology
- Radiologic Technology
- Respiratory Therapy Technician
- Supermarket Management
- Travel and Transportation

**College of Lake County**.....847/223-6601

19351 West Washington Street  
Grayslake, Illinois 60030

- Auto Body Repair and Painting
- Automotive Technology
- Building Construction Technology
- Chemical Technology
  - Bio-Tech Option
  - Chem-Tech Option
- Civil Technology
- Health Information Technology
- Human Services Technology
- Industrial Maintenance and Repair
- Library Technical Assistant
- Medical Laboratory Technology
- Radiography
- Registered Nurse Refresher
- Rehabilitation Nursing
- Technical Communications
- Tool and Moldmaker
- Water/Wastewater
- Welding—Advanced

# **COLLEGE CREDIT PROGRAMS AND REQUIREMENTS**

**Elgin Community College** .....847/697-1000

1700 Spartan  
Elgin, Illinois 60120

- Automotive Service Excellence
- CAM
- Child and Youth Advocacy
- Clinical Laboratory Technology
- Culinary Arts
- Dental Assisting
- Food Manufacturing Technology
- Gerontology
- Human Services Family Violence Counseling
- Machine Tool, Career Advanced Program
- Machine Tool Operation Technology
- Mental Health Generalist
- Plastics Processing and Fabricating
- Plastics Technology
- Sign Language Interpreting
- Substance Abuse
- Surgical Technology
- Travel and Tourism
- Truck Driving
- Truck Driving Owner/Operator
- Welding

**Lincoln Land Community College** .....217/786-2200

5250 Shepherd Road  
Springfield, Illinois 62794-9256

- Aircraft Mechanics

**McHenry County College** .....815/455-3700

Route 14 and Lucas Road  
Crystal Lake, Illinois 60014

- Agri-Business Service and Supply
- Agricultural Business Technology
- Automotive Technology
- Dispensing Opticianry
- Industrial Supervision Technology
- Industrial Work Measurement
- Machine Apprenticeship
- Photography<sup>1</sup>
- Real Estate Appraisal
- Small Business Specialist

**Oakton Community College** .....847/635-1600

1600 East Golf Road  
Des Plaines, Illinois 60016

- Automotive Service Excellence
- Automotive Technology
- Bed and Breakfast Operations Management
- Biomedical Electronics Technology
- Electronic Servicing
- Facilities Operation and Engineering
- Health Information Technology
- Human Services
- Investment Economics and Analysis
- Machine Apprentice (Tool & Die)
- Medical Laboratory Technology
- Phlebotomy
- Photography<sup>1</sup>
- Physical Therapy Assistant

**Rock Valley College** .....815/654-4285

3301 North Mulford Road  
Rockford, IL 61101

- Aviation Maintenance Technology

**Triton College** .....708/456-0300

2000 Fifth Avenue  
River Grove, IL 60171

- Automotive Technology
- Basic Addiction Counseling
- Dental Laboratory Technology
- Diesel Technology
- Laser Electro-Optic
- Machine Repair Specialist
- Magnetic Resonance Imaging
- Ophthalmic Technician
- Photo Offset
- Radiologic Technology
- Respiratory Therapy Technician
- Surgical Technology<sup>2</sup>

<sup>1</sup> Courses only.

<sup>2</sup> Technical courses only.

**Cooperative Programs, continued**

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

Architectural Technology .....	McHenry County district
Bread and Pastry Arts .....	Lake County and Rock Valley districts
Building Codes and Enforcement .....	DuPage, Lake County, McHenry County and Oakton districts
Cardiac Technology .....	Elgin, Lake County and Triton districts
Certified Professional Secretary .....	Lake County district
CNC/CAM Technician .....	McHenry County district
Computer Information Systems- Computer Operator .....	McHenry County district
Criminal Justice <sup>3</sup> .....	McHenry County district
Culinary Arts .....	Lake County, McHenry County, Oakton and Rock Valley districts
Dental Hygiene .....	DuPage, Elgin, Lake County, McHenry County, Oakton and Triton districts
Dietetic Technician .....	DuPage, Elgin, Lake County, McHenry County, Oakton and Triton districts
Fashion Design .....	Elgin, Lake County, McHenry County, Oakton and Triton districts
Fashion Merchandising .....	Elgin, Lake County, McHenry County and Oakton districts
Financial Services .....	DuPage, Lake County, and McHenry County districts
Fire Science Technology .....	McHenry County district
Health Care Secretary .....	DuPage district
Hospitality Management .....	McHenry County district
Industrial and Retail Security .....	DuPage, Lake County and McHenry County districts
Interior Design .....	Elgin, Lake County, McHenry County and Oakton districts
Journalism .....	DuPage, Elgin, Lake County and McHenry County districts
Law Office Administrative Assistant .....	Lake County district
Management .....	DuPage District
Material/Logistics Management .....	DuPage, Elgin, Lake County and McHenry County districts

Mechanical Engineering Technology .....	McHenry County district
Medical Office Assistant .....	DuPage, Elgin, Lake County, McHenry County and Oakton districts
Medical Transcriptionist .....	McHenry County district
Nursing .....	McHenry County district
Paralegal Studies .....	DuPage, Lake County, McHenry County, Oakton, Rock Valley and Triton districts
Park and Golf Maintenance .....	DuPage, Elgin, McHenry County and Oakton districts
Pharmacy Technicians .....	DuPage, Elgin, Lake County, McHenry County, Oakton and Triton districts
Plant Science Technology .....	Oakton district
Refrigeration and Air Conditioning Technology .....	McHenry County district
Sales Management and Development .....	DuPage district
Sign Language Interpreting .....	DuPage, Elgin, Lake County, McHenry County and Triton districts

<sup>3</sup> Corrections courses only.

**Special Academic Programs:  
FlexEd™**

FlexEd™ is one of the most comprehensive programs of its kind in the country. Offering alternative learning options, FlexEd™ meets the changing needs of people on the go, with courses that are more accessible, flexible and convenient. Special opportunities under the FlexEd™ heading include:

- Internet Courses
- Late Start Classes
- Open Entry Classes
- Spring Into Spring Classes
- Sunrise Classes
- Telecourses
- Videoconference Courses
- Weekend College
- XLR8 Classes

**Internet Courses**

A variety of courses are now available to students via the World Wide Web. Not only will you have the flexibility of class scheduling, testing dates and times, you'll also have the opportunity to communicate with your instructor and classmates via e-mail or through special forum "chat" rooms, both an integral part of your online educational experience. If you have access to a computer with specific

## COLLEGE CREDIT PROGRAMS AND REQUIREMENTS

hardware and software requirements, modem and online access through an Internet Service Provider (ISP), then Internet courses may be the perfect option for you.

### ■ **Late Start Classes**

The name says it all. Late Start classes are ideal if you're not able to register on time. Or if you'd like to take two courses – one the first eight weeks of the semester and a second one the last eight weeks. So if you've missed our scheduled registration, check out our website at [www.harper.cc.il.us](http://www.harper.cc.il.us) for a complete list of Late Start classes.

### ■ **Open Entry Classes**

Harper has designed this unique class format to meet the needs of many students. Maybe you are unable to attend regularly scheduled classes. Or you want to finish the course work more quickly or you're just anxious to start, but the course has already begun. We just require a one-hour orientation, where the instructor will show you around the lab, hand out homework assignments and answer any questions. Open Entry instructors are available for guidance during posted office hours. Open Entry classes are offered in AutoCAD, Administrative Technology and Computer Information Systems. In addition, all Adult Educational Development classes are open entry.

### ■ **Spring into Spring**

Twelve-week classes beginning the week of January 18 and ending the week of April 11. Offered at Elk Grove High School only – an easy drive from home or work.

### ■ **Sunrise Classes**

The early bird gets the worm, and now, also a great education. Harper's sunrise classes start anywhere from 6:00 to 7:35 in the morning and are perfect if you want to get a little learning in before you go to work.

### ■ **Telecourses**

Harper offers a complete range of courses, from economics to psychology, that may be viewed on cable TV within the Harper district area. Each telecourse has a mandatory, on-campus orientation session in order to give you an introduction to the instructor and course expectations. Any missed classes can be viewed at the main campus Library or select area libraries. A taped set of classes may also be rented from the Bookstore for a fee.

### ■ **Videoconference Classes**

If courses you're interested in are offered only at another area college, chances are they may be available at Harper through our sophisticated videoconferencing classroom located on our main Palatine campus. These unique two-way interactive video classes can save you hours a week in drive time.

### ■ **Weekend College**

If you have a demanding job or a very active lifestyle, our weekend courses may be the ideal way for you to concentrate on your educational goals. Harper College offers a variety of weekend formats, including the traditional six-

teen-week course or shorter formats, such as three credits in three weekends. For many people, this is often the best way to earn an associate degree or credits that can be transferred to a four-year program.

### ■ **XLR8**

Earn six credit hours and a Harper Achievement Award in just 16 weeks. The new XLR8 program offers awards in several disciplines.

**For more information on any of our FlexEd™ classes, call 847/925-6707. Or visit our web site: [www.harper.cc.il.us](http://www.harper.cc.il.us)**

## International Studies Program

Harper College has joined in a consortium with 40 other community colleges, Illinois State University and several colleges in Wisconsin and Michigan to provide a semester abroad program for students at these institutions. This joint effort makes it possible for the colleges to offer a sound, viable academic program at reasonable cost, and allows qualified students to take advantage of the unique educational experience afforded through study in another country. Currently, programs are available in Canterbury, England, Salzburg, Austria, Amsterdam, Holland and San Jose, Costa Rica. Other opportunities include a new site in Japan and possibly China.

The Harper College International Studies Program was first offered in the spring of 1987. The sites in England and Austria will be offered each fall and spring. The program in Costa Rica is offered only in the summer. The program in Holland is offered in the spring only. To be eligible, a student must have completed 15 credit hours with a 2.75 grade point. Further information about the International Studies Program is available through Student Development, in the Business and Social Science Center, 1117, 847/925-6522.

## Honors Program

Harper College seeks to stimulate, encourage and recognize work of depth, scope and originality by its students. A balanced curriculum of honors courses is offered in the major areas required for the General Education component of associate degrees.

Honors students enjoy the benefit of reduced class size and the challenge of social and intellectual interaction with other high achieving students while they acquire the breadth of understanding and develop leadership qualities that such settings enhance.

All honors courses are noted as such on the transcript. Additionally, upon fulfilling all other degree requirements, students who complete at least 12 hours of honors course work and maintain a GPA of 3.25 or higher will be designated as Honors Program graduates.



To be admitted to honors classes, students must meet specified criteria, complete an honors application, and have an interview with the coordinator of honors. Applications are available in the Office of Admissions, the Division offices and the Counseling Centers.

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

## English as a Second Language

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

The ESL/Linguistics Department serves students from any language background. Some students are referred to the department from the Harper College assessment program. Student educational backgrounds range from six grades completed through completion of graduate/professional programs. Students with fewer than six years of education are referred to the Adult Educational Development Department for enrollment in the Nonnative Literacy Program.

Students are tested during registration and counseled for appropriate program and course placement. For more information, contact the department office.

### ■ **Intensive English Program**

A full-time approach to English language instruction is offered for beginning through high-intermediate students. Emphasis is on the language skills and cultural knowledge needed to enter college and university programs in the United States. The program is also beneficial for business and professional personnel. The program includes four levels; students may complete one level per semester or twelve-week summer session. The program provides instruction in grammar, vocabulary, listening, speaking, reading and writing. Students must have completed a minimum of 12 grades of education in their native country or in the U.S. in order to enter the program.

This program meets the INS requirements for students on student visas and has candidacy status with the TESOL Commission on Accreditation.

### ■ **Part-Time Academic ESL Program**

This program is for those students who wish to improve their English language skills for educational, professional or employment reasons. A core sequence of six proficiency levels of general courses is offered as well as intermediate to advanced level courses in reading, writing, grammar, listening/speaking, formal and informal vocabulary, pronunciation, American culture and TOEFL preparation. Students may enroll in this program along with other appropriate college courses.

## Adult Educational Development

The Adult Educational Development (AED) Department provides instructional programs and services in literacy, Pre-GED, GED, nonnative literacy, citizenship, employment skills and special topics. On site, customized academic skills classes for business and industry are offered through Workforce and Professional Development. All programs are intended for adults 16 years old and over who are not currently enrolled in a secondary school.

The **nonnative literacy program** serves students whose first language is not English and who have limited years of schooling in their native countries.

The **literacy program** is intended to teach adults who cannot read, write or perform basic arithmetic. **The Pre-GED and GED programs** are designed for those who have not completed a secondary education program in the United States and who have not passed the General Educational Development (GED) Test battery (high school equivalency). The GED testing program is intended for adults 19 years of age and older. However, students 17 and 18 years of age may meet other test requirements. **The citizenship training program** focuses upon test preparation and procedures for U.S. citizenship. **The employment skills program** is open to students concurrently enrolled in other AED programs or as a separate option.

Students are tested and advised during registration for placement in classes. Basic skills, nonnative literacy and Pre-GED students are advised of their progress through achievement tests in classes, and GED students are given predictive tests to measure potential success in passing the GED Test battery. Advising services are available to meet students' personal, academic and/or career/vocational needs. The on-site workforce program offers work-related customized instruction in reading, writing, language (English—listening, speaking, reading and writing for non-native employees) and mathematical skills.

Daytime and evening courses are offered at the Palatine campus, Northeast Center, the Police Neighborhood Resource Center in Rolling Meadows, Edgebrook Community Center at Baldwin Greens, the Northeast Palatine Community Center, and other locations including area businesses. Courses include Nonnative Literacy I, II, III and IV; Basic Reading Skills, Basic English Skills, Basic Mathematical Skills, Pre-GED Reading Skills, Pre-GED English Skills, Pre-GED Mathematical Skills; GED Social Studies and Science, GED Writing Skills and Literature, GED Mathematics; Adult Employment Skills; Citizenship Training and Topics in Adult Educational Development. For more information, call the AED Department at 847/925-6223 (campus) or 847/925-6015 (Northeast Center).

## Student Development Credit Courses and Seminars

### ■ Credit Courses

Several different classroom experiences are offered for academic credit by the Student Development Division. Orientation 101 (ORN 101) provides exposure to strategies necessary to adapt to the college environment and assists students in developing initial career and educational goals. Humanistic Psychology (PSY 107) facilitates personal growth and development through the exploration of self-understanding, confidence, motivation, clarification of goals and relationships. Topics in Psychology (PSY 108) allows students the opportunity to examine current issues. Topics covered during a particular semester are listed in the semester course schedule. Career Development (CDV 110) provides students with the opportunity to explore career interests, experiences, skills, abilities and work related values and examine information about the world of work in order to develop educational and career goals. Exploring Diversity in the United States (DIV 101) focuses on culture and other diversity issues and topics; students will have the opportunity to discuss dimensions of their own cultures and cultures of others as well as examine discrimination and prejudice between groups and the impact of these power differences on peoples' lives.

### ■ Non-credit Seminars:

Non-credit group seminars on a variety of topics are also offered each semester. Mailings, posters and brochures will inform students of these offerings. Students may request additional information by visiting any of the Student Development Centers.

## Alternative Credit Programs/ Credit Options

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

Guidelines, policies and procedures for these programs are available from the Assessment and Testing Center.

### Advanced Placement Program (Offered Only in High School)

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

### College Level Examination Program

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

### Harper College Proficiency Examination Program

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

### American Council on Education Credit Recommendations

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

## **Transfer Programs**

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

### **ART**

### **BIOLOGICAL SCIENCES**

### **BUSINESS ADMINISTRATION**

### **COMPUTER SCIENCE-INFORMATION SYSTEMS EMPHASIS**

### **COMPUTER SCIENCE-TECHNICAL EMPHASIS**

### **CRIMINAL JUSTICE**

### **EARLY CHILDHOOD EDUCATION**

### **ELEMENTARY EDUCATION**

### **SECONDARY EDUCATION**

### **SPECIAL EDUCATION**

### **ENGINEERING**

### **FOREIGN LANGUAGES**

### **HEALTH EDUCATION**

### **LIBERAL ARTS**

### **MASS COMMUNICATIONS**

### **MATHEMATICS**

### **MUSIC**

### **PHYSICAL EDUCATION**

### **PSYCHOLOGY**

### **SOCIAL SCIENCE**

### **SPEECH COMMUNICATION**

### **THEATRE ARTS**

# TRANSFER PROGRAMS

## Art<sup>1,2</sup>

*This recommended transfer program for art students meets the requirements for an associate in fine arts degree. Students should check individual school requirements before completing the curriculum as outlined.*

### General Education Courses

#### Communications:

ENG	101	Composition I.....	3
ENG	102	Composition II.....	3
SPE	101	Fundamentals of Speech Communication.....	3
			<u>9</u>

<b>Mathematics<sup>3</sup></b>		.....	3
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<b>Physical and Life Sciences<sup>4</sup></b>		.....	7
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<b>Humanities and Fine Arts<sup>5</sup></b>		.....	6
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<b>Social and Behavioral Sciences<sup>6</sup></b>		.....	6
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#### Core Art Courses:

FNA	111	History of Art I.....	3
FNA	112	History of Art II.....	3
FNA	113	History of Art III.....	3
ART	110	Drawing I.....	3
ART	111	Drawing II.....	3
ART	121	Design I.....	3
ART	122	Design II.....	3
ART	225	Figure Drawing Studio.....	3
			<u>24</u>

#### Elective Art Courses<sup>7</sup>

ART	206	Printmaking Studio.....	3
ART	240	Computer Graphics Studio.....	3
ART	261	Painting Studio.....	3
ART	291	Ceramics Studio.....	3
ART	296	Sculpture Studio.....	3
			<u>9</u>

**Total**      **64**

<sup>1</sup> Art majors pursuing an A.F.A. degree should be aware that a portfolio review with an art advisor is required after the completion of the first two semesters of art course requirements before starting any other art courses. The Art department strongly recommends that A.F.A. candidates also take two semesters of ART 100 for its professional career content.

<sup>2</sup> Completion of the Associate in Fine Arts degree does not fulfill the requirements of the Illinois General Education core curriculum. After transfer, A.F.A. students will need to complete the general education requirements of the institution to which they transfer.

<sup>3</sup> Approved courses are listed with the requirements for the associate degrees.

<sup>4</sup> Select one physical and one life science course. At least one must include a lab.

<sup>5</sup> Approved courses are listed with the requirements for the associate degrees.

<sup>6</sup> Select one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.

<sup>7</sup> Approved courses are listed with the requirements for the associate degrees.

<sup>8</sup> Select studio art courses from at least two of the following disciplines for a total of 9 semester hours in consultation with an Art Department advisor.

**Biological Sciences**

*This recommended transfer program for biological sciences students meets the requirements for an associate in science degree and recommendations of the Illinois Articulation Initiative biological sciences major panel. Students should decide the specialization within the biological sciences major as early as possible, preferably by the beginning of the sophomore year. Students are strongly encouraged to complete an associate in science degree prior to transfer. Requirements for schools vary. Students should check individual school requirements before completing the curriculum as outlined.*

**General Education Courses**

**Communications:**

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			9

**Mathematics:**

MGT	225	Applied General Statistics or	
MTH	165	Elementary Statistics or	
MTH	200	Calculus with Analytic Geometry I or	
MTH	201	Calculus with Analytic Geometry II or	
MTH	202	Calculus with Analytic Geometry III .....	3-5
Mathematics elective <sup>1</sup> .....			<u>1-3</u>
			6

**Physical and Life Sciences:**

BIO	120	General Botany .....	4
CHM	121	General Chemistry I .....	<u>4</u>
			8

**Humanities and Fine Arts**<sup>2</sup> ..... 9

**Social and Behavioral Sciences**<sup>3</sup> ..... 9

**Special Electives**<sup>3</sup> ..... 3

**Approved Electives:**

BIO	110	Principles of Biology .....	4
BIO	140	General Zoology .....	4
CHM	122	General Chemistry II .....	4
Physics and Organic Chemistry <sup>4</sup> .....			<u>8-10</u>
			20-22

**Total**      **64**

<sup>1</sup> Students should check the curriculum of the transfer schools they are considering.

<sup>2</sup> Select at least one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.

<sup>3</sup> Approved courses are listed with the requirements for the associate degrees.

<sup>4</sup> Take two courses in physics (PHY 121 and PHY 122 or PHY 201 and PHY 202) OR take two courses in organic chemistry (CHM 204 and CHM 205) OR take one course in physics and one course in organic chemistry.

# TRANSFER PROGRAMS

## Business Administration

*This recommended transfer program for business students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation Initiative business major panel. Students will choose a major within the business field at the four-year institution they attend. Requirements for schools vary. Students should check individual school requirements before completing the curriculum as outlined.*

### General Education Courses

#### Communications:

ENG	101	Composition I.....	3
ENG	102	Composition II.....	3
SPE	101	Fundamentals of Speech Communication.....	<u>3</u>
			9

#### Mathematics:

MTH	134	Calculus for Social Scientists.....	4
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<b>Physical and Life Sciences</b> <sup>1</sup> .....	7
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<b>Humanities and Fine Arts</b> <sup>2</sup> .....	9
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#### Social and Behavioral Sciences:

ECO	211	Microeconomics.....	3
ECO	212	Macroeconomics.....	3
		Social and Behavioral Sciences elective <sup>3</sup> .....	<u>3</u>
			9

#### Special Electives:

MGT	111	Introduction to Business Organizations <sup>4</sup> .....	3
CIS	100	Computer Literacy or	
CIS	101	Introduction to Computer Information Systems.....	<u>3</u>
			6

#### Approved Electives

MGT	225	Applied General Statistics.....	4
ACC	101	Introduction to Financial Accounting.....	4
ACC	102	Introduction to Managerial Accounting.....	3
ACC	211	Business Law I <sup>6</sup> or	
ACC	213	Legal Environment of Business.....	3
		Other elective credit <sup>5</sup> .....	<u>2</u>
			16

**Total**      **60**

- <sup>1</sup> Select one physical and one life science course. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.
- <sup>2</sup> Select at least one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.
- <sup>3</sup> PSY 101 is recommended. Select in consultation with an advisor.
- <sup>4</sup> As part of the Illinois Articulation Initiative (Phase II), participating schools will accept MGT 111 as elective credit.
- <sup>5</sup> Approved courses are listed with the requirements for the associate degrees.
- <sup>6</sup> As part of the Illinois Articulation Initiative (Phase II), participating schools will accept ACC 211 or 213 in place of an equivalent business law or legal and social environment of business courses.

**Computer Science-Information Systems Emphasis**

*This recommended transfer program meets the requirements for an associate in science degree and the recommendations of the Illinois Articulation computer science major panel. Bachelor's degree programs in computer science encompass two distinct emphases: the information systems emphasis and the technical emphasis. The information systems emphasis focuses on the use of computer technology and information management methods to solve business problems. Students should check individual school requirements before completing the curriculum as outlined. Admission into many baccalaureate computer science programs is competitive; completion of the courses outlined below alone does not guarantee admission.*

**General Education Courses**

**Communications:**

ENG	101	Composition I.....	3
ENG	102	Composition II.....	3
SPE	101	Fundamentals of Speech Communication.....	<u>3</u>
			9

**Mathematics:**

MTH	124	Finite Mathematics or	
MTH	134	Calculus for Social Scientists or	
MTH	200	Calculus with Analytic Geometry I.....	3-5
MGT	225	Applied General Statistics.....	<u>4</u>
			7-9

**Physical and Life Sciences**<sup>1</sup>..... 8

**Humanities and Fine Arts**<sup>2</sup>..... 9

**Social and Behavioral Sciences:**

ECO	211	Microeconomics.....	3
ECO	212	Macroeconomics.....	3
		Social and Behavioral Science elective <sup>3</sup> .....	<u>3</u>
			9

**Special Electives:**

CSC	121	Computer Science I.....	4
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**Approved Electives:**

CSC	122	Computer Science II.....	4
CSC	217	Assembler Programming and Machine Organization.....	4
MTH	220	Discrete Mathematics.....	3
ACC	101	Introduction to Financial Accounting.....	4
ACC	102	Introduction to Managerial Accounting.....	<u>3</u>
			18

**Total      64**

<sup>1</sup> PHY 201 recommended for flexibility to change to the technical emphasis. Select one course from humanities and one from fine arts. Interdisciplinary courses may count in either category.

<sup>2</sup> Approved courses are listed with the requirements for the associate degrees

<sup>3</sup> Approved courses are listed with the requirements for the associate degrees.

# TRANSFER PROGRAMS

## Computer Science-Technical Emphasis

*This recommended transfer program meets the requirements for an associate in science degree and the recommendations of the Illinois Articulation Initiative computer science major panel. Bachelor's degree programs in computer science encompass two distinct emphases: the information systems emphasis and the technical emphasis. The technical emphasis focuses on algorithms, theoretical foundations of computer science, and development of software. Students should check individual school requirements before completing the curriculum as outlined. Admission into many baccalaureate computer science programs is competitive; completion of the courses outlined below alone does not guarantee admission.*

### General Education Courses

#### Communications:

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			9

#### Mathematics:

MTH	200	Calculus with Analytic Geometry I .....	5
MTH	201	Calculus with Analytic Geometry II .....	<u>5</u>
			10

#### Physical and Life Sciences

PHY	201	General Physics I .....	4
		Life Science elective <sup>1</sup> .....	<u>4</u>
			8

Humanities and Fine Arts<sup>2</sup> .....

Social and Behavioral Sciences<sup>3</sup> .....

#### Special Electives:

CSC	121	Computer Science I .....	4
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#### Approved Electives:

CSC	122	Computer Science II .....	4	
		Select 11 hours from: <sup>4</sup>		
	CSC	216	Data Structures and Algorithm Analysis.....	3
	CSC	217	Assembler Programming and Machine Organization.....	4
	PHY	202	General Physics II .....	4
	PHY	203	General Physics III .....	4
	MTH	202	Calculus with Analytic Geometry III .....	5
	MTH	220	Discrete Mathematics .....	<u>3</u>
				15

**Total** **64**

<sup>1</sup> Approved courses are listed with the requirements for the associate degrees.

<sup>2</sup> Select one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.

<sup>3</sup> ECO 211 and ECO 212 recommended for flexibility to change to the information systems emphasis.

<sup>4</sup> Students should try to complete the entire course sequence in calculus and physics at the same school before transferring, since topics are covered in different orders by different schools.



**Criminal Justice**

*This recommended transfer program for criminal justice students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation Initiative criminal justice major panel. Harper also offers an associate in applied science degree in criminal justice. Students should check individual school requirements before completing the curriculum as outlined. Admission into many baccalaureate criminal justice programs is competitive; completion of the courses outlined below does not guarantee admission.*

**General Education Courses**

**Communications:**

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			9

**Mathematics:**

MTH	165	Elementary Statistics .....	4
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<b>Physical and Life Sciences</b> <sup>1</sup> .....	7
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<b>Humanities and Fine Arts</b> <sup>2</sup> .....	9
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**Social and Behavioral Sciences:**

PSC	101	American Politics and Government .....	3
PSY	101	Introduction to Psychology .....	3
SOC	101	Introduction to Sociology .....	<u>3</u>
			9

<b>Special Electives</b> <sup>3</sup> .....	6
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**Approved Electives:**<sup>4</sup>

CRJ	101	Introduction to Criminal Justice .....	3
CRJ	104	Introduction to Corrections .....	3
CRJ	201	Criminal Law .....	3
CRJ	205	Juvenile Delinquency .....	3
CRJ	210	Introduction to Criminology .....	3
		Other elective credit <sup>5</sup> .....	<u>1</u>
			16

**Total      60**

- <sup>1</sup> Select one physical and one life science course. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.
- <sup>2</sup> Select at least one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.
- <sup>3</sup> Approved courses are listed with the requirements for the associate degrees.
- <sup>4</sup> As part of the Illinois Articulation Initiative (Phase II), participating schools will accept these CRJ courses as general electives if not accepted as core or elective courses in the major.
- <sup>5</sup> Approved courses are listed with the requirements for the associate degrees.

# TRANSFER PROGRAMS

## Early Childhood Education

*This recommended transfer program for early childhood education students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation Initiative early childhood education major panel. Harper also offers an associate in applied science degree in early childhood education. Students should check individual school requirements before completing the curriculum as outlined. Admission into baccalaureate early childhood education programs is competitive; completion of these courses alone does not guarantee admission.*

### General Education Courses

#### Communications:

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	3
			<u>9</u>

**Mathematics**<sup>1</sup> ..... 3-4

**Physical and Life Sciences**<sup>2</sup> ..... 7

**Humanities and Fine Arts**<sup>3,4</sup> ..... 9

#### Social and Behavioral Sciences:

HST	111	The American Experience to 1877 or	
HST	112	The American Experience Since 1877 .....	3
PSC	101	American Politics & Government .....	3
		Social and Behavioral Sciences elective <sup>4</sup> .....	3
			<u>9</u>

**Special Electives**<sup>5</sup> ..... 6

#### Approved Electives

CCA	101	Introduction to Early Childhood Education .....	3
CCA	102	Child Development I .....	3
CCA	219	Psychology of Exceptional Children .....	3
CCA	291	Practicum I .....	1
HSC	220	Health, Nutrition and Safety .....	3
		Select additional hours from list below: <sup>6</sup> .....	3-4

#### Additional Courses for Teacher Certification:

Mathematics .....	0-3
Physical & Life Sciences .....	0-5
Humanities & Fine Arts .....	0-3
Social & Behavioral Sciences .....	0-3
Area of Concentration: <sup>8</sup> .....	0-9

16-17

**Total** **60**

- Students should check the curriculum of the transfer schools they are considering.
- Select one physical and one life science course. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.
- Select at least one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.
- Select at least one non-western culture 3 credit hour course in either category. Approved courses are listed with the requirements for the associate degrees.
- Recommended: foreign language, art, music or speech. Approved courses are listed with the requirements for the associate degrees.

(continued)

**Early Childhood Education continued....**

- <sup>6</sup> Check with a Student Development faculty member regarding the maximum number of credits that will be accepted in transfer.
- <sup>7</sup> A grade of "C" or better is required in CCA 101, 102, 219 and 291. It may be in students' best interest to repeat these courses if taken more than five years before transfer.
- <sup>8</sup> Select from one academic discipline at the sophomore level or above, selected in consultation with an advisor. Acceptable disciplines include Mathematics, Biology, Chemistry, Physics, Economics, History, Political Science, Psychology, Sociology, Art, Music, English, Foreign Language, Philosophy, Theatre.

**Elementary Education**

*This recommended transfer program for elementary education students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation Initiative elementary education major panel. Students should check individual school requirements before completing the curriculum as outlined. Admission into baccalaureate elementary education programs is competitive; completion of these courses alone does not guarantee admission.*

**General Education Courses**

**Communications:**

ENG 101	Composition I.....	3
ENG 102	Composition II.....	3
SPE 101	Fundamentals of Speech Communication.....	<u>3</u>
		9

<b>Mathematics<sup>1</sup></b>	.....	3-4
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<b>Physical and Life Sciences<sup>2</sup></b>	.....	7
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<b>Humanities and Fine Arts<sup>3,4</sup></b>	.....	9
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**Social and Behavioral Sciences:**

HST 111	The American Experience to 1877 or	
HST 112	The American Experience Since 1877.....	3
PSC 101	American Politics & Government.....	3
PSY 101	Introduction to Psychology.....	<u>3</u>
		9

**Special Electives:**

PED 203	Health.....	3
	Other Special elective <sup>4</sup> .....	<u>3</u>
		6

**Approved Electives:<sup>5</sup>**

EDU 201	Introduction to Education.....	3
EDU 202	Pre-Student Teaching Clinical Experience.....	1
CCA 102	Child Development I or	
PSY 228	Psychology of Human Development.....	3
MTH 130	Math for Elementary Teachers.....	4
	Select additional hours from list below: <sup>6</sup> .....	<u>5-6</u>

**Additional Courses for Teacher Certification:**

Physical & Life Sciences.....	0-5
Humanities & Fine Arts.....	0-6
Area of Concentration: <sup>7</sup> .....	0-9

16-17

<b>Total</b>	<b>60</b>
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# TRANSFER PROGRAMS

## Elementary Education continued...

- 1 Students should check the curriculum of the transfer schools they are considering.
- 2 Select one physical and one life science course. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.
- 3 Select at least one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Three hours of Literature are recommended. Select at least one non-western culture 3 credit course. Approved courses are listed with the requirements for the associate degrees.
- 4 Recommended: foreign language. Approved courses are listed with the requirements for the associate degrees.
- 5 As part of the Illinois Articulation Initiative (Phase II), participating schools will accept these EDU courses in transfer, however, they may or may not substitute for upper division professional coursework required for certification.
- 6 Check with a Student Development faculty member regarding the maximum number of credits that will be accepted in transfer.
- 7 Select from one academic discipline at the sophomore level or above, selected in consultation with an advisor. Acceptable disciplines include Mathematics, Biology, Chemistry, Physics, Economics, History, Political Science, Psychology, Sociology, Art, Music, English, Foreign Language, Philosophy, Theatre.

## Secondary Education

*This recommended transfer program for secondary education students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation Initiative secondary education major panel. Students should check individual school requirements before completing the curriculum as outlined. Admission into baccalaureate secondary education programs is competitive; completion of these courses alone does not guarantee admission.*

### General Education Courses

#### Communications:

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	3
			9

**Mathematics**<sup>1</sup> ..... 3-4

**Physical and Life Sciences**<sup>2</sup> ..... 7

**Humanities and Fine Arts**<sup>3</sup> ..... 9

#### Social and Behavioral Sciences:

HST	111	The American Experience to 1877 or	
HST	112	The American Experience Since 1877 .....	3
PSC	101	American Politics & Government .....	3
PSY	101	Introduction to Psychology .....	3
			9

#### Special Electives:

PED	203	Health .....	3
		Other Special elective <sup>4</sup> .....	3
			6

#### Approved Electives:<sup>5</sup>

EDU	201	Introduction to Education .....	3
EDU	202	Pre-Student Teaching Clinical Experience .....	1
PSY	228	Psychology of Human Development .....	3
		Select additional hours from list below: <sup>6</sup> .....	9-10

(continued)

**Secondary Education continued...**

**Additional Courses for Teacher Certification:**

Physical & Life Sciences.....	0-2
Humanities & Fine Arts .....	0-6
Area of Teaching Major/Minor <sup>7</sup> .....	0-10

16-17

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<b>Total</b>	<b>60</b>
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- <sup>1</sup> Students should check the curriculum of the transfer schools they are considering.
- <sup>2</sup> Select one physical and one life science course. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.
- <sup>3</sup> Select at least one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Three hours of Literature are recommended. Select at least one non-western 3 credit course. Approved courses are listed with the requirements for the associate degrees.
- <sup>4</sup> Recommended: foreign language. Approved courses are listed with the requirements for the associate degrees.
- <sup>5</sup> As part of the Illinois Articulation Initiative (Phase II), participating schools will accept these EDU courses in transfer, however, they may or may not substitute for upper division professional coursework required for certification.
- <sup>6</sup> Check with a Student Development faculty member regarding the maximum number of credits that will be accepted in transfer.
- <sup>7</sup> Select in consultation with an advisor.

**Special Education**

*This recommended transfer program for special education students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation special education major panel. Students should check individual school requirements before completing the curriculum as outlined. Admission into baccalaureate special education programs is competitive; completion of these courses alone does not guarantee admission.*

**General Education Courses**

**Communications:**

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			9

<b>Mathematics<sup>1</sup></b>			3
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<b>Physics and Life Sciences<sup>2</sup></b>			7
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<b>Humanities and Fine Arts<sup>3</sup></b>			9
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**Social and Behavioral Sciences:**

PSC	101	American Politics and Government .....	3
HST	111	The American Experience to 1877 or	
HST	112	The American Experience Since 1877.....	3
PSY	101	Introduction to Psychology .....	<u>3</u>
			9

**Special Electives:**

PED	203	Health.....	3
Other Special elective <sup>1</sup> .....			<u>3</u>
			6

## TRANSFER PROGRAMS

### Special Education continued...

#### Approved Electives:

EDU	201	Introduction to Education .....	3
EDU	202	Pre-Student Teaching Clinical Experience.....	1
PSY	228	Psychology of Human Development.....	3
Select additional hours from list below:.....			8

#### Additional Courses for Teacher Certification:

Physical & Life Sciences.....		2	
Humanities & Fine Arts .....		6	
Other elective credit <sup>1</sup> .....			<u>2</u>
			17
<b>Total</b>			<b>60</b>

<sup>1</sup> Approved courses are listed with the requirements for the associate degrees. Students should check the curriculum of the transfer school they are considering.

<sup>2</sup> Select one physical and one life science course. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.

<sup>3</sup> Select one course from humanities and one course from fine arts. Interdisciplinary courses may count in either category. Three hours of Literature are recommended. Select at least one non-western culture 3 credit course. Approved courses are listed with the requirements for the associate degrees.

### Engineering

*A strong background in mathematics and the physical sciences will be required to complete an engineering curriculum at a university. Thus, the core math and science courses should be mastered by all students planning to pursue an engineering degree. Specific courses vary according to the engineering specialty. Students are encouraged to contact Student Development faculty and Engineering faculty at Harper College and the transfer institution to determine which courses are specifically required.*

*Upon successful completion, students will meet the requirements for the associate in engineering science degree.<sup>1</sup>*

#### Required General Education Courses:

ENG	101	Composition .....	3
ENG	102	Composition .....	3
Social and Behavioral Sciences <sup>2</sup> .....			3-6
Humanities and Fine Arts <sup>2</sup> .....			3-6

#### Required Core Courses:

CHM	121	General Chemistry I <sup>3</sup> .....	4
CSC	208 <sup>4</sup>	Problem Solving for Science and Engineering Using FORTRAN.....	4
MTH	200	Calculus with Analytic Geometry I.....	5
MTH	201	Calculus with Analytic Geometry II.....	5
MTH	202	Calculus with Analytic Geometry III.....	4
MTH	212	Differential Equations .....	3
PHY	201	General Physics I.....	4
PHY	202	General Physics II.....	4

(continued)

**Engineering continued...**

*The remaining 19 credit hours are to be chosen from the courses listed below. Because of the variety of engineering disciplines, these courses should be selected based on the transfer institution's requirements with the assistance of the Student Development faculty and approval of Engineering Chair.*

**Specialty Courses:**

CSC	122	Computer Science II .....	4
EGR	100	Introduction to Engineering.....	1
EGR	120	Engineering Graphics I (CAD) .....	4
EGR	205	Analytical Mechanics (Statics & Dynamics) .....	5
EGR	212	Mechanics of Deformable Bodies.....	3
EGR	260	Introduction to Circuit Analysis .....	4
EGR	262	Electrical Circuits Laboratory.....	2
EGR	270	Introduction to Digital Systems .....	4
MTH	220	Discrete Mathematics .....	3
PHY	203	General Physics III .....	4

- <sup>1</sup> Completion of the associate in engineering science degree does not fulfill the requirements of the Illinois General Education Core Curriculum. After transfer, AES students will need to complete the general education requirements of the institution to which they transfer.
- <sup>2</sup> Students are encouraged to select at least one course in either the humanities and fine arts or social and behavioral sciences that emphasizes non-western cultures or minority cultures within the United States.
- <sup>3</sup> CHM 131 and CHM 132 may be substituted where required for specialized curricula as chemical engineering. Students should contact the engineering department chairperson for information.
- <sup>4</sup> Computer engineering and computer science students should select CSC 121 instead.

**Foreign Languages**

*See Liberal Arts*

**Health Education**

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

**FIRST YEAR**

**First Semester**

CHM	110	Fundamentals of Chemistry or	
CHM	121	General Chemistry I .....	4
ENG	101	Composition .....	3
PED	203	Health .....	3
Physical Education elective <sup>1</sup> .....			1
PSY	101	Introduction to Psychology .....	3
Humanities and Fine Arts .....			<u>3</u>
			17

# TRANSFER PROGRAMS

## Health Education continued...

### Second Semester

BIO	110	Principles of Biology .....	4
ENG	102	Composition .....	3
		Mathematics <sup>2</sup> .....	3-4
PED	201	First Aid .....	3
PED	205	Drugs in Our Culture .....	2
		Physical Education elective .....	<u>1</u>
			16-17

### Summer Semester

SPE	101	Fundamentals of Speech Communication .....	3
BIO	140	General Zoology .....	<u>4</u>
			7

## SECOND YEAR

### First Semester

BIO	160	Human Anatomy .....	4
		Mathematics <sup>2</sup> .....	3-4
PED	207	Human Sexuality .....	2
PHI	180	Medical Ethics .....	3
		Social and Behavioral Sciences .....	<u>3</u>
			15-16

### Second Semester

		Social and Behavioral Sciences .....	3
BIO	161	Human Physiology .....	4
DIT	101	Basic Nutrition .....	3
EDU	211	Educational Psychology .....	3
		Humanities and Fine Arts .....	<u>3</u>
			16

### Summer Semester

		Humanities and Fine Arts .....	<u>3</u>
			3

<sup>1</sup> Some, but not all, physical education courses can be taken more than one time for credit. Course descriptions indicate which are approved for repeating.

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

## Liberal Arts

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

*The student who has successfully completed a year or more of a foreign language in high school may qualify for advanced placement in the language at Harper College. In mathematics, the student may meet requirements of some universities through proficiency testing.*

(continued)



**Liberal Arts continued...**

**FIRST YEAR**

**First Semester**

ENG 101 Composition .....	3
Foreign Language <sup>2</sup> .....	4
Physical or Life Sciences .....	3-4
Mathematics .....	3-4
Social and Behavioral Sciences.....	<u>3</u>
	16-18

**Second Semester**

ENG 102 Composition .....	3
Foreign Language <sup>2</sup> .....	4
Physical or Life Sciences .....	4
Approved elective .....	3
Social and Behavioral Sciences.....	<u>3</u>
	17

**SECOND YEAR**

**First Semester**

English <sup>1</sup> .....	3
Foreign Language <sup>2</sup> .....	4
Humanities and Fine Arts <sup>3</sup> .....	3
Social and Behavioral Sciences.....	3
SPE 101 Fundamentals of Speech Communication.....	<u>3</u>
	16

**Second Semester**

English <sup>1</sup> .....	3
Foreign Language <sup>2</sup> .....	4
Humanities and Fine Arts <sup>3</sup> .....	<u>6</u>
	13

<sup>1</sup> Advanced English, literature or speech.

<sup>2</sup> Consult a Student Development faculty member for specific language requirements of the university to which you plan to transfer.

<sup>3</sup> HUM 101 and HUM 102 are recommended. Other humanities areas include art, music, literature, philosophy, fine arts and SPE 111.

**Mass Communications**

*This recommended transfer program for mass communications students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation Initiative mass communications major panel. Bachelor's degree programs in mass communications encompass four major program areas: advertising/public relations, radio/TV/film, journalism/news/editorial/photojournalism, and mass communications. Students should choose the appropriate course sequence for their chosen specialty. Students are encouraged to complete an associate degree prior to transfer. Students should check individual school requirements before completing the curriculum as outlined. Admission into many baccalaureate mass communication programs is competitive and some schools have specific requirements including portfolio review. Completion of the courses outlined below alone does not guarantee admission. Students should be computer literate and acquire computer skills early in the college experience.*

# TRANSFER PROGRAMS

## Mass Communications continued...

### General Education Courses

#### Communications:

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			9

**Mathematics**<sup>1</sup> ..... 3-6

**Physical and Life Sciences**<sup>2</sup> ..... 7-8

**Humanities and Fine Arts**<sup>3</sup> ..... 9

**Social and Behavioral Sciences**<sup>1</sup> ..... 9

**Special Electives**<sup>1</sup> ..... 6

#### Approved Electives:

##### *Radio/TV/Film Specialty*

JNM	136	Broadcast Writing .....	3
JNM	234	Mass Communications .....	3
FNA	114	Introduction to Film or	
LIT	112	Literature and Film .....	3
		Other elective credit <sup>1</sup> .....	<u>8</u>
			17

##### *Advertising/Public Relations Specialty*

JNM	232	Advertising Copywriting and Design or	
MKT	217	Advertising .....	3
JNM	233	Public Relations Writing and Design .....	3

Select 6 hours from:

JNM	131	News Reporting and Writing .....	3
JNM	136	Broadcast Writing .....	3
JNM	234	Mass Communications .....	3

Other elective credit<sup>1</sup> ..... 5  
17

##### *Journalism/News Editorial/Photojournalism or Mass Communication Specialty*

JNM	131	News Reporting and Writing .....	3
JNM	234	Mass Communications .....	3
		Other elective credit <sup>1</sup> .....	<u>11</u>
			17

**Total** **60**

<sup>1</sup> Approved courses listed with the requirements for the associate degrees.

<sup>2</sup> Select one physical and one life science. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.

<sup>3</sup> Select one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.

**Mathematics**

*This recommended transfer program for mathematics students meets the requirements for an associate in science degree and the recommendations of the Illinois Articulation mathematics major panel. Students should check individual school requirements before completing the curriculum as outlined. Admission into baccalaureate mathematics programs is competitive; completion of these courses alone does not guarantee admission.*

**General Education Courses**

**Communications:**

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	3
			9

**Mathematics:**

MTH	200	Calculus with Analytic Geometry I .....	5
MTH	201	Calculus with Analytic Geometry II .....	5
			10

**Physical and Life Sciences**<sup>1</sup> ..... 8

**Humanities and Fine Arts**<sup>2</sup> ..... 9

**Social and Behavioral Sciences**<sup>3</sup> ..... 9

**Special Electives:**

CSC	208	Problem Solving for Science and Engineering Using FORTRAN .....	4
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**Approved Electives:**

MTH	202	Calculus with Analytic Geometry III .....	4
MTH	212	Differential Equations .....	3
Other elective credit <sup>3</sup> .....			8
			15

**Total**      **64**

- <sup>1</sup> Select one physical and one life science course. At least one must include a lab. PHY 201 is strongly recommended. Approved courses are listed with the requirements for the associate degrees.
- <sup>2</sup> Select one course from humanities and one course from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.
- <sup>3</sup> Approved courses are listed with the requirements for the associate degrees.

**Music<sup>1</sup>**

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

*This recommended transfer program for music students meets the requirement for an associate in fine arts degree. Students should check individual school requirements before completing the curriculum as outlined.*

**MUSIC EMPHASIS**

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

# TRANSFER PROGRAMS

## Music<sup>1</sup> continued...

### FIRST YEAR

#### First Semester

Applied Music <sup>2</sup>	.....	2
Ensemble <sup>3</sup>	.....	1
MUS 111	Theory of Music I.....	3
MUS 115	Aural Skills I.....	1
MUS 120	Introduction to Music Literature .....	3
MUS 165	Class Piano I <sup>4</sup> .....	2
Humanities	.....	3
ENG 101	Composition.....	<u>3</u>
		18

#### Second Semester

Applied Music <sup>2</sup>	.....	2
Ensemble <sup>3</sup>	.....	1
MUS 112	Theory of Music II.....	3
MUS 116	Aural Skills II.....	1
MUS 166	Class Piano II <sup>4</sup> .....	2
Humanities	.....	3
Mathematics <sup>5</sup>	.....	3
ENG 102	Composition.....	<u>3</u>
		18

### SECOND YEAR

#### First Semester

Applied Music <sup>2</sup>	.....	2
Ensemble <sup>3</sup>	.....	1
MUS 211	Theory of Music III.....	3
MUS 215	Aural Skills III.....	1
MUS 265	Class Piano III <sup>4</sup> .....	2
Physical and Life Sciences	.....	3
SPE 101	Fundamentals of Speech Communication.....	<u>3</u>
		15

#### Second Semester

Applied Music <sup>2</sup>	.....	2
Ensemble <sup>3</sup>	.....	1
MUS 212	Theory of Music IV .....	3
MUS 216	Aural Skills IV .....	1
MUS 266	Class Piano IV <sup>4</sup> .....	2
Physical and Life Sciences	.....	4
Social and Behavioral Sciences.....	.....	<u>3</u>
		16

<sup>1</sup> Completion of the associate in fine arts degree does not fulfill the requirements of the Illinois General Education Core Curriculum. After transfer, A.F.A. students will need to complete the general education requirements of the institution to which they transfer.

<sup>2</sup> To be selected from MUS 180 through MUS 199 and MUS 280 through MUS 299.

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

<sup>4</sup> All music majors must demonstrate piano proficiency. MUS 165, MUS 166, MUS 265 and MUS 266 may be passed by proficiency exam. Music majors are also advised to take MUS 100 as part of their elective credit.

<sup>5</sup> To be selected from MTH 101, MTH 124, and MTH 134.

**Music continued...**

**PIANO PEDAGOGY EMPHASIS**

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

**FIRST YEAR**

**First Semester**

Applied Music <sup>1</sup>	.....	2
Ensemble <sup>2</sup>	.....	1
MUS 111	Theory of Music I.....	3
MUS 115	Aural Skills I.....	1
MUS 120	Introduction to Music Literature .....	3
Humanities	.....	3
ENG 101	Composition .....	<u>3</u>
		16

**Second Semester**

Applied Music <sup>1</sup>	.....	2
Ensemble <sup>2</sup>	.....	1
MUS 112	Theory of Music II.....	3
MUS 116	Aural Skills II.....	1
Humanities	.....	3
Mathematics <sup>4</sup>	.....	3
ENG 102	Composition .....	<u>3</u>
		16

**SECOND YEAR**

**First Semester**

Applied Music <sup>1</sup>	.....	2
Ensemble <sup>2</sup>	.....	1
MUS 211	Theory of Music III.....	3
MUS 215	Aural Skills III.....	1
MUS 271	Piano Pedagogy I.....	3
Physical and Life Sciences	.....	3
SPE 101	Fundamentals of Speech Communication.....	<u>3</u>
		16

**Second Semester**

Applied Music <sup>1</sup>	.....	2
Ensemble <sup>2</sup>	.....	1
MUS 212	Theory of Music IV .....	3
MUS 216	Aural Skills IV .....	1
MUS 266	Class Piano IV <sup>3</sup> .....	2
MUS 272	Piano Pedagogy II.....	3
Physical and Life Sciences	.....	4
Social and Behavioral Sciences.....		<u>3</u>
		19

<sup>1</sup> To be selected from MUS 180 through MUS 199 and MUS 280 through MUS 299.

<sup>2</sup> To be selected from MUS 130, MUS 140, MUS 145 and MUS 150.

<sup>3</sup> All music majors must demonstrate piano proficiency. MUS 165, MUS 166, MUS 265 and MUS 266 may be passed by proficiency exam. Music majors are also advised to take MUS 100 as part of their elective credit.

<sup>4</sup> To be selected from MTH 101, MTH 124, and MTH 134.

# TRANSFER PROGRAMS

## Physical Education<sup>1,2</sup>

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

### FIRST YEAR

#### First Semester

BIO	110	Principles of Biology .....	4
ENG	101	Composition .....	3
PED	200	Introduction to Physical Education .....	2
PED	203	Health .....	3
PED	222	Football Techniques or	
PED	224	Basketball Techniques .....	2
PSY	101	Introduction to Psychology .....	3
			<u>17</u>

#### Second Semester

		Humanities and Fine Arts .....	3
ENG	102	Composition .....	3
HST	111	The American Experience to 1877 or	
HST	112	The American Experience Since 1877 .....	3
PED	201	Standard First Aid .....	3
PED	208	Bioscientific Foundations of Human Movement .....	3
			<u>15</u>

#### Summer Semester

SPE	101	Fundamentals of Speech Communication .....	3
PSC	101	American Politics and Government .....	3
			<u>6</u>

### SECOND YEAR

#### First Semester

BIO	160	Human Anatomy .....	4
		Mathematics <sup>3</sup> .....	3-4
PED	210	Sports Officiating .....	2
PED	211	Physical Education in Elementary School .....	3
		Humanities and Fine Arts .....	3
			<u>15-16</u>

#### Second Semester

BIO	161	Human Physiology .....	4
		Humanities and Fine Arts .....	3
PED	206	Athletic Training Techniques .....	3
PED	220	Track and Field Techniques or	
PED	226	Baseball Techniques .....	2
		Physical Sciences .....	4
			<u>16</u>

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

<sup>2</sup> Some, but not all, physical education courses can be taken more than one time for credit. Course descriptions indicate which are approved for repeating.

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

**Psychology**

*This recommended transfer program for psychology students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation Initiative psychology major panel. Students should check individual school requirements before completing the curriculum as outlined.*

**General Education Courses**

**Communications:**

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			9

**Mathematics**<sup>1</sup> ..... 4-5

**Physical and Life Sciences**<sup>2</sup> ..... 7

**Humanities and Fine Arts**<sup>3</sup> ..... 9

**Social and Behavioral Sciences:**

PSY	101	Introduction to Psychology .....	3
			<u>6</u>
			9

**Special Electives**<sup>4</sup> ..... 6

**Approved Electives:**

PSY	145	Psychology in Business and Industry .....	3
PSY	216	Child Psychology .....	3
Other elective credit <sup>4</sup> .....			<u>10</u>
			16

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**Total**      **60**

<sup>1</sup> MTH 165 or MGT 225, MTH 134 or MTH 200, or MTH 124 recommended.

<sup>2</sup> Select one physical and one life science course. At least one must include a lab. Approved courses are listed with the requirements for the associate degrees.

<sup>3</sup> Select at least one course from humanities and one from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.

<sup>4</sup> Approved courses are listed with the requirements for the associate degrees.

# TRANSFER PROGRAMS

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## Social Science

The following first-year program is recommended for students who plan to transfer and major in such fields as history, political science, anthropology or sociology. The student should check with the transfer school of choice or a Student Development Center before planning the second year at Harper.

### FIRST YEAR

#### First Semester

ENG 101	Composition .....	3
Foreign Language <sup>1</sup>	.....	4
Mathematics	.....	3-4
Social and Behavioral Sciences	.....	3
Humanities and Fine Arts	.....	<u>3</u>
		16-17

#### Second Semester

ENG 102	Composition .....	3
Foreign Language <sup>1</sup>	.....	4
Physical and Life Sciences	.....	3-4
Social and Behavioral Sciences	.....	3
SPE 101	Fundamentals of Speech Communication .....	<u>3</u>
		16-17

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



**Speech Communication**

*This recommended transfer program for speech communication students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation speech communication major panel. Students should check individual school requirements before completing the curriculum as outlined.*

**General Education Courses**

**Communications:**

ENG 101	Composition I .....	3
ENG 102	Composition II .....	3
SPE 101	Fundamentals of Speech Communications .....	<u>3</u>
		9

**Mathematics**<sup>1</sup> ..... 3-6

**Physical and Life Sciences**<sup>2</sup> ..... 7-8

**Humanities and Fine Arts**<sup>3</sup> ..... 9

**Social and Behavioral Sciences**<sup>3</sup> ..... 9

**Special Electives:**

SPE 200	Interpersonal Communication .....	3
SPE 205	Group Discussion .....	<u>3</u>
		6

**Approved Electives:**

SPE 102	Public Speaking and Communication Theory or	
SPE 107	Oral Interpretation .....	3
Other elective credit <sup>1</sup> .....		<u>10-14</u>
		13-17
<b>Total</b>		<b>60</b>

<sup>1</sup> Approved courses re listed with the requirements for the associate degrees.

<sup>2</sup> Select at least one physical and at least one life science. One course must include a lab. Approved courses are listed with the requirements for the associate degrees.

<sup>3</sup> Select one course from humanities and one course from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.

## Theatre Arts

*This recommended transfer program for theatre arts students meets the requirements for an associate in arts degree and the recommendations of the Illinois Articulation theatre arts panel. Students should check individual school requirements before completing the curriculum as outlined. Admission into baccalaureate theatre arts programs is competitive; completion of these courses alone does not guarantee admission.*

### General Education Courses

#### Communications:

ENG	101	Composition I .....	3
ENG	102	Composition II .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			9

<b>Mathematics</b> <sup>1</sup>		.....	3-6
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<b>Physical and Life Sciences</b> <sup>2</sup>		.....	7-8
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<b>Humanities and Fine Arts</b> <sup>3</sup>		.....	9
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<b>Social and Behavioral Sciences</b> <sup>1</sup>		.....	9
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#### Special Electives:

SPE	107	Oral Interpretation .....	3
SPE	212	Acting I .....	<u>3</u>
			6

#### Approved Electives:

SPE	213	Acting II .....	3
SPE	216	Stagecraft .....	3
Other elective credit <sup>1</sup>		.....	<u>7-11</u>
			13-17

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**Total            60**

<sup>1</sup> Approved courses are listed with the requirements for the associate degrees.

<sup>2</sup> Select at least one physical and at least one life science. One course must include a lab. Approved courses are listed with the requirements for the associate degrees.

<sup>3</sup> Select one course from humanities and one course from fine arts. Interdisciplinary courses may count in either category. Approved courses are listed with the requirements for the associate degrees.

## Career Programs

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

## Certificate Programs

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

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

### ACCOUNTING ASSOCIATE

Associate in Applied Science Degree  
Accounting Associate Certificate  
Accounting Clerk Certificate  
Accounting-Payroll, State and Local Taxes Certificate

### ADMINISTRATIVE TECHNOLOGY

Associate in Applied Science Degree:  
Executive Assistant  
Administrative Assistant Certificate  
Certified Professional Secretary Certificate  
General Office Certificate  
Office Technology Certificate  
Secretarial Certificate

### ARCHITECTURAL TECHNOLOGY

Associate in Applied Science Degree  
Architectural CAD Certificate  
Architectural Technology Certificate

### AUTOMATION SKILLS

Automation Skills Certificate

### BANKING (See Financial Services)

### BREAD & PASTRY (See Hospitality Management)

### BUILDING CODES AND ENFORCEMENT

Building Codes and Enforcement Certificate

### CARDIAC TECHNOLOGY

Associate in Applied Science Degree

### COMMERCIAL CREDIT MANAGEMENT

(See Financial Services)

### COMPUTER INFORMATION SYSTEMS

Associate in Applied Science Degree:  
Microcomputers in Business

Associate in Applied Science Degree:  
Technology

Associate in Applied Science Degree:  
Web Development

Advanced LAN Management Certificate

C Programming Certificate

Computer Operator Certificate

LAN Management Certificate

Microcomputers in Business Certificate

Microcomputer Support Specialist Certificate

Midrange Certificate

NetPrep™ Network Specialist Certificate

NetPrep™ Senior Network Specialist Certificate

Technical Certificate

Web Development Certificate

Web Visual Design Certificate

### CRIMINAL JUSTICE

Associate in Applied Science Degree

Criminal Justice Certificate

Industrial and Retail Security Certificate

### CULINARY ARTS (See Hospitality Management)

### DENTAL HYGIENE

Associate in Applied Science Degree

### DIETETIC TECHNICIAN

Associate in Applied Science Degree

Dietary Manager Certificate

### DIGITAL ELECTRONICS AND MICROPROCESSOR TECHNOLOGY

Associate in Applied Science Degree  
Digital Electronics and Microprocessor Technology Certificate

### EARLY CHILDHOOD EDUCATION

Associate in Applied Science Degree

Early Childhood Education:

Before/After School Care Certificate

Early Childhood Administrator Certificate

Early Childhood Education Assistant Teacher Certificate

Early Childhood Education Teacher Certificate

Early Childhood Education Infant/Toddler Certificate

Early Childhood Education -

Special Education Paraprofessional Certificate

Early Childhood Education - Family Child Care Certificate

### ELECTRONICS MANUFACTURING TECHNICIAN

Associate in Applied Science Degree

### ELECTRONICS TECHNOLOGY

Associate in Applied Science Degree

Electrical Maintenance Certificate

Electronics Certificate

### EMERGENCY MEDICAL TECHNICIAN (See HSC 110)

### FASHION DESIGN

Associate in Applied Science Degree

Fashion Design Certificate

### FASHION MERCHANDISING

Associate in Applied Science Degree

## **CAREER & CERTIFICATE PROGRAMS**

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### **FINANCIAL SERVICES**

Associate in Applied Science Degree  
Commercial Credit Management Certificate  
Financial Management Certificate  
Real Estate Brokers License Preparation Certificate  
Real Estate Sales Professional Certificate

### **FIRE SCIENCE TECHNOLOGY**

Associate in Applied Science Degree  
Fire Science Technology Certificate

### **HOSPITALITY MANAGEMENT**

Associate in Applied Science Degree  
Bread and Pastry Arts Certificate  
Culinary Arts Certificate  
Hospitality Management Certificate  
Hotel Management Certificate

### **HOTEL MANAGEMENT** (See Hospitality Management)

### **INSURANCE**

### **INTERIOR DESIGN**

Associate in Applied Science Degree

### **INTERNATIONAL BUSINESS**

Associate in Applied Science Degree  
International Business Certificate

### **JOURNALISM**

Associate in Applied Science Degree  
Media Design Certificate  
Media Writing Certificate  
Media Writing and Design Certificate

### **LAW OFFICE ADMINISTRATIVE ASSISTANT**

Associate in Applied Science Degree  
Law Office Administrative Assistant Certificate

### **MANAGEMENT**

Associate in Applied Science Degree:  
Management  
Associate in Applied Science Degree:  
Small Business Management  
Advanced Management Certificate  
General Management Certificate  
Human Resource Management Certificate  
Small Business Management Technician

### **MANUFACTURING ENGINEERING**

Associate in Applied Science Degree:  
Manufacturing Technology  
Associate in Applied Science Degree:  
Manufacturing Technology/Machining  
CNC/CAM Technician Certificate  
Machinist Certificate  
Production Engineering Technician Certificate  
Production Welding Certificate  
Quality Assurance Certificate

### **MARKETING**

Associate in Applied Science Degree  
Retail Merchandising Certificate  
Sales Management Certificate

### **MATERIALS/LOGISTICS MANAGEMENT**

Associate in Applied Science Degree  
Materials/Logistics Management Certificate

### **MECHANICAL ENGINEERING TECHNOLOGY**

Associate in Applied Science Degree  
CAD Technician Certificate  
Mechanical Drafting Certificate

### **MEDICAL OFFICE ADMINISTRATION**

Associate in Applied Science Degree:  
Medical Office Assistant  
Associate in Applied Science Degree:  
Health Care Office Manager  
Health Care Secretary Certificate  
Health Insurance Billing Specialist Certificate  
Medical Office Assistant Certificate  
Medical Transcriptionist Certificate

### **NURSING**

Associate in Applied Science Degree  
Certified Nursing Assistant Certificate  
Licensed Practical Nursing Certificate

### **PARALEGAL STUDIES**

Associate in Applied Science Degree  
Paralegal Studies Certificate

### **PARK AND GOLF MAINTENANCE**

Associate in Applied Science Degree  
Arboriculture Certificate  
Golf Course Maintenance Certificate  
Grounds Equipment Operator Certificate  
Nursery Operations Certificate  
Turfgrass Maintenance Certificate

### **PHARMACY TECHNICIAN**

Pharmacy Technician Certificate

### **PLANT SCIENCE TECHNOLOGY**

Associate in Applied Science Degree  
Advanced Floral Design Certificate  
Floral Design Certificate  
Garden Center Operations Certificate  
Greenhouse Operations Certificate  
Grounds Maintenance Certificate  
Landscape Design Certificate  
Pesticide Applicator Certificate  
Plant Propagation Certificate

### **REAL ESTATE** (See Financial Services)

### **REFRIGERATION AND**

### **AIR CONDITIONING TECHNOLOGY**

Associate in Applied Science Degree  
Domestic Refrigeration and Heating Certificate  
Heating Services Certificate  
Refrigeration Service Certificate  
Refrigeration and Air Conditioning Service Certificate  
Residential Comfort Systems Certificate

### **SIGN LANGUAGE INTERPRETING**

Sign Language Interpreting Certificate

# ACCOUNTING ASSOCIATE

## Associate in Applied Science Degree

Accounting Associate is a two-year program with emphasis on data processing technology.

The curriculum includes the study of accounting theory and practice, partnership, corporation accounting, cost accounting and computer information systems. The program is designed to prepare students for employment as junior accountants in business, industry and government.

### FIRST YEAR

#### First Semester

ACC	101	Introduction to Financial Accounting .....	4
CIS	101	Introduction to Computer Information Systems .....	3
		English <sup>1</sup> .....	3
MGT	111	Introduction to Business Organization .....	3
		Mathematics elective <sup>2</sup> .....	<u>3-4</u>
			16-17

#### Second Semester

ACC	102	Introduction to Managerial Accounting.....	3
CIS	106	Computer Logic and Programming Technology .....	3
ECO	200	Introduction to Economics .....	3
ENG	130	Business Writing <sup>1</sup> .....	3
		Humanities elective .....	<u>3</u>
			15

### SECOND YEAR

#### First Semester

ACC or CIS		Elective <sup>3</sup> .....	3
ACC	201	Intermediate Accounting I.....	3
ACC	211	Business Law I .....	3
		Business elective <sup>4</sup> .....	3
		Social Science elective .....	<u>3</u>
			15

#### Second Semester

ACC	202	Intermediate Accounting II.....	3
ACC	203	Introductory Cost Accounting .....	3
		Business electives <sup>4</sup> .....	6
		CIS electives <sup>5</sup> .....	<u>3</u>
			15

<sup>1</sup> Students may elect ENG 100, ENG 101 or ENG 102, depending on their test scores and advice of a Student Development faculty member. ENG 130 must be taken as the second English course.

<sup>2</sup> Only MGT 150 or MTH 124 or higher will satisfy this requirement.

<sup>3</sup> Elective: ACC 155, ACC 250, CIS 203.

<sup>4</sup> Electives: ACC 212, ACC 213, BFC 215, MGT 218, MGT 270.

<sup>5</sup> Elective: CIS 122, CIS 123, CIS 124.

# ACCOUNTING ASSOCIATE

## Requirements for the Illinois CPA Certificate

To sit for the CPA examination in Illinois effective January 1, 2001, the candidate must have 150 hours of acceptable college level education including at least a bachelor's degree. Twenty-four semester hours must be in accounting; an additional 24 hours in business courses are required (business law is included here).

At William Rainey Harper College, acceptable accounting courses include: ACC 101, ACC 102, ACC 201, ACC 202, ACC 203, ACC 250, ACC 251, ACC 253, and ACC 254. A wide variety of business courses are offered including: ACC 211, ACC 212, ACC 213, and MGT 225.

## Requirements for the CMA Certificate

The CMA (Certified Management Accountant) is a national program with no state affiliates. The candidate must have senior standing at an accredited college or university, or must hold a baccalaureate degree, in any field, or have passed the U.S. CPA examination. Anyone who has passed the U.S. CPA examination is given credit for part 2 of the CMA examination.

Recommended courses at William Rainey Harper College include: ACC 101, ACC 102, ACC 201, ACC 202, ACC 203, ACC 211, ACC 212, ACC 251, ACC 253, ACC 254, BFC 215, CIS 101, ECO 210, ECO 211, ECO 212, MGT 111, MGT 218, MGT 225, MGT 270, MTH 124 and PHI 110.

## Accounting Associate Certificate

*This 19-credit hour certificate program is designed for persons interested in pursuing careers as junior accountants in business, government and industry. There is an acute shortage of persons with the training needed to be successful in accounting.*

### Required:

ACC	101	Introduction to Financial Accounting .....	4
ACC	102	Introduction to Managerial Accounting.....	3
CIS	123	Spreadsheet/Budgeting for Micros.....	1
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	125	Word Processing for Micros.....	1

### Electives: Select any three courses from the following:

ACC	155	Tax and Payroll Accounting .....	4
ACC	201	Intermediate Accounting I.....	3
ACC	202	Intermediate Accounting II.....	3
ACC	203	Introductory Cost Accounting .....	3
ACC	250	Income Tax Accounting .....	3
ACC	251	Advanced Tax Accounting.....	3
ACC	253	Advanced Accounting I .....	3
ACC	254	Auditing.....	3

# ACCOUNTING ASSOCIATE

## Accounting Clerk Certificate

*This 10-credit hour certificate program provides the student with the courses needed for an entry level position in such areas as accounts payable, accounts receivable and inventory accounting.*

ACC	101	Introduction to Financial Accounting .....	4
ACC	102	Introduction to Managerial Accounting.....	3
CIS	123	Spreadsheet/Budgeting for Micros .....	1
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	125	Word Processing for Micros.....	1

## Accounting-Payroll, State and Local Taxes Certificate

*This 7-credit hour certificate program will provide the student with the courses needed for an entry level position in this particular area.*

ACC	155	Tax and Payroll Accounting .....	4
CIS	123	Spreadsheet/Budgeting for Micros .....	1
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	125	Word Processing for Micros.....	1

# ADMINISTRATIVE TECHNOLOGY

See also *Law Office Administrative Assistant*

## Associate in Applied Science Degree: Executive Assistant

The curriculum emphasizes office technology, administrative duties, and communication skills. Two semesters of an internship experience highlight the program.

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

An orientation and planning session with the coordinator is recommended for each student. Detailed information will be sent upon request or upon application to the program.

### FIRST YEAR

#### First Semester

ENG	130	Business Writing .....	3
OFC	104	Introduction to Office Careers .....	1
OFC	105	Human Relations for Office Careers .....	1
OFC	106	Time Management for Office Careers .....	1
OFC	107	Internet Applications .....	1
OFC	113	Keyboarding IV <sup>1</sup> .....	3
OFC	133	Word Processing Software I <sup>2</sup> .....	2
OFC	201	Advanced Features in Word Processing .....	2
OFC	203	Proofreading and Editing .....	2
			<u>16</u>

#### Second Semester

OFC	125	Shorthand .....	5
OFC	134	Word Processing Software II .....	2
OFC	220	Automated Office Procedures <sup>1</sup> .....	4
OFC	228	Records Control for the Office .....	1
OFC	229	Meeting and Conference Planning .....	1
SPE	101	Fundamentals of Speech Communication .....	3
			<u>16</u>

### SECOND YEAR

#### First Semester

CIS	123	Spreadsheet/Budgeting for Micros .....	1
CIS	124	Advanced Spreadsheet for Micros .....	1
MGT	111	Introduction to Business Organization .....	3
OFC	202	Desktop Publishing Using Word Processing .....	2
OFC	227	Business Presentations .....	1
OFC	230	Executive Machine Transcription .....	2
OFC	237	Secretarial Seminar and Internship I .....	3
OFC	247	Professional Development .....	2
			<u>15</u>



# ADMINISTRATIVE TECHNOLOGY

## Associate in Applied Science Degree continued...

### Second Semester

ECO elective <sup>3</sup> .....	3
Humanities elective .....	3
MTH elective <sup>4</sup> .....	3
OFC 238 Secretarial Seminar and Internship II.....	3
Social Science elective .....	3
	15

<sup>1</sup> Placement into OFC 113 and OFC 220 is contingent upon previous training and consent of instructor.

<sup>2</sup> Students are required to take WordPerfect as their software package choice during the first 8-weeks of the first year, first semester.

<sup>3</sup> ECO elective: ECO 115, ECO 200.

<sup>4</sup> Students may take any mathematics course offered depending upon their test scores and the advice of a Student Development faculty member. MGT 150 is recommended.

## Administrative Assistant Certificate

*This 31-credit hour certificate program is designed for persons with secretarial experience who are interested in expanding their business knowledge for higher level positions such as administrative assistant, office manager, or a higher level management position. A combination of 31 credit hours may be selected from the following courses with the approval of the coordinator of the program or a Student Development faculty member.*

### Required:

ACC 101	Introduction to Financial Accounting <sup>1</sup> .....	4
ENG 130	Business Writing I .....	3
MGT 111	Introduction to Business Organization <sup>1</sup> .....	3
MGT 160	Principles of Supervision.....	3
MGT 280	Human Relations in Business .....	3

### Electives: Select at least 15 credit hours from the following courses:

Accounting elective.....	3
ACC 211 Business Law <sup>1</sup> .....	3
CIS 101 Introduction to Computer Information Systems .....	3
CIS 121 General Accounting Applications for Micros .....	2
CIS 122 Data Base for Micros .....	1
CIS 123 Spreadsheet/Budgeting for Micros .....	1
CIS 124 Advanced Spreadsheet for Micros .....	1
ECO 200 Introduction to Economics <sup>1</sup> .....	3
ENG 103 Technical Report Writing .....	3
MGT 265 Human Resource Management.....	3
MGT 270 Principles of Management .....	3
PSY 145 Psychology in Business and Industry.....	3
OFC 106 Time Management for Office Careers <sup>1</sup> .....	1
OFC 107 Internet Applications .....	1
OFC 225 Topics in Office Careers.....	1-6
OFC 227 Business Presentations .....	1
OFC 228 Records Control for the Office <sup>1</sup> .....	1
OFC 229 Meeting and Conference Planning <sup>1</sup> .....	3

# ADMINISTRATIVE TECHNOLOGY

## Administrative Assistant Certificate continued...

OFC	250	Records Management Basics.....	3
OFC	251	Records and Information Management I .....	3
OFC	252	Records and Information Management II .....	3
OFC	253	Forms Control.....	3
OFC	254	Records Management Technology .....	3
		Word Processing equipment electives.....	2-6

<sup>1</sup> For those who have passed the Certified Professional Secretary Examination within the past five years, credit will be given for these courses. Contact the testing office for information on procedures and appropriate fees.

## Certified Professional Secretary Certificate

*This is a 6-credit hour certificate program specifically designed for individuals with a high degree of secretarial skill and business experience who are currently employed as secretaries and wish to raise their level of professionalism and/or qualify for promotion into executive secretarial, administrative assistant or managerial types of positions within a company.*

*This program emphasizes advanced secretarial and business training in order to provide the secretary with a deeper and broader understanding of the dynamics of the business world and the vital role performed by the secretary in the ever-increasing demands of the business.*

OFC	260	Behavioral Science in Business (CPS) .....	1
OFC	261	Business Law (CPS).....	1
OFC	262	Economics and Management (CPS).....	1
OFC	263	Accounting (CPS) .....	1
OFC	264	Office Administration and Communication (CPS).....	1
OFC	265	Office Technology (CPS).....	1

## General Office Certificate

*This 15-credit hour certificate program is designed for persons interested in working in various types of offices in a support capacity. The curriculum gives basic training in technology, communication, business vocabulary, and office skills.*

*Graduates of the program are prepared for positions as clerks, help desk assistants, receptionists, and general office assistants. An orientation and planning session with the coordinator is recommended for each student. Detailed information will be sent upon request or upon application to the program.*

*Any combination of 15 credit hours may be selected from the following courses:*

CIS	123	Spreadsheet/Budgeting for Micros .....	1
ENG	100	Composition .....	3
MGT	111	Introduction to Business Organization.....	3
MGT	150	Business Math.....	3
OFC	104	Introduction to Office Careers.....	1

# ADMINISTRATIVE TECHNOLOGY

## General Office Certificate continued...

OFC	105	Human Relations for Office Careers .....	1
OFC	107	Internet Applications .....	1
OFC	111	Keyboarding II .....	3
OFC	112	Keyboarding III <sup>1</sup> .....	3
OFC	113	Keyboarding IV <sup>1</sup> .....	3
OFC	130	Survey of Word Processing Applications .....	1
OFC	133	Word Processing Software I .....	2
OFC	134	Word Processing Software II .....	2
OFC	201	Advanced Features in Word Processing <sup>1</sup> .....	2
OFC	202	Desktop Publishing Using Word Processing <sup>1</sup> .....	2

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

## Office Technology Certificate

*This 14-credit hour certificate program is designed for the student with good keyboarding skills who is interested in office employment emphasizing computer application skills and for the student who needs to upgrade her/his knowledge of current office technology.*

### Required:

OFC	113	Keyboarding IV <sup>1</sup> .....	3
OFC	130	Survey of Word Processing Software Applications ....	1
OFC	133	Word Processing Software I .....	2
OFC	134	Word Processing Software II .....	2
OFC	203	Proofreading and Editing .....	2

### Electives: Select at least 4 credit hours from the following courses:

OFC	107	Internet Applications .....	1
OFC	201	Advanced Features in Word Processing .....	2
OFC	202	Desktop Publishing Using Word Processing .....	2
OFC	204	Macros for Word Processing .....	2
OFC	205	Using Tables in Word Processing .....	2
OFC	206	Using Merges in Word Processing .....	2
OFC	225	Topics in Office Careers .....	1-6
OFC	227	Business Presentations .....	1
OFC	230	Executive Machine Transcription .....	2

<sup>1</sup> Placement into OFC 113 is contingent upon previous training and consent of instructor.

# ADMINISTRATIVE TECHNOLOGY

## Secretarial Certificate

*This 28-credit hour certificate program gives experience, training and development in secretarial skills in order to obtain entry-level secretarial employment, be promoted into a secretarial position or to expand and update one's secretarial/office skills. Students may apply this entire program toward the two-year Executive Assistant degree program.*

*A combination of 28 credit hours is required for this certificate with the approval of the coordinator or Student Development faculty member.*

### Required:

OFC	104	Introduction to Office Careers.....	1
OFC	105	Human Relations for Office Careers .....	1
OFC	106	Time Management for Office Careers.....	1
OFC	133	Word Processing Software I.....	2
OFC	201	Advanced Features in Word Processing .....	2
OFC	220	Automated Office Practices .....	4
OFC	228	Records Control for the Office .....	1
OFC	229	Meeting and Conference Planning .....	1
OFC	230	Executive Machine Transcription .....	2
OFC	237	Secretarial Seminar and Internship I.....	3

### Electives: Select at least 10 credit hours from the following courses:

CIS	121	General Accounting Applications for Micros .....	1
CIS	122	Data Base for Micros .....	1
CIS	123	Spreadsheet/Budgeting for Micros.....	1
CIS	124	Advanced Spreadsheet for Micros .....	1
ENG	130	Business Writing .....	3
OFC	107	Internet Applications.....	1
OFC	113	Keyboarding IV <sup>1</sup> .....	3
OFC	202	Desktop Publishing Using Word Processing .....	2
OFC	203	Proofreading and Editing .....	2
OFC	204	Macros for Word Processing.....	2
OFC	205	Using Tables in Word Processing .....	2
OFC	206	Using Merges in Word Processing .....	2
OFC	225	Topics in Office Careers.....	1-6
OFC	227	Business Presentations.....	1
OFC	250	Records Management Basics.....	3
OFC	251	Records & Information Management I .....	3
OFC	252	Records & Information Management II .....	3
SPE	101	Fundamentals of Speech Communication.....	3

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

# ARCHITECTURAL TECHNOLOGY

## Associate in Applied Science Degree

*The curriculum emphasis is on architecture and construction, but courses in communication skills, social sciences and humanities are also included. Graduates from this curriculum may be qualified for positions as architectural drafters, engineering interns in building construction, building materials and system details, specification writers and ancillary professional services.*

### FIRST YEAR

#### First Semester

ATE	101	Introduction to Architectural Technology I .....	4
ATE	103	Building Materials Technology I .....	4
ATE	105	Architectural CAD I .....	3
ENG	101	Composition .....	3
Social Science elective .....			<u>3</u>
			17

#### Second Semester

ATE	102	Introduction to Architectural Technology II .....	4
ATE	104	Building Materials Technology II .....	4
ENG	102	Composition <sup>1</sup> .....	3
Mathematics elective <sup>2</sup> .....			3
Social Science elective .....			<u>3</u>
			17

### SECOND YEAR

#### First Semester

ATE	201	Comprehensive Building Project I .....	4
ATE	203	Construction Problems I .....	4
ATE	207	Architectural Statics .....	3
Humanities elective <sup>3</sup> .....			<u>3</u>
			14

#### Second Semester

ATE	202	Comprehensive Building Project II .....	4
ATE	204	Construction Problems II .....	4
ATE	208	Architectural Strength of Materials .....	3
Technical elective <sup>4</sup> .....			<u>3</u>
			14

<sup>1</sup> ENG 100, ENG 103, ENG 130 or SPE 101 may be used under certain conditions to satisfy this requirement.

<sup>2</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete a three (3) credit hour ATE elective.

<sup>3</sup> Recommended elective: ART 110, MUS 103, MUS 104, PHI 105 or any literature course.

<sup>4</sup> Technical elective: ATE 106, ATE 109, ATE 205, ATE 206, ATE 210, ATE 211, ATE 213, BCE 201, ELT 142, or a combination of ATE 100 and ATE 200.

# ARCHITECTURAL TECHNOLOGY

## Architectural CAD Certificate

*This 12-hour certificate program is designed for those just entering the field of architecture, as well as the practicing professional who desires to learn the necessary skills to be proficient in all manners of CAD drafting. Courses begin with introductory two dimensional drafting and proceed through advanced two dimensional drafting, three dimensional drafting and photo-realistic rendering of three dimensional computer images. Add-on rendering packages will also be explored. Students will learn, through hands-on experience using state of the art computer hardware, the CAD software packages in demand in today's workplace.*

ATE	105	Introduction to Architectural CAD I .....	3
ATE	106	Introduction to Architectural CAD II .....	3
ATE	205	Architectural Computer Applications I .....	3
ATE	206	Architectural Computer Applications II .....	3

## Architectural Technology Certificate

*This is a technical program leading to a certificate of completion of any of the following courses, totaling 15 credit hours, provided the combination has approval of a Student Development faculty member. The curriculum emphasis is on architecture in the related areas of construction, CAD, drafting, estimating, specifications, construction management, model making, historical survey, rendering and perspective drawing.*

ATE	101	Introduction to Architectural Technology I .....	4
ATE	102	Introduction to Architectural Technology II .....	4
ATE	103	Building Materials Technology I .....	4
ATE	104	Building Materials Technology II .....	4
ATE	105	Architectural CAD I .....	3
ATE	106	Architectural CAD II .....	3
ATE	107	Architectural Principles for the Interior Designer I .....	4
ATE	108	Architectural Principles for the Interior Designer II .....	4
ATE	109	Chicago's Great Architectural Tradition .....	3
ATE	201	Comprehensive Building Project I .....	4
ATE	202	Comprehensive Building Project II .....	4
ATE	203	Construction Problems I .....	4
ATE	204	Construction Problems II .....	4
ATE	205	Architectural Computer Applications I .....	3
ATE	206	Architectural Computer Applications II .....	3
ATE	207	Architectural Statics .....	3
ATE	208	Architectural Strength of Materials .....	3
ATE	209	Principles of Building Construction .....	3
ATE	210	Cost Estimating .....	3
ATE	211	Solar Energy Architecture .....	3
ATE	212	Architectural Rendering .....	3
ATE	213	Construction Management Process .....	3
ATE	214	Architectural Models .....	3

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# AUTOMATION SKILLS

## Automation Skills

*This 30-credit hour certificate program is designed to train students in a variety of entry level positions in industries targeting service, manufacturing and maintenance activities. The curriculum offers courses in a wide variety of specific topics leading to an understanding of robotics and automated manufacturing repair and maintenance needs of industry.*

*Any combination of 30 credit hours may be selected from the courses listed below, provided the combination has approval of coordinator.*

*Graduates may find employment in a variety of electricity-electronic or mechanical related industries with job classifications of millwright, maintenance mechanic or field service mechanic.*

AUT	101	Analog Electricity-Electronics .....	4
AUT	105	Digital Electronics .....	4
AUT	108	Industrial Computer Overview .....	1
AUT	110	Safety and OSHA .....	1
AUT	125	Optics: Fiber .....	2
AUT	130	Pneumatics and Hydraulics .....	3
AUT	135	Sensors .....	2
AUT	140	Controllers-PLC's .....	2
AUT	145	Electronic Schematics and QC .....	3
AUT	147	Measurements and Instruments .....	1
AUT	148	Quality Skills .....	1
AUT	161	Robotic Applications .....	3
AUT	165	CNC Setup and Operation .....	1
AUT	170	Data Acquisition I .....	2
AUT	175	Data Acquisition II .....	2
CWE	220	Cooperative Education I .....	2-5
CWE	221	Cooperative Education II .....	2-5
MET	106	Mechanical Blueprint Reading .....	1
MFG	105	Machining Processes I .....	3

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## BANKING

*See: Financial Services*

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## BREAD & PASTRY

*See: Hospitality Management*

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# BUILDING CODES AND ENFORCEMENT

## Building Codes and Enforcement Certificate

*This certificate program, which totals 24 credit hours, is designed to meet the educational and training needs of those employed in the building code compliance field, as well as those in the building and construction industry who are interested in keeping abreast of building code changes and requirements.*

*The emphasis of this specialized program is on building codes and their interpretation and application in the field. This offers students a unique opportunity to develop and expand their knowledge and skills. The certificate may enhance students' opportunities for employment and career advancement. New employment opportunities are cyclical in nature, and students should consult the program coordinator or Student Development faculty member before registering for this program.*

BCE	101	Basic Construction for Building Codes.....	3
BCE	102	Basic Code Enforcement Techniques.....	3
BCE	104	Basic Mechanical and Energy Conservation Codes or	
FIS	123	Fire Prevention Principles II <sup>1</sup> .....	3
BCE	105	Basic Plumbing Codes .....	3
BCE	106	Basic Electrical Codes.....	3
BCE	201	Basic Building Codes .....	3
ENG	103	Technical and Report Writing.....	3
SPE	101	Fundamentals of Speech Communication.....	3

<sup>1</sup> Prerequisite of FIS 122 will be waived.



# CARDIAC TECHNOLOGY\*

## Associate in Applied Science Degree

*Students are prepared for positions as cardiodiagnostic technicians in hospitals, cardiovascular clinics, or physicians' offices. Cardiognostics involves skill acquisition in performing resting electrocardiograms, assisting physicians in running exercise stress tests, scanning heart rhythm strips and carrying out sophisticated cardiac ultrasound examinations (echocardiography).*

*A 300-hour internship at a local hospital is required once all core courses (HPI prefix) have been completed with a grade of "C" or better.*

\*\* Admission requirements include:

- Fulfillment of the general admission requirements of Harper College.
- Submission of an official copy of ACT results. (This requirement will be waived for students who have completed 12 or more semester hours of college work.)
- High school graduation or equivalent (GED).
- High school grade point average of 2.0 or better (on a 4.0 scale), or if 12 semester hours of college credit have been completed, a college grade point average of 2.0 or better (on a 4.0 scale). Students who have previously enrolled at Harper College must be in good academic standing.
- Completion of at least two semesters of high school biology with grades of "C" or better or one semester of college biology with a grade of "C" or better. Once college biology has been completed, only college biology will be used to determine if the biology requirement has been fulfilled.
- Attendance at a Cardiac Technology Program information meeting.
- Satisfactory interview with the Cardiac Technology program director.
- Completion of the Harper College writing/reading Assessment or a college-level English composition course with a grade of "C" or better.
- Satisfactory Harper College Cardiac Technology admission score.

### Summer Semester

HPI	100	Introduction to the Cardiac Technology Program .....	1
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### FIRST YEAR

#### First Semester

BIO	160	Human Anatomy .....	4
		English elective <sup>1</sup> .....	3
HPI	101	Fundamentals of Exercise Testing .....	3
HSC	112	Medical Terminology .....	3
		Mathematics elective <sup>2</sup> .....	<u>3</u>
			16

#### Second Semester

		English elective <sup>1</sup> .....	3
HPI	105	Electrocardiography.....	4
HPI	113	Ultrasound Physics <sup>2</sup> .....	2
HPI	116	Cardiac Anatomy and Physiology.....	<u>4</u>
			13

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# CARDIAC TECHNOLOGY

## Associate in Applied Science Degree continued...

### SECOND YEAR

#### First Semester

HPI	103	Prevention and Treatment of Cardiac Emergencies ..	3
HPI	106	Cardiovascular Physiology and Pathology .....	3
HPI	109	Diagnostics I .....	3
HPI	117	Laboratory Techniques I .....	<u>2</u>
			11

#### Second Semester

CHM	100	Chemistry for the Health Sciences.....	4
HPI	110	Diagnostics II .....	3
HPI	115	Clinical Laboratory Skills.....	3
HPI	118	Laboratory Techniques II .....	2
		Humanities or Social Science elective .....	<u>3</u>
			15

#### Summer Semester

HPI	107	Cardiac Technology Internship <sup>3</sup> .....	4
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\* Cardiac Technology is a limited enrollment program. See limited enrollment programs section of this Catalog for details.

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

<sup>1</sup> Students should seek the advice of a Student Development faculty member to determine the appropriate English course.

<sup>2</sup> A competency test, available in the Assessment Center, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete a three (3) credit hour elective.

<sup>3</sup> HPI 107 may also be taken in fall or spring.

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# COMMERCIAL CREDIT MANAGEMENT

*See: Financial Services*

# COMPUTER INFORMATION SYSTEMS

## Associate in Applied Science Degree: Microcomputers in Business

The technical curriculum trains students for various positions in the field of microcomputers. The student will take courses in business, computer information systems, and general education. The student may choose from five specialized study areas: C Programming, LAN Administration, NetPrep Network Management, Packages Programming or Telecommunications. The student must select a minimum of 66 semester hours from these specialized study areas. Graduates of the program may find employment as microcomputer programmers, systems analysts, network technicians, and consultants.

### Required Core Courses:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	106	Computer Logic and Programming Technology .....	3
CIS	134	Personal Computer (DOS) .....	3
CIS	203	Systems Analysis and Design I.....	3
CIS	204	Advanced Systems Analysis and Design .....	3

### Required General Education Courses:

ENG	101	Composition .....	3
ENG	102	Composition or	
ENG	103	Technical and Report Writing or	
SPE	101	Fundamentals of Speech Communication <sup>1</sup> .....	3
MTH	080	Intermediate Algebra .....	4
		Natural Science, Social Science or	
		Humanities electives <sup>2</sup> .....	6

### Specialized Study Areas:

#### C Programming

##### Required:

CIS	122	Data Base for Micros .....	1
CIS	147	Windows.....	2
CIS	149	UNIX.....	3
CIS	152	Data Base Programming, Microcomputers.....	3
CIS	166	Introduction to Programming in C.....	4
CIS	176	Advanced C Programming .....	4
CIS	186	C Programming for Graphical User Interfaces .....	4
CIS	266	C++ and Object Oriented Software Development.....	4
		Electives <sup>3</sup> .....	7
		Social Science, Humanities or	
		Natural Science elective <sup>2</sup> .....	3

#### LAN Administration

##### Required:

CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database for Micros (1) and	
CIS	123	Spreadsheet Budgeting for Micros (1) and	
CIS	125	Word Processing for Micros (1) .....	3
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	126	Graphics for Micros .....	1
CIS	131	Microcomputer Printers.....	1
CIS	146	Operating System—OS/2 (3) or	
CIS	147	Windows (2) .....	2-3
CIS	149	Personal Computer UNIX or	
CIS	171	Introduction to Local Area Networks.....	3

# COMPUTER INFORMATION SYSTEMS

## Associate in Applied Science Degree: Microcomputers in Business continued...

CIS	152	Data Base Programming, Microcomputers.....	3
CIS	170	Introduction to Data Communication .....	3
MGT	111	Introduction to Business Organization.....	3
SPE	101	Fundamentals of Speech Communication.....	3
Electives <sup>4</sup>		.....	9
Social Science or Humanities elective <sup>2</sup>		.....	3

### NetPrep™ Network Technology

#### Required:

CIS	102	NetPrep™ Networking Fundamentals.....	3
CIS	107	NetPrep™ Local Area Networks .....	3
CIS	115	NetPrep™ Wide Area Networks .....	3
CIS	147	Windows.....	2
CIS	155	NetPrep™ Network Architectures .....	3
CIS	156	NetPrep™-The Internet .....	3
CIS	157	NetPrep™ Internetworking Devices and Concepts...	3
CIS	158	NetPrep™ Protocol Analysis .....	3
CIS	159	NetPrep™ Network Analysis and Design .....	3
Electives <sup>5</sup>		.....	6
Social Science or Humanities elective		.....	3

### Packages

#### Required:

ACC	101	Introduction to Financial Accounting .....	4
CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database for Micros (1) and	
CIS	123	Spreadsheet Budgeting for Micros (1) and	
CIS	125	Word Processing for Micros (1) .....	3
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	126	Graphics for Micros .....	1
CIS	131	Microcomputer Printers.....	1
CIS	147	Windows.....	2
CIS	152	Data Base Programming, Microcomputers.....	3
CIS	170	Introduction to Data Communications .....	3
CIS	171	Introduction to Local Area Networks.....	3
CIS electives <sup>6</sup>		.....	8
MGT	111	Introduction to Business Organization .....	3
Social Science, Humanities or			
Natural Science elective <sup>2</sup>		.....	3

### Programming

#### Required:

ACC	101	Introduction to Financial Accounting .....	4
ACC	102	Introduction to Managerial Accounting.....	3
CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Data Base for Micros (1) and	
CIS	123	Spreadsheet Budgeting for Micros (1) and	
CIS	125	Word Processing for Micros (1) .....	3
CIS	130	BASIC for Business or	
CIS	166	Introduction to Programming in C.....	4
CIS	133	Personal Computer Programming— Assembler Language or	
CIS	186	C Programming for Graphical User Interfaces or	
CIS	266	C++ and Object Oriented Software Development....	4

# COMPUTER INFORMATION SYSTEMS

## Associate in Applied Science Degree continued...

CIS	170	Introduction to Data Communications .....	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	176	Advanced C Programming or	
CIS	231	Advanced BASIC with Graphics.....	4
CIS	elective <sup>7</sup>	.....	1
ECO	200	Introduction to Economics or	
ECO	211	Microeconomics <sup>2</sup> .....	3
MGT	111	Introduction to Business Organization .....	3

### Telecommunications

#### Required:

ACC	101	Introduction to Financial Accounting .....	4
ACC	102	Introduction to Managerial Accounting.....	3
CIS	151	Introduction to Telecommunications .....	3
CIS	166	Introduction to Programming in C.....	4
CIS	170	Introduction to Data Communications .....	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	172	Network Administration .....	3
ECO	200	Introduction to Economics or	
ECO	211	Microeconomics.....	3
Elective <sup>8</sup>		.....	3
MGT	111	Introduction to Business Organization.....	3
MTH	104	Plane Trigonometry .....	3

<sup>1</sup> Students in LAN Administration specialization are required to choose from ENG 102 or ENG 103; ENG 103 is recommended. Students in Telecommunications specialization are required to choose from ENG 102 or SPE 101; ENG 102 is recommended.

<sup>2</sup> Students must take 9 credit hours in a minimum of two of these areas. For students specializing in Telecommunications, PHY 101, ECO 211 and ECO 212 are recommended.

<sup>3</sup> ACC 101, ACC 102, CIS 119, CIS 126, CIS 127, CIS 130, CIS 131, CIS 133, CIS 141, CIS 144, CIS 145, CIS 146, CIS 148, CIS 160, CIS 161, CIS 168, CIS 170, CIS 171, CIS 178, CIS 196, CIS 231.

<sup>4</sup> ACC 101, ACC 102, CIS 103, CIS 105, CIS 118, CIS 119, CIS 121, CIS 127, CIS 132, CIS 137, CIS 138, CIS 141, CIS 144, CIS 145, CIS 146, CIS 147, CIS 148, CIS 149, CIS 154, CIS 171, CIS 205, CIS 218, CIS 223, CIS 224.

<sup>5</sup> CIS electives: CIS 124, CIS 131, CIS 141, CIS 144, CIS 145, CIS 146, CIS 149, CIS 151, CIS 166, CIS 170, CIS 171, CIS 172,, or up to 3 credit hours from CIS 120, CIS 122, CIS 123, CIS 125.

<sup>6</sup> CIS electives: CIS 104, CIS 105, CIS 118, CIS 119, CIS 121, CIS 127, CIS 129, CIS 130, CIS 132, CIS 133, CIS 138, CIS 141, CIS 144, CIS 145, CIS 146, CIS 148, CIS 149, CIS 154, CIS 205, CIS 223, CIS 224, CIS 231.

<sup>7</sup> CIS elective: CIS 104, CIS 105, CIS 117, CIS 124, CIS 126, CIS 131, CIS 141, CIS 147, CIS 168, CIS 196, CIS 280.

<sup>8</sup> CIS 105, CIS 120, CIS 132, CIS 147, CIS 149, CIS 152, CIS 176, CIS 186, CIS 196, MTH 165.

# COMPUTER INFORMATION SYSTEMS

## Associate in Applied Science Degree: Technology

The technical curriculum trains students for various positions in the field of computer information systems. The student will take courses in mathematics, business, data processing and general education. Graduates of the program may find employment as computer programmers, systems analysts and computer operators.

### FIRST YEAR

#### First Semester

CIS	101	Introduction to Computer Information Systems .....	3
CIS	106	Computer Logic and Programming Technology .....	3
ENG	101	Composition .....	3
MTH	080	Intermediate Algebra (4) or	
MTH	086	Intermediate Algebra (2) and	
MTH	087	Intermediate Algebra (2) .....	4
		Social Science elective .....	<u>3</u>
			16

#### Second Semester

ACC	101	Introduction to Financial Accounting .....	4
CIS	108	Computer Programming—COBOL .....	5
CIS	203	Systems Analysis and Design I .....	3
ENG	102	Composition or	
ENG	103	Technical and Report Writing .....	3
MGT	111	Introduction to Business Organization .....	<u>3</u>
			18

### SECOND YEAR

#### First Semester

ACC	102	Introduction to Managerial Accounting .....	3
CIS	110	Computer Programming—Assembler Language .....	5
CIS	204	Advanced Systems Analysis and Design .....	3
CIS	elective <sup>1</sup>	.....	3-4
		Humanities elective .....	<u>3</u>
			17-18

#### Second Semester

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

<sup>1</sup> CIS electives: CIS 104, CIS 105, CIS 111, CIS 112, CIS 113, CIS 117, CIS 119, CIS 120, CIS 121, CIS 122, CIS 123, CIS 124, CIS 125, CIS 126, CIS 127, CIS 128, CIS 129, CIS 130, CIS 131, CIS 132, CIS 133, CIS 134, CIS 136, CIS 140, CIS 142, CIS 150, CIS 152, CIS 153, CIS 154, CIS 160, CIS 166, CIS 168, CIS 171, CIS 176, CIS 178, CIS 186, CIS 196, CIS 208, CIS 210, CIS 215, CIS 220, CIS 223, CIS 224, CIS 230, CIS 231, CIS 240, CIS 266, CIS 270, CIS 280.

# COMPUTER INFORMATION SYSTEMS

## Associate in Applied Science Degree: Web Development

The technical curriculum trains students for various positions in the field of web site design and maintenance. The student will take courses in business, computer information systems, and general education. The student may choose from two specialized study areas: Web Application Developer or Web Visual Design. Graduates of the program may find employment as web masters, web developers, web designers, web site managers, and consultants.

### Required Core Courses:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	106	Programming Logic and Technology .....	3
CIS	118	Introduction to the Internet .....	1
CIS	119	Web Site Development I .....	2
CIS	138	Web Site Development II .....	3
CIS	147	Windows .....	2
CIS	170	Introduction to Data Communication .....	3
CIS	219	Web Site Management .....	3
MGT	111	Introduction to Business Organization .....	3
MGT	245	Principles of Marketing .....	3

### Required General Education Courses:

ENG	101	Composition .....	3
ENG	102	Composition or	
ENG	103	Technical and Report Writing or	
SPE	101	Fundamentals of Speech Communication .....	3
		Mathematics elective <sup>1</sup> .....	4
		Natural Science, Social Science, or	
		Humanities electives <sup>2</sup> .....	6

### Specialized Study Areas:

#### Web Application Developer

##### Required:

CIS	122	Data Base for Micros .....	1
CIS	130	BASIC for Business .....	4
CIS	152	Data Base Programming, Microcomputers .....	3
CIS	161	Introduction to Perl Programming .....	3
CIS	168	Introduction to JAVA .....	4
		CIS electives <sup>3</sup> .....	6
		Natural Science, Social Science, or	
		Humanities electives <sup>2</sup> .....	3

#### Web Visual Design

##### Required:

ART	121	Design I .....	3
CIS	105	Introduction to Multimedia .....	3
CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Data Base for Micros (1) and	
CIS	123	Spreadsheet Budgeting for Micros (1) and	
CIS	125	Word Processing for Micros (1) .....	3
CIS	205	Multimedia Development .....	3
		CIS electives <sup>4</sup> .....	9
JNM	230	Graphic Design Communication .....	3

<sup>1</sup> Students must take 4 credit hours in a mathematics course at the level of MTH 080 or above.

<sup>2</sup> Students must take a total of 9 credit hours in a minimum of two of these areas.

<sup>3</sup> CIS 105, CIS 134, CIS 166, CIS 178, CIS 203, CIS 204, CIS 218, CIS 231, CIS 280, JNM 230.

<sup>4</sup> CIS 130, CIS 134, CIS 152, CIS 218, CIS 203, CIS 204.

# COMPUTER INFORMATION SYSTEMS

## Advanced LAN Management Certificate

*This 30-credit hour certificate program is designed to prepare a student to find employment in a network administration area or similar areas in a business.*

### Required:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	131	Microcomputer Printers.....	1
CIS	134	Personal Computer (DOS) .....	3
CIS	145	Microcomputer Hardware and Software .....	3
CIS	147	Windows.....	2
CIS	170	Introduction to Data Communications .....	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	172	Network Administration .....	3
CIS	203	Systems Analysis and Design.....	3

### Electives: Group I (Select 3 credit hours):

CIS	120	Introduction to Business Software Packages.....	3
CIS	122	Data Base for Micros .....	1
CIS	123	Spreadsheet/Budgeting for Micros .....	1
CIS	125	Word Processing for Micros .....	1

### Electives: Group II (Select 2 credit hours):

CIS	105	Introduction to Multimedia .....	3
CIS	126	Graphics for Micros .....	1
CIS	137	Computer Operator Internship.....	3
CIS	141	Advanced Data Base for Micros .....	1
CIS	144	Advanced DOS .....	3
CIS	146	Operating System—OS/2.....	3
CIS	149	Personal Computer UNIX.....	3
CIS	151	Introduction to Telecommunications .....	3
CIS	204	Advanced Systems Analysis and Design II .....	3
CIS	224	Spreadsheet Macros and Other Advanced Topics....	1

<sup>1</sup> Students must satisfy prerequisite for each course selected.

## C Programming Certificate

*This is an 18-credit hour certificate program to familiarize a student with the business use of C on the microcomputer. The student will gain exposure to microcomputers using the C programming language. This exposure will be useful to a person whose job or business requires the use of the C Programming language.*

CIS	101	Introduction to Computer Information Systems .....	3
CIS	106	Computer Logic and Programming Technology.....	3
CIS	166	Introduction to Programming in C.....	4
CIS	176	Advanced C Programming .....	4
CIS	186	C Programming for Graphical User Interfaces or	
CIS	196	Advanced C Programming for	
		Graphical User Interfaces or	
CIS	266	C++ and Object Oriented Software Development.....	4



# COMPUTER INFORMATION SYSTEMS

## Computer Operator Certificate

*This 30-credit hour certificate program includes the study of computer information systems, computer logic and programming technology, programming systems, an internship at an industrial training station, and general clerical subjects. Graduates may find employment as computer operators, tape librarians, peripheral equipment handlers or in other clerical positions in computer installations in business, industry and government.*

### First Semester

CIS	101	Introduction to Computer Information Systems .....	3
CIS	106	Computer Logic and Programming Technology .....	3
CIS	134	Personal Computer (DOS) or	
CIS	135	Computer Operator (DOS).....	3
ENG	101	Composition .....	3
MGT	111	Introduction to Business Organization .....	3
			<u>15</u>

### Second Semester<sup>2</sup>

CIS electives <sup>1</sup>		.....	6
CIS	136	Job Control/Utilities or	
CIS	149	Personal Computer UNIX or	
CIS	171	Introduction to Local Area Networks .....	3
ENG	102	Composition or	
ENG	103	Technical and Report Writing .....	3
MGT	150	Business Math .....	3
			<u>15</u>

<sup>1</sup> CIS electives: CIS 118, CIS 119, CIS 120, CIS 122, CIS 123, CIS 124, CIS 125, CIS 126, CIS 130, CIS 131, CIS 134, CIS 137, CIS 144, CIS 146, CIS 149, CIS 166, CIS 170, CIS 171, CIS 223, CIS 224.

<sup>2</sup> Students must satisfy prerequisite for each course selected.

## LAN Management Certificate

*This 20-credit hour certificate program is designed to familiarize a student with LAN management. The student will gain exposure to microcomputers— hardware, software and networks. This will be useful to the person who would like to help in network administration areas in a business or to help install hardware and software.*

CIS	101	Introduction to Computer Information Systems .....	3
CIS	117	Introduction to Windows .....	1
CIS	131	Microcomputer Printers.....	1
CIS	134	Personal Computer (DOS) .....	3
CIS	145	Microcomputer Hardware and Software .....	3
CIS	170	Introduction to Data Communications .....	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	172	Network Administration .....	3

# COMPUTER INFORMATION SYSTEMS

## Microcomputers in Business Certificate

*This is a 16-credit hour certificate program designed to familiarize a student with the business uses of microcomputers. The student will gain exposure to microcomputers and microcomputer software. This exposure will be useful to the person whose job or business requires the use of a microcomputer.*

### Required:

CIS	100	Computer Literacy or	
CIS	101	Introduction to Computer Information Systems .....	3
CIS	126	Graphics for Micros .....	1
CIS	134	Personal Computer (DOS) .....	3

### Electives: Group I (Select 3 credit hours):

CIS	120	Introduction to Business Software Packages.....	3
CIS	122	Data Base for Micros .....	1
CIS	123	Spreadsheet/Budgeting for Micros .....	1
CIS	125	Word Processing for Micros .....	1

### Electives: Group II (Select 6 credit hours1):

CIS	104	Multimedia Presentations .....	2
CIS	105	Introduction to Multimedia .....	3
CIS	106	Computer Logic and Programming Technology .....	3
CIS	117	Introduction to Windows .....	1
CIS	118	Introduction to the Internet.....	1
CIS	119	Web Site Development .....	2
CIS	121	General Accounting Application for Micros.....	2
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	127	Advanced Business Graphics .....	1
CIS	129	Personal Information Management .....	1
CIS	130	BASIC for Business.....	4
CIS	131	Microcomputer Printers.....	1
CIS	132	Advanced Business Software Packages .....	4
CIS	133	Personal Computer Programming— Assembler Language.....	4
CIS	141	Advanced Data Base for Micros.....	1
CIS	144	Advanced DOS.....	3
CIS	146	Operating System-OS/2 .....	3
CIS	147	Windows.....	2
CIS	148	Personal Computer Utilities.....	2
CIS	152	Data Base Programming Microcomputers.....	3
CIS	153	Expert Systems .....	3
CIS	154	Desktop Publishing .....	3
CIS	166	Introduction to Programming in C .....	4
CIS	168	JAVA Programming I .....	4
CIS	170	Introduction to Data Communications .....	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	176	Advanced C Programming .....	4
CIS	186	C Programming for Graphical User Interfaces .....	4
CIS	196	Advanced C Programming for Graphical User Interfaces.....	4
CIS	203	Systems Analysis and Design I.....	3
CIS	204	Advanced Systems Analysis and Design .....	3
CIS	205	Multimedia Development .....	3

# COMPUTER INFORMATION SYSTEMS

## Microcomputers in Business Certificate continued...

CIS	223	Spreadsheet Graphics.....	1
CIS	224	Spreadsheet Macros and Other Advanced Topics....	1
CIS	231	Advanced BASIC with Graphics.....	4
CIS	266	C++ and Object Oriented Software Development....	4

1 Students must satisfy prerequisite for each course selected.

## Microcomputer Support Specialist Certificate

*This 36-credit hour certificate program will familiarize a student with the micro-computer environment to facilitate work in the business world in a support capacity such as help desk personnel or other computer support positions.*

### Required:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	118	Introduction to the Internet.....	1
CIS	124	Advanced Spreadsheet for Micros .....	1
CIS	126	Graphics for Micros .....	1
CIS	131	Microcomputer Printers.....	1
CIS	134	Personal Computer (DOS) .....	3
CIS	145	Microcomputer Hardware and Software .....	3
CIS	147	Windows.....	2
CIS	170	Introduction to Data Communications .....	3
CIS	203	Systems Analysis and Design.....	3
ENG	130	Business Writing .....	3
MGT	111	Introduction to Business Organization.....	3

### Electives: Group I (Select 3 credit hours):

CIS	120	Introduction to Business Software Packages.....	3
CIS	122	Data Base for Micros .....	1
CIS	123	Spreadsheet/Budgeting for Micros .....	1
CIS	125	Word Processing for Micros.....	1

### Electives: Group II (Select 6 credit hours<sup>1</sup>):

CIS	104	Multimedia Presentations.....	2
CIS	105	Introduction to Multimedia .....	3
CIS	106	Computer Logic and Programming Technology.....	3
CIS	141	Advanced Data Base for Micros.....	1
CIS	146	Operating Systems—OS/2.....	3
CIS	154	Desktop Publishing .....	3
CIS	166	Introduction to Programming in C.....	4
CIS	219	Web Site Management.....	3
CIS	223	Spreadsheet Graphics.....	1
CIS	224	Spreadsheet Macros and Other Advanced Topics .....	1

<sup>1</sup> Students must satisfy prerequisite for each course selected.

# COMPUTER INFORMATION SYSTEMS

## Midrange Certificate

*This is a 15-credit hour certificate program designed to introduce the student to the AS400.*

### Required:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	111	Introduction to the AS400 .....	3

### Electives: Select 9 credit hours from the following courses:

CIS	106	Computer Logic and Programming Technology .....	3
CIS	112	AS400 System Operations .....	3
CIS	113	AS400 Facilities .....	3
CIS	140	RPG Programming .....	3
CIS	240	Advanced RPG .....	3

## NetPrep™ Network Specialist Certificate

*This is a 15-credit hour certificate program designed to familiarize a student with the basic components of network computing. The certificate provides an introduction to the computer network career area. The student will be ready to embark on further network training or be qualified for an entry-level job as an associate network specialist/technician.*

### Required:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	102	NetPrep™ Networking Fundamentals .....	3
CIS	107	NetPrep™ Local Area Networks .....	3
CIS	115	NetPrep™ Wide Area Networks .....	3
CIS	155	NetPrep™ Networking Architectures .....	3

# COMPUTER INFORMATION SYSTEMS

## NetPrep™ Senior Network Specialist Certificate

*This 15-credit hour certificate program is designed to provide the student with in-depth, vendor-neutral, platform-independent training to become a network specialist/technician. This certificate provides students with basic knowledge for entry-level network designer and technician positions.*

### Required:

CIS	134	Personal Computer (DOS) .....	3
CIS	156	NetPrep™.The Internet .....	3
CIS	157	NetPrep™ Internetworking Devices and Concepts ...	3
CIS	158	NetPrep™ Protocol Analysis .....	3
CIS	159	NetPrep™ Network Analysis and Design .....	3

## Technical Certificate

*Any combination of 15 credit hours may be selected from the courses listed below, providing the appropriate prerequisites have been satisfied.*

CIS	101	Introduction to Computer Information Systems .....	3
CIS	104	Multimedia Presentations .....	2
CIS	105	Introduction to Multimedia .....	3
CIS	106	Computer Logic and Programming Technology .....	3
CIS	108	Computer Programming-COBOL .....	5
CIS	110	Computer Programming—Assembler Language .....	5
CIS	111	Introduction to the AS 400 .....	3
CIS	112	AS 400 System Operations .....	3
CIS	113	AS 400 Facilities .....	3
CIS	120	Introduction to Business Software Packages <sup>1</sup> .....	3
CIS	121	General Accounting Applications for Micros <sup>1</sup> .....	2
CIS	122	Data Base for Micros <sup>1</sup> .....	1
CIS	123	Spreadsheet/Budgeting for Micros <sup>1</sup> .....	1
CIS	124	Decision Support for Micros <sup>1</sup> .....	1
CIS	125	Word Processing for Micros <sup>1</sup> .....	1
CIS	126	Graphics for Micros <sup>1</sup> .....	1
CIS	127	Advanced Business Graphics <sup>1</sup> .....	1
CIS	128	DOS Basics for Micros <sup>1</sup> .....	1
CIS	129	Personal Information Management <sup>1</sup> .....	1
CIS	130	BASIC for Business .....	4
CIS	131	Microcomputer Printers <sup>1</sup> .....	1
CIS	132	Advanced Business Software Packages .....	4
CIS	133	Personal Computer Programming— Assembler Language .....	4
CIS	134	Personal Computer (DOS) .....	3
CIS	135	Computer Operator (DOS) .....	3
CIS	136	Job Control/Utilities .....	3
CIS	140	RPG Programming .....	3
CIS	141	Advanced Data Base for Micros .....	1
CIS	142	PL/1 Programming Language .....	3
CIS	150	Business FORTRAN .....	3
CIS	152	Data Base Programming, Microcomputers .....	3
CIS	153	Expert Systems .....	3

# COMPUTER INFORMATION SYSTEMS

## Technical Certificate continued...

CIS	154	Desktop Publishing .....	3
CIS	160	Introduction to Pascal Programming.....	3
CIS	166	Introduction to Programming in C.....	4
CIS	168	JAVA Programming I .....	4
CIS	170	Introduction to Data Communication .....	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	176	Advanced C Programming .....	4
CIS	186	C Programming for Graphical User Interfaces .....	4
CIS	196	Advanced C Programming for Graphical User Interfaces.....	4
CIS	202	Programming Systems.....	3
CIS	203	Systems Analysis and Design I.....	3
CIS	204	Advanced Systems Analysis and Design .....	3
CIS	208	Computer Programming—Advanced COBOL.....	4
CIS	210	Computer Programming— Advanced Assembler Language .....	4
CIS	220	Topics in Data Processing .....	1-6
CIS	223	Spreadsheet Graphics.....	1
CIS	224	Spreadsheet Macros and Other Advanced Topics....	1
CIS	231	Advanced BASIC with Graphical User Interfaces .....	4
CIS	240	Advanced RPG .....	3
CIS	266	C++ and Object Oriented Software Development....	4
CIS	270	Data Communications with CICS Applications.....	4
CIS	280	Data Base Programming, Client Server .....	4

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

## Web Development Certificate

*This 21-credit hour certificate program provides a background in web development with emphasis on scripting and programming techniques. Individuals seeking entry-level positions in the field of web page development and maintenance will find these skills helpful. This program will also be useful to individuals whose job scope has expanded to include web site responsibilities.*

### Required:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	106	Programming Logic and Technology.....	3
CIS	118	Introduction to the Internet.....	1
CIS	119	Web Site Development I .....	2
CIS	138	Web Site Development II .....	3
CIS	147	Windows.....	2
CIS	219	Web Site Management.....	3

**Electives:** Select 4 credit hours from the following courses:

CIS	122	Data Base for Micros .....	1
CIS	161	Introduction to Perl Programming .....	3
CIS	168	Introduction to JAVA.....	4

# COMPUTER INFORMATION SYSTEMS

## Web Visual Design Certificate

*This 21-credit hour certificate program provides a background in web development with emphasis on graphic and visual elements. Individuals seeking entry-level positions in the field of web page development and maintenance will find these skills helpful. This program will also be helpful to individuals whose job scope has expanded to include web site responsibilities.*

### Required:

CIS	101	Introduction to Computer Information Systems .....	3
CIS	105	Introduction to Multimedia .....	3
CIS	118	Introduction to the Internet .....	1
CIS	119	Web Development I .....	2
CIS	138	Web Development II .....	3
CIS	205	Multimedia Development .....	3
CIS	219	Web Site Management.....	3

### Electives: Select 3 credit hours from the following courses:

CIS	122	Data Base for Micros .....	1
CIS	126	Graphics for Micros .....	1
CIS	147	Windows.....	2

# CRIMINAL JUSTICE

## Associate in Applied Science Degree

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

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

### Required General Education Courses:

Electives <sup>2</sup>			9
English elective <sup>3</sup>			6
Humanities elective			3
Mathematics electives <sup>4</sup>			3
PSC 101	American Politics and Government or		
PSC 220	Suburban, Urban and State Politics		3
PSY 101	Introduction to Psychology		3
PSY 217	Adolescent Psychology		3
SOC 101	Introduction to Sociology		3
SOC 205	Social Problems		3
SPE 101	Fundamentals of Speech Communication		3

### Required Core Courses:

CRJ 101	101	Introduction to Criminal Justice <sup>1</sup>	3
CRJ 104		Introduction to Corrections	3
CRJ 201		Criminal Law <sup>1</sup>	3
CRJ 202		Criminal Procedures	3
CRJ 205		Juvenile Delinquency	3
CRJ 210		Introduction to Criminology <sup>1</sup>	3
CRJ 213		Crime Prevention	3
CRJ 214		Community Policing	3

### Specialized Study Areas:

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

#### Basic Law Enforcement

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

#### Advanced Law Enforcement

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



# CRIMINAL JUSTICE

## Associate in Applied Science Degree continued...

### Corrections

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

### Industrial Security

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

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

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

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

<sup>4</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete a three (3) credit hour elective.

## Criminal Justice Certificate

*This 15-credit hour certificate program is designed to provide specialized education for those currently employed, or other interested persons who wish to obtain a certificate indicating completion of the courses as a group. Any combination of 15 credit hours may be selected from the courses listed below, providing the combination has coordinator approval. These courses must be taken at Harper College.*

CRJ	101	Introduction to Criminal Justice .....	3
CRJ	105	Criminal Courts of the U.S.....	3
CRJ	116	Introduction to Forensics.....	3
CRJ	203	Law and Society.....	3
CRJ	207	Vice and Drug Control.....	3
CRJ	214	Community Policing .....	3
CRJ	215	Alternatives to Confinement.....	3
CRJ	216	Investigative Process .....	3
CRJ	220	Police Administration .....	3
CRJ	222	Police Operations.....	3
CRJ	224	Police Supervision.....	3
CRJ	226	Case Management.....	3
CRJ	235	Street Procedures .....	4
CRJ	238	Defensive Techniques.....	3

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# CRIMINAL JUSTICE

## Industrial and Retail Security Certificate

*This 15-credit hour 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 area when seeking employment in the security field. To qualify for the certificate, students must take a total of 15 credit hours at Harper College.*

**Required:**

CRJ	250	Industrial Security Administration .....	3
CRJ	252	Industrial Fire Protection, Disaster Control.....	3
CRJ	253	Safety Management .....	3

**Electives:** Select at least 6 credit hours from the following:

CRJ	201	Criminal Law .....	3
CRJ	202	Criminal Procedures.....	3
CRJ	214	Community Policing .....	3
CRJ	216	Investigative Process .....	3
CRJ	222	Police Operations.....	3
CRJ	226	Case Management.....	3
CRJ	235	Street Procedures .....	4
CRJ	238	Defensive Techniques.....	3

<sup>1</sup>Students having special needs should see the coordinator.

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# CULINARY ARTS

*See: Hospitality Management*

# DENTAL HYGIENE\*

## Associate in Applied Science Degree

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

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

\*\* Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College.
- Submission of an official copy of ACT results. (This requirement will be waived for students who have completed 12 or more semester hours of college work.)
- High school graduation or equivalent (GED).
- A high school grade average of 2.5 or better (on a 4.0 scale) or if 12 semester hours of college credit have been completed, a college grade average of 2.0 or better (on a 4.0 scale). Students who have previously enrolled at Harper College must be in good academic standing.
- Completion of at least two semesters of high school biology with grades of "C" or better or one semester of college biology with a grade of "C" or better; two semesters of high school chemistry with grades of "C" or better or one semester of college chemistry with a grade of "C" or better; and two additional semesters of high school science with grades of "C" or better or one additional semester of college science with a grade of "C" or better. Once college biology and chemistry have been completed, only college biology and chemistry will be used to determine if the biology and chemistry course work admission requirements have been fulfilled.
- Students who have completed any of the following courses (or their equivalent) must have obtained a grade of "C" or better in each course completed: BIO 130 — Microbiology, BIO 160 — Human Anatomy, BIO 161 — Human Physiology, CHM 100 — Chemistry for the Health Sciences, CHM 125 — Organic and Biochemistry for the Health Sciences, DIT 101 — Basic Nutrition
- Subject Competency Requirements. All students must show proof of completion of: a) the Harper College Writing/Reading Assessment Test or a college level English composition course with a grade of "C" or better and b) the Harper College Math Assessment Test or a college level math course with a grade of "C" or better.
- Attendance at a Dental Hygiene Program information meeting.
- Completion of the Health Occupations Aptitude Examination.
- Satisfactory Harper College Dental Hygiene Admission score.

### FIRST YEAR

#### Summer Semester

BIO	160	Human Anatomy <sup>2</sup> .....	4
CHM	100	Chemistry for the Health Sciences <sup>2</sup> or	
CHM	125	Organic and Biochemistry for	
		the Health Sciences <sup>1, 2</sup> .....	<u>4</u>
			8

# DENTAL HYGIENE

## Associate in Applied Science Degree continued...

### First Semester

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

### Second Semester

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

### Summer Semester

DHY	119	Oral Health Management of Special Needs Populations .....	2
DHY	151	Clinical Dental Hygiene II .....	2
DHY	269	Science of Dental Materials .....	1
DHY	270	Dental Material Laboratory Techniques .....	<u>1</u>
			6

## SECOND YEAR

### First Semester

DHY	200	Periodontology .....	2
DHY	202	Radiology I .....	1
DHY	220	Community Dental Health I .....	2
DHY	240	Dental Pharmacology .....	2
DHY	250	Clinical Dental Hygiene III .....	5
ENG	101	Composition .....	3
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			18

### Second Semester

DHY	201	Ethics, Jurisprudence and Practice Management .....	2
DHY	203	Radiology II .....	1
DHY	221	Community Dental Health II .....	2
DHY	251	Clinical Dental Hygiene IV .....	5
		Mathematics elective <sup>3</sup> .....	3
SOC	101	Introduction to Sociology .....	<u>3</u>
			16

<sup>\*</sup> Dental Hygiene I is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details.

<sup>\*\*</sup> Subject to change. Contact the Admissions Office for additional information.

<sup>1</sup> Meet with Student Development faculty member or coordinator of the Dental Hygiene program for appropriate testing and/or placement.

<sup>2</sup> Must be completed with a grade of "C" or better no earlier than five years prior to beginning the Dental Hygiene program.

<sup>3</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

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# DIETETIC TECHNICIAN

## Associate in Applied Science Degree

*This program, with its major emphasis on nutritional care, prepares a student for employment in a hospital, long term care facility, the food industry or in community feeding programs in consultation with registered dietitians. Activities the technician performs include nutritional assessment, planning menus, implementing and evaluating diets and dietary counseling.*

*The Dietetic Technician program is accredited by the Commission on Accreditation/Approval for Dietetics Education of the American Dietetic Association, a specialized accrediting body recognized by the Commission on Recognition of Post Secondary Accreditation and the United States Department of Education. Graduates of the program are eligible to take the registration examination for Dietetic Technicians.*

*The Dietetic Technician program is traditionally offered as a full-time, two-year program but individualized part-time programs can be developed. Not all courses are offered every semester. To help avoid scheduling conflicts an orientation and planning session with the coordinator is recommended.*

### FIRST YEAR

#### First Semester

BIO	135	Introductory to Human Anatomy and Physiology <sup>1</sup> .....	4
DIT	100	Introduction to Dietetics <sup>2</sup> .....	2
DIT	101	Basic Nutrition .....	3
FSM	114	Food Standards and Sanitation .....	2
HSC	112	Medical Terminology .....	3
Mathematics elective <sup>3</sup> .....			<u>3</u>
			17

#### Second Semester

BIO	136	Introduction to Human Disease <sup>1</sup> .....	3
DIT	102	Advanced Nutrition .....	3
DIT	150	Dietetic Clinical Laboratory I <sup>4</sup> .....	3
ENG	101	Composition .....	3
PSY	101	Introduction to Psychology .....	<u>3</u>
			15

### SECOND YEAR

#### First Semester

DIT	110	Principles of Food Preparation .....	3
DIT	200	Dietetic Clinical Laboratory II <sup>4</sup> .....	5
DIT	201	Nutritional Services in Institutions .....	3
FSM	212	Hospitality Supervision or	
MGT	160	Principles of Supervision .....	3
SOC	101	Introduction to Sociology .....	<u>3</u>
			17

# DIETETIC TECHNICIAN

## Associate in Applied Science Degree continued...

### Second Semester

DIT	202	Nutrition Care Seminar .....	2
DIT	203	Dietetic Technician Seminar .....	1
DIT	220	Food Systems Administration .....	3
DIT	250	Dietetic Clinical Laboratory III <sup>4</sup> .....	5
SPE	101	Fundamentals of Speech Communication .....	<u>3</u>
			14

<sup>1</sup> BIO 135 and BIO 136 are recommended for the first year of the program to avoid scheduling conflicts.

<sup>2</sup> DIT 100 must be taken fall semester, prior to taking DIT 150 offered only in spring.

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

<sup>4</sup> A baccalaureate graduate with a degree in nutrition/dietetics meeting American Dietetic Association guidelines after completing the clinical laboratory courses DIT 150, DIT 200 and DIT 250 will then be eligible to take the registration examination for Dietetic Technicians.

## Dietary Manager Certificate

*This 18-credit hour certificate program is designed for persons who desire a position in health care food service supervision. Food service personnel working in nutrition related fields who would like to enhance their management and clinical skills and promotion opportunities may also benefit from this program of study.*

*A dietary manager performs supervisory and clinical duties necessary to meet the basic nutritional needs of individuals. Supervision of employees, assuring menu acceptance by clients and managing food production are several of the responsibilities of a dietary manager.*

*The curriculum is approved by the Dietary Manager Association. Students who complete the 18-credit hour certificate are eligible to take a national certification examination.*

### First Semester

DIT	100	Introduction to Dietetics .....	2
DIT	101	Basic Nutrition .....	3
FSM	114	Food Standards and Sanitation .....	2
			7

### Second Semester

DIT	102	Advanced Nutrition .....	3
DIT	200	Dietetic Clinical Laboratory II <sup>1</sup> .....	5
DIT	220	Food Systems Administration <sup>1</sup> .....	<u>3</u>
			11

<sup>1</sup> Prerequisites waived for Dietary Manager student.

# DIGITAL ELECTRONICS AND MICROPROCESSOR TECHNOLOGY

## Associate in Applied Science Degree

*This program is designed to prepare students for the field of digital electronics in industries associated with computers and microprocessor equipment. The curriculum offers courses in electronics, digital electronics, computer hardware, software and peripheral systems, mathematics and general education.*

*Graduates of this 62-credit hour program may be employed in a variety of electronics related industries with job classifications as technician, programmer or field service technician.*

### Required General Education Courses:

Communications .....	6
Students must select 9 credit hours from at least two of the following areas:	
Humanities, Natural Sciences or Social Sciences .....	9

### Required Core Courses:

CIS	133	Personal Computer Programming-Assembler Language or Problem Solving for Science and Engineering Using FORTRAN .....	4
ELT	110	Introductory Electronics .....	4
ELT	111	Electronics I, Resistive .....	3
ELT	203	Electronics II, Digital .....	5
ELT	206	Electronic Computers .....	5
ELT	210	Computer Programming .....	3
ELT	216	Microprocessor Software Applications .....	5
ELT	217	Microprocessor Peripheral Systems .....	5
ELT	218	Principles of Microprocessor System Design .....	5
Electronics elective <sup>1</sup> .....			3
MTH	106	Mathematics I .....	5

<sup>1</sup> To be approved by program coordinator.

## Digital Electronics and Microprocessor Technology Certificate

*This is a 25-credit hour certificate program designed to give the student a job entry level skill in the field of digital electronics and microprocessors.*

ELT	110	Introductory Electronics .....	4
ELT	111	Electronics I, Resistive .....	3
ELT	203	Electronics II, Digital .....	5
ELT	206	Electronic Computers .....	5
ELT	210	Computer Programming .....	3
MTH	106	Mathematics I .....	5
			25

# EARLY CHILDHOOD EDUCATION

## Associate in Applied Science Degree

The 60-semester hour curriculum is designed to provide students with the requisite skills and theoretical knowledge to work in a variety of facilities for young children as a teacher or director for half-day and full day early childhood centers; a teacher's assistant in academic at-risk, special needs and public school classrooms; resource and referral agencies; before/after school care, recreational programs and related settings.

### Required General Education Courses:

ENG	101	Composition .....	3
ENG	103	Technical and Report Writing or	
SPE	101	Fundamentals of Speech Communication .....	3
		Humanities elective <sup>1</sup> .....	3
		Mathematics <sup>4</sup> .....	3
		Natural Science elective <sup>2</sup> .....	3
PSY	101	Introduction to Psychology .....	3

### Required Core Courses:

CCA	101	Introduction to Early Childhood Education .....	3
CCA	102	Child Development I .....	3
CCA	103	Child Development II .....	3
CCA	115	Principles of Early Childhood Curriculum .....	3
CCA	209	Language Development and Activities for the Young Child .....	3
CCA	210	Creative Activities for the Young Child or	
CCA	230	Movement and Rhythms for the Young Child.....	3
CCA	221	Math and Science for the Young Child .....	3
CCA	219	Psychology of Exceptional Children or	
CCA	223	Exceptional Child in Early Childhood Programs .....	3
CCA	226	Observation and Guidance of the Young Child .....	3
CCA	252	Child-Family-Community.....	3
CCA	291	Early Childhood Practicum I .....	3
CCA	292	Early Childhood Practicum II .....	3
CCA Electives <sup>3</sup>		.....	3
HSC	220	Health, Nutrition and Safety .....	3

### Elective:

CCA	100	Early Childhood Career Exploration .....	1
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<sup>1</sup> Humanities elective: ART 105, HST 210, HUM 110, LIT 219, MUS 103, MUS 104, PHI 115, SGN 101, SPE 111.

<sup>2</sup> Natural Science elective: BIO 101 or BIO 103.

<sup>3</sup> CCA electives: Any CCA course including CCA 140, CCA 143, CCA 144, CCA 146, CCA 149, CCA 151, CCA 152, CCA 153, CCA 154, CCA 155 or CCA 156.

<sup>4</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete SOC 101 in order to have the 60 semester hours required for this degree.



# EARLY CHILDHOOD EDUCATION

## Early Childhood Education - Before/After School Care Certificate

*This 6-credit hour certificate program provides basic knowledge about developmentally appropriate programming and guidance for school age care.*

CCA	226	Observation and Guidance of the Young Child.....	3
CCA	235	Principles of School Age Care .....	3

## Early Childhood Administrator Certificate

*This 19-credit hour certificate program is designed specifically to meet the training/educational requirements of early childhood centers, as requested by the Illinois Department of Children and Family Services, Text of Adopted Rules.*

*Minimal education requirements for a director in a licensed child care center are two years of credit from an accredited college or university with 18 credit hours or equivalent quarter hours in courses related to child care and/or child development from birth to age six.*

CCA	102	Child Development I .....	3
CCA	103	Child Development II .....	3
CCA	115	Principles of Early Childhood Curriculum .....	3
CCA	226	Observation and Guidance of the Young Child .....	3
CCA	252	Child-Family-Community .....	3
CCA	253	Administration of Early Childhood Programs .....	3
CCA	254	Interpersonal Relationships In Early Childhood Education .....	1

## Early Childhood Education Assistant Teacher Certificate

*This 6-credit hour certificate program will provide an assistant teacher in a licensed child care facility with basic knowledge regarding child growth/development and developmentally appropriate programming.*

CCA	102	Child Development I .....	3
CCA	115	Principles of Early Childhood Curriculum .....	3

# EARLY CHILDHOOD EDUCATION

## Early Childhood Education Teacher Certificate

*This 30-credit hour certificate program emphasizes a combination of theoretical and practical knowledge. It meets the minimal educational requirements established by the Illinois Department of Children and Family Services, for an early childhood teacher who has obtained one year's experience in a licensed center.*

CCA	101	Introduction to Early Childhood Education .....	3
CCA	102	Child Development I .....	3
CCA	115	Principles of Early Childhood Curriculum .....	3
CCA	209	Language Development and Activities for the Young Child .....	3
CCA	210	Creative Activities for Young Children or	
CCA	221	Math and Science for the Young Child.....	3
CCA	219	Psychology of Exceptional Children or	
CCA	223	Exceptional Child in Early Childhood Programs .....	3
CCA	226	Observation and Guidance of the Young Child .....	3
CCA	252	Child-Family-Community.....	3
CCA	291	Early Childhood Practicum I .....	3
ENG	101	Composition .....	3

## Early Childhood Education - Infant/Toddler Certificate

*This 9-credit hour certificate program provides theoretical and practical knowledge about infants and toddlers.*

CCA	102	Child Development I .....	3
CCA	111	First Three Years of Life.....	3
CCA	112	Play and Assessment for the Young Child .....	3

## Early Childhood Education - Special Education Paraprofessional Certificate

*This 6-credit hour certificate program will provide a paraprofessional in a special education facility with basic knowledge regarding characteristics of children with special needs, methods, and behavioral management techniques within the special education population.*

CCA	120	Introduction to Special Education for Paraprofessionals .....	3
CCA	121	Behavioral Management in Special Education Setting.....	3

# EARLY CHILDHOOD EDUCATION

## Early Childhood Education - Family Child Care Certificate

*This 9-credit hour certificate program provides practical knowledge, including the legal requirements, for administering and running a family child care home.*

### Required:

CCA	140	Family Child Care Management .....	1
CCA	143	Safety for the Young Child.....	1
CCA	144	Nutrition for the Young Child .....	1
CCA	151	Communicating with Parents and Children.....	1
CCA	152	Principles of Child Growth and Development, Birth-5 .....	1
CCA	153	Guiding Children and Managing the Classroom .....	1
CCA	154	Activities and Resources for Young Children I.....	1
CCA	155	Activities and Resources for Young Children II.....	1

### Elective: Select one course from the following:

CCA	146	Programming for School Age Care .....	1
CCA	149	Topics in Early Childhood Education .....	1
CCA	156	Effective Teaching .....	1

# ELECTRONICS MANUFACTURING TECHNICIAN

## Associate in Applied Science Degree

*The technical curriculum trains students for various positions in the field of electronics manufacturing. The student will take courses in general education, technical programming, digital electronics, DC circuit analysis, AC circuit analysis, linear devices, microprocessors, electronic communications systems and worksite internships. Graduates of the program may find employment as electronics technicians, field engineers, repair/maintenance technicians and computer repair/programmer technicians.*

### Required General Education Courses:

ECO	200	Introduction to Economics .....	3
EMF	111	Electronics Math I .....	2
EMF	112	Electronics Math II .....	2
EMF	113	Electronics Math III .....	2
EMF	114	Electronics Math IV .....	2
ENG	101	Composition .....	3
PHI	115	Ethics or	
PHI	150	Business Ethics .....	3
PHY	115	Applied Physics for Electronics I .....	3
PHY	116	Applied Physics for Electronics II .....	3
SPE	101	Fundamentals of Speech Communication .....	3

### Required Core Courses:

EMF	132	Technical Programming I .....	1.5
EMF	133	Technical Programming II .....	1.5
EMF	134	Digital Electronics I .....	2
EMF	135	Digital Electronics II .....	2
EMF	136	DC Circuit Analysis I .....	2.5
EMF	137	DC Circuit Analysis II .....	2.5
EMF	170	Electronics Manufacturing Internship I .....	2
EMF	171	Electronics Manufacturing Internship II .....	1
EMF	172	Electronics Manufacturing Internship III .....	2
EMF	230	AC Circuit Analysis I .....	2
EMF	231	AC Circuit Analysis II .....	2
EMF	232	Linear Devices I .....	2
EMF	233	Linear Devices II .....	2
EMF	234	Microprocessors I .....	2
EMF	235	Microprocessors II .....	2
EMF	236	Microprocessors III .....	2
EMF	237	Microprocessors IV .....	2
EMF	238	Electronics Communications Systems I .....	2
EMF	239	Electronics Communications Systems II .....	2
EMF	250	Linear Devices III .....	2
EMF	251	Linear Devices IV .....	2

# ELECTRONICS TECHNOLOGY

## Associate in Applied Science Degree

*This program is designed to prepare students for the field of electronics and associated industries. The curriculum offers courses in electronics, circuit analysis, mathematics, physics and general education, with laboratory emphasis placed on equipment familiarization and use.*

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

### Summer Semester

ELT	100	Electronics Career Exploration <sup>1</sup> .....	1
MTH	100	Basic Applied Mathematics .....	2

### FIRST YEAR

#### First Semester

ELT	101	Circuits I .....	5
ELT	110	Introductory Electronics .....	4
		General Education elective .....	3
MTH	106	Mathematics I .....	<u>5</u>
			17

#### Second Semester

ELT	102	Circuits II .....	4
ELT	111	Electronics I, Resistive .....	3
ELT	210	Computer Programming .....	3
MTH	107	Mathematics II .....	<u>5</u>
			15

#### Summer Semester

ELT	200	Electronics Internship <sup>1</sup> .....	2
		General Education electives <sup>2</sup> .....	6

### SECOND YEAR

#### First Semester

ELT	103	Circuits III .....	5
ELT	203	Electronics II, Digital .....	5
		General Education elective <sup>2</sup> .....	3
		PHY/AUT electives <sup>3</sup> .....	<u>3-5</u>
			16-18

#### Second Semester

ELT	204	Electronics III, Advanced Electronics .....	5
ELT	206	Electronic Computers .....	5
		General Education elective <sup>2</sup> .....	3
		PHY/AUT electives <sup>3</sup> .....	<u>4-5</u>
			17-18

<sup>1</sup> High school tech prep students must take ELT 100 during first summer semester and ELT 200 during second summer semester.

<sup>2</sup> General Education electives: See program coordinator and Student Development faculty member.

<sup>3</sup> PHY/AUT electives: PHY 121 and PHY 122 or AUT 125, AUT 130, AUT 135.

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# ELECTRONICS TECHNOLOGY

## Electrical Maintenance Certificate

*Residential and commercial electrical servicing methods are the focus of this 11-credit hour certificate program. This program is designed for maintenance individuals interested in learning and upgrading skills in troubleshooting, repairing and maintaining of residential and commercial electrical and machinery. Emphasis is on tools, measuring equipment, controls, motors, sensors and wiring diagrams. Single and three-phase delta and wye circuits are covered. In addition, an overview of pneumatics, hydraulics and programmable logic controllers is introduced.*

ELT	110	Introductory Electronics .....	4
ELT	142	Basic Electricity (Residential/Commercial).....	2
ELT	215	Industrial Controls and Motors.....	5

## Electronics Certificate

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

ELT	101	Circuits I .....	5
ELT	102	Circuits II .....	4
ELT	103	Circuits III, Networks .....	5
ELT	105	Electro-Mechanical Drafting .....	3
ELT	110	Introductory Electronics .....	4
ELT	111	Electronics I, Resistive .....	3
ELT	142	Basic Electricity..... (Residential/Commercial).....	2
ELT	203	Electronics II, Digital .....	5
ELT	204	Electronics III, Advanced Electronics .....	5
ELT	205	Electronic Instrumentation .....	4
ELT	206	Electronic Computers .....	5
ELT	207	UHF Communications and Reception .....	4
ELT	210	Computer Programming .....	3
ELT	215	Industrial Controls and Motors.....	5

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# EMERGENCY MEDICAL TECHNICIAN

**See: HSC 110- Emergency Medical Technician Training**

# FASHION DESIGN

## Associate in Applied Science Degree

The program is designed to train students in apparel design, flat pattern design, draping, fashion illustrating and in professional design room practices of tailoring. Facilities will stimulate the professional atmosphere of the fashion industry.

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

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

### FIRST YEAR

#### First Semester

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

#### Second Semester

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

### SECOND YEAR

#### First Semester

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

#### Second Semester

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

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

<sup>2</sup> A competency test, available in the testing center, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete MKT 106.

<sup>3</sup> ART 105 is recommended.

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# FASHION DESIGN

## Fashion Design Certificate

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

FAS	101	Flat Pattern Design and Draping I .....	3
FAS	102	Flat Pattern Design and Draping II .....	3
FAS	103	Apparel Design and Construction I .....	3
FAS	104	Apparel Design and Construction II .....	3
FAS	105	Fashion Design Illustration I.....	1
FAS	106	Fashion Design Illustration II.....	1
FAS	107	Textiles I .....	2
FAS	108	Textiles II .....	2
FAS	109	Fashion Arts and Design.....	2
FAS	110	Costume History.....	2
FAS	114	Fashion Modeling.....	1
FAS	201	Advanced Flat Pattern Design and Draping I.....	4
FAS	202	Advanced Flat Pattern Design and Draping II.....	4
FAS	203	Advanced Diversified Apparel Design I .....	4
FAS	204	Advanced Diversified Apparel Design II .....	4
FAS	205	Tailoring Techniques I .....	2
FAS	206	Tailoring Techniques II .....	2
FAS	209	Advanced Fashion Illustration I.....	1
FAS	210	Advanced Fashion Illustration II.....	1
FAS	212	Visual Fashion Merchandising .....	2



# FASHION MERCHANDISING

## Associate in Applied Science Degree

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

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

### FIRST YEAR

#### First Semester

ENG	101	Composition .....	3
FAS	107	Textiles I .....	2
FAS	110	Costume History .....	2
MGT	111	Introduction to Business Organization .....	3
MGT	150	Business Math .....	3
MKT	106	Retail Merchandising .....	<u>3</u>
			16

#### Second Semester

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

### SECOND YEAR

#### First Semester

ART	105	Introduction to Arts .....	3
FAS	229	Promotion of Fashion .....	3
MKT	140	Principles of Professional Selling .....	3
MKT	245	Principles of Marketing .....	3
MKT	250	Retailing .....	3
SOC	101	Introduction to Sociology .....	<u>3</u>
			18

#### Second Semester

CIS	101	Introduction to Computer Information Systems .....	3
FAS	230	Contemporary Living .....	3
FAS	116	Fashion Industries Career Practicum and Seminar or	
FAS	240	Fashion Projects .....	3
MKT	247	Consumer Buying Behavior .....	3
MKT	251	Retail Merchandise Management .....	<u>3</u>
			15

# FINANCIAL SERVICES

## Associate in Applied Science Degree

*This 60-credit hour curriculum is designed for persons interested in preparing for positions in the dynamic field of finance.*

*Career opportunities in finance are quite extensive and diversified. Career objectives of persons completing this program would be in the areas of banking, commercial credit and collections, finance, insurance and real estate.*

*Students can choose a basic program of study in finance or one of the specialized study areas. Students earning an associate in applied science degree in financial services must complete the general education courses, required core courses and course work from the specialized study areas.*

### Required General Education Courses:

ENG	101	Composition .....	3
ENG	102	Composition or	
ENG	103	Business Writing or	
SPE	101	Fundamentals of Speech Communication.....	3
		Humanities elective .....	3
MGT	150	Business Math.....	3

### Required Core Courses:

ACC	101	Introduction to Financial Accounting .....	4
ACC	102	Introduction to Managerial Accounting.....	3
BFC	102	Commercial Law .....	3
CIS	120	Introduction to Business Software Packages.....	3
ECO	115	Consumer Economics or	
ECO	211	Microeconomics.....	3
ECO	200	Introduction to Economics or	
ECO	212	Macroeconomics .....	3
MGT	111	Introduction to Business Organization.....	3
MGT	218	Introduction to Finance .....	3

### Specialized Study Area:

Depending on the student's career needs, he/she may choose from the following specialized study areas. It is recommended that students pursue one of the following specialized areas and consult with the program coordinator or Student Development faculty member.

#### Banking

##### Required:

BFC	101	Principles of Financial Institution Operations.....	3
BFC	115	Advanced Principles of Financial Institution Operations.....	3
BFC	117	Marketing of Financial Institutions.....	3
BFC	215	Financial Statements Interpretation and Analysis.....	3
BFC	225	International Finance.....	3
ECO	210	Money and Banking .....	3
		Electives <sup>1</sup> .....	5

# FINANCIAL SERVICES

## Associate in Applied Science Degree continued...

### Commercial Credit Management

**Required:**

BFC	101	Principles of Financial Institution Operations.....	3
BFC	117	Marketing for Financial Institutions .....	3
BFC	201	Commercial Credit and Collection Principles .....	3
BFC	202	Advanced Commercial Credit and Collection .....	3
BFC	215	Financial Statement Interpretations and Analysis.....	3
Electives <sup>3</sup>		.....	8

### Finance

**Required:**

BFC	101	Principles of Financial Institution Operations.....	3
BFC	200	Investment Management .....	3
BFC	215	Financial Statements Interpretation and Analysis.....	3
BFC	225	International Finance.....	3
ECO	210	Money and Banking .....	3
Electives <sup>3</sup>		.....	8

### Insurance

**Required:**

BFC	121	Principles of Property and Liability Insurance .....	3
BFC	122	Principles of Personal Insurance .....	3
BFC	123	Principles of Commercial Insurance .....	3
BFC	215	Financial Statements Interpretation and Analysis.....	3
Electives <sup>4</sup>		.....	11

### Real Estate

**Required:**

RES	101	Real Estate Transactions.....	3
Electives <sup>5</sup>		.....	20

<sup>1</sup> Select at least 5 credit hours from the following: BFC 100, BFC 118, BFC 121, BFC 122, BFC 123, BFC 200, BFC 211, BFC 212, BFC 213, BFC 216, BFC 219, BFC 220, BFC 225, BFC 230, BFC 235, CIS 122, CIS 123, CIS 124, CIS 126, MGT 270, RES 101.

<sup>2</sup> Select at least 8 credit hours from one of the following: ACC 201, BFC 121, BFC 200, BFC 225, CIS 122, CIS 123, CIS 124, CIS 126, ECO 210, MGT 225, MGT 270.

<sup>3</sup> Select at least 8 credit hours from one of the following: BFC 118, BFC 201, BFC 212, BFC 219, BFC 220, CIS 122, CIS 123, CIS 124, CIS 126, MGT 270.

<sup>4</sup> Select at least 11 credit hours from one of the following: CIS 117, CIS 122, CIS 123, MTH 124, MTH 165, PHI 150, PSY 101, PSY 145.

<sup>5</sup> Select at least 20 credit hours from the following: ATE 209, BFC 101, CIS 118, CIS 119, CIS 123, MGT 154, MKT 140, MKT 141, MKT 217, MKT 240, MKT 245, RES 105, RES 110, RES 190, RES 192, RES 194, RES 196, RES 220, RES 221.

# FINANCIAL SERVICES

## Commercial Credit Management Certificate

*This 16-credit hour certificate program is designed for those currently employed in, or seeking employment in the credit and collection field. The curriculum emphasizes developing the competencies necessary to effectively implement sound collection practices. Students may apply this entire program toward the two-year associate degree in Financial Services.*

ACC	101	Introduction to Financial Accounting .....	4
BFC	201	Commercial Credit and Collection Principles .....	3
BFC	202	Advanced Commercial Credit and Collection .....	3
BFC	215	Financial Statements Interpretation and Analysis.....	3
Elective <sup>1</sup>		.....	3

<sup>1</sup> BFC 200, BFC 217, BFC 225, ECO 210, MGT 111

## Financial Management Certificate

*This 19-credit hour certificate program is designed for those currently employed in, or seeking employment in finance departments, banks, investment companies or other finance-related enterprises. The curriculum emphasizes developing the competencies necessary for supervisory and public contact positions in the finance field.*

ACC	101	Introduction to Financial Accounting .....	4
BFC	101	Principles of Financial Institution Operations .....	3
BFC	215	Financial Statements Interpretation and Analysis.....	3
MGT	111	Introduction to Business Organization.....	3
MGT	218	Introduction to Finance .....	3
Electives <sup>1</sup>		.....	3

<sup>1</sup> Electives: BFC 121, BFC 200 or MGT 170, MGT 150

## Real Estate Brokers License Preparation Certificate

*This 8-credit hour certificate program will provide the minimum number of hours and mandatory courses to complete the education requirements for application to take the State of Illinois Real Estate Brokers test.*

RES	101	Real Estate Transactions.....	3
RES	190	Contracts and Conveyancing .....	1
RES	192	Advanced Principles of Real Estate.....	1
RES	198	Brokerage Administration .....	1
Electives <sup>1</sup>		.....	2

<sup>1</sup>Electives: RES 105, RES 110, RES 194, and RES 196

## Real Estate Sales Professional Certificate

*This 3-credit hour certificate program is designed to prepare students for the Illinois real estate salesperson's licensing exam.*

RES	101	Real Estate Transactions.....	3
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# FIRE SCIENCE TECHNOLOGY

## Associate in Applied Science Degree

*This 61-credit hour curriculum offers areas of specialization which are applicable to both public and private sector career fields. In the public sector, the program offers courses which will prepare students wishing to enter into public fire services. Specialties in fire prevention or fire suppression which meet the guidelines for certification by the Office of the State Fire Marshal may be chosen.*

*In the private sector, primarily with sprinkler contractors and consultants, and the insurance industry, the specialty area in fire protection design will prepare the students to seek certification within the National Institute of Engineering Technologies for Automatic Sprinkler Design Layout: Level II.*

*Students wishing to pursue a career in fire science should discuss these opportunities with the Fire Science program coordinator or a Student Development faculty member before entering this program.*

### Required General Education Courses:

ENG	101	Composition .....	3
ENG	103	Technical and Report Writing .....	3
Humanities elective <sup>1</sup> .....			3
MTH	080	Intermediate Algebra (4) or	
MTH	086	Intermediate Algebra I (2) and	
MTH	087	Intermediate Algebra (2) .....	4
Physical Science elective <sup>1</sup> .....			3
PSY	101	Introduction to Psychology .....	3
Social Science elective <sup>1</sup> .....			3
SPE	101	Fundamentals of Speech Communication .....	3

### Specialized Study Areas:

Students should complete an additional 36 credit hours of course work for the A.A.S. degree. It is recommended that students pursue one of the following specialized areas and consult with the program coordinator.

#### Summer Semester

FIS	105	Fire Science Career Exploration <sup>2</sup> .....	1
FIS	200	Fire Science Internship <sup>2</sup> .....	2

<sup>1</sup> See program coordinator for advice on recommended electives.

<sup>2</sup> FIS 105 and FIS 200 may be counted as technical electives with approval of coordinator.

### Fire Prevention Officer

#### Required:

FIS	100	Introduction to Fire Science or	
FIS	121	Principles of Combustion .....	3
FIS	102	Fire Management I .....	3
FIS	122	Fire Prevention Principles I .....	3
FIS	123	Fire Prevention Principles II .....	3
FIS	132	Hazardous Materials I .....	3
FIS	145	Fire Instructor I .....	3
FIS	212	Fire Alarm and Suppression Systems .....	3
FIS	222	Fire Prevention Principles III .....	3
FIS	223	Fire Prevention Principles IV .....	3
FIS	224	Fire Prevention Principles V .....	3
FIS	242	Hydraulics .....	3
FIS	252	Fire Sprinkler Design and Layout I .....	3

# FIRE SCIENCE TECHNOLOGY

## Associate in Applied Science Degree continued...

### Fire Officer

#### Required:

FIS	100	Introduction to Fire Science or	
FIS	121	Principles of Combustion .....	3
FIS	102	Fire Management I .....	3
FIS	103	Tactics and Strategy I .....	3
FIS	122	Fire Prevention Principles I.....	3
FIS	132	Hazardous Materials I .....	3
FIS	133	Hazardous Materials II .....	3
FIS	145	Fire Instructor I .....	3
FIS	202	Fire Management II .....	3
FIS	203	Tactics and Strategy II .....	3
FIS	212	Fire Alarm and Suppression Systems.....	3
FIS	220	Fire Instructor II .....	3
FIS	252	Fire Sprinkler Design and Layout I.....	3

### Automatic Sprinkler Design Technician

#### Required:

BCE	101	Basic Construction for Building Codes.....	3
BCE	201	Basic Building Codes .....	3
FIS	121	Principles of Combustion .....	3
FIS	122	Fire Prevention Principles I.....	3
FIS	123	Fire Prevention Principles II.....	3
FIS	222	Fire Prevention Principles III.....	3
FIS	223	Fire Prevention Principles IV .....	3
FIS	224	Fire Prevention Principles V .....	3
FIS	242	Hydraulics .....	3
FIS	252	Fire Sprinkler Design and Layout I.....	3
FIS	253	Fire Sprinkler Design and Layout II.....	3
MET	101	Applied Mechanical Drafting .....	3

# FIRE SCIENCE TECHNOLOGY

## Fire Science Technology Certificate

*This 15-credit hour certificate program is designed to upgrade people currently employed in the fire science field and to enable them to seek more responsible positions within that field by furthering their knowledge in special areas of fire science.*

**Electives:** Select at least 6 credit hours from the following courses:

ENG	100	Composition .....	3
ENG	101	Composition .....	3
ENG	103	Technical and Report Writing.....	3
MTH	100	Basic Applied Mathematics .....	3
SOC	101	Introduction to Sociology .....	3

**Electives:** Select at least 9 credit hours from the following courses, providing the combination has approval of a Student Development faculty member:

FIS	100	Introduction to Fire Science .....	3
FIS	101	Municipal Fire Administration I.....	3
FIS	103	Fire Fighting Tactics I .....	3
FIS	112	Fire Alarm and Extinguishing Systems .....	3
FIS	122	Fire Prevention Principles I.....	3
FIS	123	Fire Prevention Principles II.....	3
FIS	132	Hazardous Materials I .....	3
FIS	133	Hazardous Materials II .....	3
FIS	145	Fire Instructor I .....	3
FIS	201	Municipal Fire Administration II.....	3
FIS	203	Fire Fighting Tactics II .....	3
FIS	222	Fire Prevention Principles III.....	3
FIS	223	Fire Prevention Principles IV .....	3
FIS	224	Fire Prevention Principles V .....	3
FIS	242	Fire Hydraulics .....	3
FIS	262	Water Supply Analysis .....	3
HSC	110	Emergency Medical Technical Training .....	6

# HOSPITALITY MANAGEMENT

## Associate in Applied Science Degree

Emphasis is placed on the techniques and technology of the hospitality industry from a management point of view. Graduates of this 60-credit hour curriculum will be qualified to assume positions as production supervisors, management trainees and small unit managers. Upon successful completion of approved hospitality management courses, students may be granted a Certificate of Completion and a Management Development Diploma from the Educational Foundation of the National Restaurant Association. Upon successful completion of approved hospitality management courses, students may be awarded a certificate from the Educational Institute of the American Hotel and Motel Association. Contact the Hospitality Management coordinator for details.

Students may choose a basic program of study in hospitality or one of the specialized study areas.

### Required General Education Courses:

English <sup>1</sup> .....	6
Humanities elective <sup>2</sup> .....	4
Mathematics elective <sup>3</sup> .....	3
PSY 101 Introduction to Psychology .....	3
Social Science elective .....	3

### Required Core Courses:

ACC Elective <sup>4</sup> .....	3-4
FSM 109 Introduction to Food Preparation/Production .....	4
FSM 111 Introduction to the Hospitality Industry .....	3
FSM 113 Dining Room Operations .....	3
FSM 114 Food Standards and Sanitation .....	2
FSM 115 Menu Planning .....	3
FSM 211 Purchasing and Storage .....	3
FSM 212 Hospitality Supervision .....	3
FSM 213 Seminar and Internship .....	3
FSM 214 Hospitality Operations Analysis .....	3
Elective:	
FSM 100 Hospitality Career Exploration <sup>5</sup> .....	1

### Specialized Study Areas:

It is recommended that students pursue one of the specialized study areas and consult with the program coordinator.

#### Food Service Operations Management

**Electives: Select at least 11 credit hours from the courses listed below:**

CIS 100 Computer Literacy .....	3
FSM 215 Restaurant Layout and Equipment .....	3
FSM 216 Introduction to Wines, Spirits and Beverage Management .....	3
FSM 220 Hospitality Promotions .....	3
FSM 230 Hospitality Law and Risk Management .....	4



# HOSPITALITY MANAGEMENT

## Associate in Applied Science Degree continued....

### Hotel Operations Management

*Electives: Select at least 11 credits from the courses listed below:*

CIS	100	Computer Literacy .....	3
FSM	120	Front Office Operations.....	3
FSM	210	Hospitality Facility Maintenance .....	3
FSM	220	Hospitality Promotions .....	3
FSM	230	Hospitality Law and Risk Management.....	4

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

<sup>2</sup> SPA 101 is recommended.

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

<sup>4</sup> ACC 099 or ACC 101.

<sup>5</sup> FSM 100 may be counted as an elective with approval of the program coordinator.

## Bread and Pastry Arts Certificate

*This is a 26-credit hour certificate program planned to prepare students for entrance into the food service industry. Graduates may be able to secure positions as qualified bakers and bakers' helpers in institutional, retail and commercial bakeries.*

### First Semester

FSM	107	Basic Quantity Bread and Pastry Arts .....	4
FSM	114	Food Standards and Sanitation .....	2
FSM	173	Cake Decoration .....	2
FSM electives <sup>1</sup>		.....	<u>6</u>
			14

### Second Semester

FSM	108	Advanced Quantity Bread and Pastry Arts.....	4
FSM	115	Menu Planning .....	3
FSM	172	Classical Baking .....	2
FSM electives <sup>1</sup>		.....	<u>3</u>
			12

<sup>1</sup> FSM electives: FSM 109, FSM 110, FSM 111, FSM 113, FSM 120, FSM 162, FSM 163, FSM 211, FSM 212, FSM 214, FSM 215, FSM 216, FSM 220, FSM 230.

# HOSPITALITY MANAGEMENT

## Culinary Arts Certificate

*This is a 32-credit hour certificate program planned to prepare students for entrance into the food service industry. Graduates may be able to secure positions as head cooks, assistant cooks, specialty cooks, or chef's assistants.*

### First Semester

FSM	107	Basic Quantity Bread and Pastry Arts .....	4
FSM	109	Introduction to Food Preparation/Production .....	4
FSM	114	Food Standards and Sanitation .....	2
FSM	electives <sup>1</sup>	.....	<u>6</u>
			16

### Second Semester

FSM	110	Advanced Quantity Culinary Arts .....	4
FSM	115	Menu Planning .....	3
FSM	162	Classical Cuisine.....	4
FSM	163	Garde Manger.....	2
FSM	electives <sup>1</sup>	.....	<u>3</u>
			16

<sup>1</sup> FSM electives: FSM 111, FSM 113, FSM 120, FSM 172, FSM 173, FSM 211, FSM 212,<sup>2</sup>FSM 214, FSM 220.

## Hospitality Management Certificate

*This is a 24-credit hour certificate program is designed for people wanting to upgrade their management skills to assume more responsible positions. Upon completion of this program, students may also be awarded a Management Development Diploma by the National Restaurant Association. Contact the Hospitality Management coordinator for details.*

### First Semester

FSM	111	Introduction to the Hospitality Industry .....	3
FSM	114	Food Standards and Sanitation .....	2
FSM	115	Menu Planning .....	3
FSM	230	Hospitality Law and Risk Management.....	<u>4</u>
			12

### Second Semester

FSM	211	Purchasing and Storage .....	3
FSM	212	Hospitality Supervision.....	3
FSM	214	Hospitality Operations Analysis .....	3
FSM	215	Restaurant Layout and Equipment .....	<u>3</u>
			12

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# HOSPITALITY MANAGEMENT

## Hotel Management Certificate

*This 21-credit hour certificate program is designed for people wanting to upgrade their management skills to assume more responsible positions. Upon completion of this program, students may be awarded a Rooms Division Management Certificate of Specialization from the Educational Institute of the American Hotel and Motel Association. Contact the Hospitality Management coordinator for details.*

**Required:**

CIS	100	Computer Literacy .....	3
FSM	120	Front Office Operations .....	3
FSM	210	Hospitality Facility Maintenance .....	3
FSM	212	Hospitality Supervision.....	3
FSM	230	Hospitality Law and Risk Management.....	4

**Electives:** Select at least 5 credit hours from the following:

FSM	111	Introduction to the Hospitality Industry .....	3
FSM	114	Food Standards and Sanitation .....	2
FSM	214	Hospitality Operations Analysis .....	3
FSM	220	Hospitality Promotions .....	3

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# HOTEL MANAGEMENT

*See: Hospitality Management*

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# INSURANCE

*See: Financial Services*

# INTERIOR DESIGN

## Associate in Applied Science Degree

*This program is designed for students interested in careers in the furnishing and design industry. The program offers creative, artistic and challenging career opportunities. Graduates are trained to work as kitchen and bath designers, retail designers/salespersons, interior design assistants, assistant buyers of home furnishings, manufacturers' representatives or Merchandise Mart showroom managers.*

*Students may elect to concentrate their study in residential or contract design. They may elect courses in computer aided design (CAD), sales or merchandising. Those wishing to work in the contract design field are advised to elect CAD courses and should consult with an advisor. Periodic field trips to Chicago are required and will help students learn more about current design trends.*

*The associate in applied science degree in Interior Design is accredited by the North Central Association of Colleges and Secondary Schools and may be used to meet the interior design education requirement for registration of Interior Designers in the State of Illinois. In addition, the curriculum provides an overview of topics tested by the National Council for Interior Design Qualification (NCIDQ) exam, which must be completed before interior designers may be registered by the State of Illinois. The Harper Interior Design Program is recognized as an NKBA (National Kitchen and Bath Association) Endorsed College Program.*

### FIRST YEAR

#### First Semester

IND	101	Basic Interior Design I.....	3
IND	103	Furniture History.....	3
IND	105	Interior Design Theory.....	1
IND	106	Materials and Sources.....	3
ART	121	Design I.....	3
English <sup>1</sup>		.....	<u>3</u>
			16

#### Second Semester

IND	102	Basic Interior Design II.....	3
IND	107	Interior Perspective and Rendering.....	2
IND	108	Color for Interior Design/CAD.....	3
IND	114	Codes for Interior Designers.....	1
IND	115	Kitchen and Bath Design and Interior Construction.....	3
FNA	111	History of Art I or	
FNA	112	History of Art II or	
FNA	113	History of Art III.....	<u>3</u>
			15

# INTERIOR DESIGN

## Associate in Applied Science Degree continued...

### SECOND YEAR

#### First Semester

IND	203	3-D Design for Interiors.....	3
IND	205	Interior Design Historic Styles.....	3
IND	206	Lighting for Interior Design .....	2
IND	213	Interior Detailing and Construction Drawing.....	3
Elective <sup>2</sup>		.....	2-3
SPE	101	Fundamentals of Speech Communication.....	<u>3</u>
			16-17

#### Second Semester

IND	207	Interior Design Internship (3) or Elective <sup>2</sup> (2-3).....	2-3
IND	208	Advanced Residential Interiors or	
IND	209	Contract Interior Design.....	3
IND	211	Professional Practices for Interior Design.....	3
Mathematics elective <sup>3</sup>		.....	3
Social Science elective		.....	<u>3</u>
			14-15

<sup>1</sup> A competency test, available in the testing office, must be taken before registering for ENG 101 or ENG 130.

<sup>2</sup> Electives: ATE 105, ATE 106, IND 215, MGT 154, MKT 106, MKT 110, MKT 140.

<sup>3</sup> A competency test, available in the testing office, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a (3) three-credit hour IND elective.

# INTERNATIONAL BUSINESS

## Associate in Applied Science Degree

Completing this program will prepare students to secure employment in the dynamic and growing field of international business. Specific vocational opportunity areas would include international marketing, finance, management and distribution. Businesses hiring graduates from this program include airlines, banks, export/import management companies, freight forwarders and the retailing industry.

### FIRST YEAR

#### First Semester

ECO	200	Introduction to Economics .....	3
GEG	101	World Geography.....	3
MGT	111	Introduction to Business Organization.....	3
MGT	115	Introduction to International Business.....	3
SPE	101	Fundamentals of Speech Communication.....	<u>3</u>
			15

#### Second Semester

ACC	101	Introduction to Financial Accounting .....	4
Mathematics elective <sup>1</sup>		.....	3
MGT	165	International Management .....	3
MKT	245	Principles of Marketing .....	3
MKT	260	International Marketing .....	<u>3</u>
			16

### SECOND YEAR

#### First Semester

BFC	225	International Finance.....	3
CIS	100	Computer Literacy or	
CIS	101	Introduction to Computer Information Systems .....	3
ENG	130	Business Writing .....	3
MAT	101	Materials/Logistics Management .....	3
MKT	190	Export Documentation .....	3
MKT	290	Principles of Exporting and Importing .....	<u>3</u>
			18

#### Second Semester

Foreign Language elective		.....	4
GEG	210	Economic Geography or	
HST	243	The Far East in the Modern World .....	3
MAT	230	International Material Management .....	3
MKT	292	International Marketing Research.....	3
MKT	293	International Marketing Channel Strategy.....	<u>3</u>
			16

<sup>1</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete a 3-credit hour elective or must complete a 3-credit hour MKT elective.

# INTERNATIONAL BUSINESS

## International Business Certificate

*This 19-credit hour certificate program will prepare students beginning their business careers for entry level positions in the international business field. For students who have completed their college degrees and/or who have previous business experience, this program will provide opportunities for re-assignment into the international field of their present companies or provide new employment opportunities.*

*The specific goal of this program is to provide students with sufficient competencies in international business to allow them to qualify for and succeed in positions with firms such as international freight forwarders, export and import management companies, insurance companies, manufacturers and financial institutions dealing with companies engaged in the business of international trade.*

### Required:

ACC	101	Introduction to Financial Accounting .....	4
MGT	115	Introduction to International Business.....	3
MKT	190	Export Documentation .....	3
MKT	260	International Marketing .....	3
MKT	290	Principles of Exporting and Importing .....	3

### Electives: Select 3 credit hours from the following:

BFC	225	International Finance.....	3
MKT	292	International Marketing Research.....	3
MKT	293	International Marketing Channel Strategy.....	3

# JOURNALISM

## Associate in Applied Science Degree

*The program is designed to provide students with a balance of practical training and general education. The curriculum offers students an opportunity to learn about the journalism profession, or working professionals to increase their skills. The courses provide intensive practice in the journalistic writing style as well as hands-on experience in the technology of desktop publishing. The program offers a solid educational background for people interested in careers in writing, editing, business and trade publishing, advertising, public relations, desktop publishing, work-at-home businesses and other related fields.*

### FIRST YEAR

#### First Semester

ENG	101	Composition .....	3
HST	111	The American Experience to 1877 .....	3
JNM	130	Fundamentals of Journalism or	
JNM	137	Media Writing .....	3
Mathematics elective <sup>1</sup> .....			3
SPE	101	Fundamentals of Speech	
		Communication .....	3
			<u>15</u>

#### Second Semester

HST	112	The American Experience Since 1877 .....	3
JNM	131	News Reporting and Writing .....	3
JNM	133	Feature Writing .....	3
JNM	136	Broadcast Writing .....	3
JNM	230	Graphic Design Communication .....	3
			<u>15</u>

### SECOND YEAR

#### First Semester

Electives <sup>2</sup> .....		6	
JNM	234	Mass Communications .....	3
JNM	235	Magazine Editing and Design .....	3
PSC	101	American Politics and Government .....	3
			<u>15</u>

#### Second Semester

ECO	200	Introduction to Economics or	
ECO	211	Microeconomics .....	3
Electives <sup>2</sup> .....		6	
JNM	232	Advertising Copywriting and Design .....	3
JNM	233	Public Relations Writing and Design .....	3
			<u>15</u>

<sup>1</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must take a foreign language course.

<sup>2</sup> Electives: ART 110, ART 121, ART 122, ART 240, BFC 101, CRJ 101, CWE 220, ENG 102, FRN 101, FRN 102, GER 101, GER 102, HST 210, HST 214, JNM 240, JPN 101, JPN 102, MGT 111, MGT 218, MGT 225, MGT 275, MKT 245, MKT 248, PHI 210, PSC 210, PSC 220, PSC 250, PSC 260, PSC 270, PSY 101, SOC 101, SOC 205, SPA 101, SPA 102, SPE 205.



# JOURNALISM

The following certificate programs are for the individuals who are interested in a concentrated exposure to writing and/or design for publications in the media, the business world or home-based business.

Students may tailor their programs to emphasize advertising, design, public relations, publishing or writing. Desktop publishing is emphasized in JNM 230, JNM 232, JNM 233 and JNM 235. Contact the program coordinator for assistance in planning and selecting courses.

## Media Design Certificate

This is an 18-credit hour certificate program designed for those students who want to focus on design for the media.

### Required:

JNM	137	Media Writing .....	3
JNM	230	Graphic Design Communication <sup>1</sup> .....	3

### Electives: Select 12 credit hours from the following:

ART	110	Drawing I .....	3
ART	121	Design I .....	3
ART	240	Computer Graphics Studio .....	3
JNM	130	Fundamentals of Journalism .....	3
JNM	133	Feature Writing .....	3
JNM	232	Advertising Copywriting and Design .....	3
JNM	233	Public Relations Writing and Design .....	3
JNM	235	Magazine Editing and Design .....	3
JNM	240	Topics in Journalism .....	1-6

## Media Writing Certificate

This is an 18-credit hour certificate program designed for those students who want to focus on writing for the media.

### Required:

JNM	130	Fundamentals of Journalism .....	3
JNM	137	Media Writing .....	3

### Electives: Select 12 credit hours from the following:

JNM	131	News Reporting and Writing .....	3
JNM	133	Feature Writing .....	3
JNM	136	Broadcast Writing .....	3
JNM	230	Graphic Design Communication <sup>1</sup> .....	3
JNM	232	Advertising Copywriting and Design .....	3
JNM	233	Public Relations Writing and Design .....	3
JNM	235	Magazine Editing and Design .....	3
JNM	240	Topics in Journalism .....	1-6

<sup>1</sup> This course is strongly recommended before taking JNM 232, JNM 233, or JNM 235.

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# JOURNALISM

## Media Writing and Design Certificate

*This is a 21-credit hour certificate program designed for those students who want skills and background in both media writing and design.*

**Required:**

JNM	130	Fundamentals of Journalism .....	3
JNM	137	Media Writing .....	3
JNM	230	Graphic Design Communication <sup>1</sup> .....	3

**Electives:** Select 12 credit hours from the following:

ART	110	Drawing I .....	3
ART	121	Design I .....	3
JNM	131	News Reporting and Writing .....	3
JNM	133	Feature Writing .....	3
JNM	136	Broadcast Writing .....	3
JNM	232	Advertising Copywriting and Design .....	3
JNM	233	Public Relations Writing and Design .....	3
JNM	235	Magazine Editing and Design .....	3
JNM	240	Topics in Journalism .....	1-6

<sup>1</sup> This course is strongly recommended before taking JNM 232, JNM 233, or JNM 235.

# LAW OFFICE ADMINISTRATIVE ASSISTANT

*Also See: Administrative Technology*

## Associate in Applied Science Degree

*This program is designed for those interested in pursuing administrative assistant careers in law firms, government, legal departments of business firms and banks. The curriculum includes office technology, legal office procedures, legal terminology and supervised internship training in a law office or department.*

*The program may be taken part-time and many courses are available on an evening schedule; however, not all courses are offered every semester. An orientation and planning session with the coordinator is recommended for each student. Detailed information will be sent upon request or upon application to the program.*

### FIRST YEAR

#### First Semester

English elective .....	3
OFC 102 Survey of Law Office Practice .....	3
OFC 104 Introduction to Office Careers .....	1
OFC 105 Human Relations for Office Careers .....	1
OFC 106 Time Management for Office Careers .....	1
OFC 107 Internet Applications .....	1
OFC 113 Keyboarding IV <sup>1</sup> .....	3
OFC 133 Word Processing Software I .....	<u>2</u>
	15

#### Second Semester

OFC 125 Shorthand .....	5
OFC 228 Records Control for the Office .....	1
OFC 229 Meeting and Conference Planning .....	1
OFC 234 Legal Office Procedures .....	3
OFC 235 Legal Transcription .....	3
SPE 101 Fundamentals of Speech Communication .....	<u>3</u>
	16

### SECOND YEAR

#### First Semester

CIS 123 Spreadsheet/Budgeting for Micros .....	1
OFC 202 Desktop Publishing Using Word Processing .....	2
OFC 203 Proofreading and Editing .....	2
OFC 227 Business Presentations .....	1
OFC 233 Document Processing in the Law Office .....	3
OFC 237 Secretarial Seminar and Internship I .....	3
PSC 101 American Politics and Government .....	<u>3</u>
	15

#### Second Semester

ACC 211 Business Law I .....	3
Humanities elective .....	3
Mathematics elective <sup>2</sup> .....	3
OFC 238 Secretarial Seminar and Internship II .....	3
Social Science elective .....	<u>3</u>
	15

<sup>1</sup> Placement into OFC 113 is contingent upon previous training and consent of instructor.

<sup>2</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete a three (3) credit hour elective approved by the program coordinator.

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# LAW OFFICE ADMINISTRATIVE ASSISTANT

## Law Office Administrative Assistant Certificate

*This 28-credit hour certificate program is designed for individuals who possess a high degree of office skills and are interested in pursuing employment in law firms, government or legal departments of corporations.*

*A minimum keyboarding speed of 30 words per minute is recommended to enter the program; 40 words per minute is recommended to progress through internship. The program may be taken part-time, and many courses are available on an evening schedule; however, not all courses are offered every semester.*

ACC	211	Business Law I .....	3
OFC	102	Survey of Law Office Practice .....	3
OFC	104	Introduction to Office Careers.....	1
OFC	105	Human Relations for Office Careers .....	1
OFC	106	Time Management for Office Careers.....	1
OFC	107	Internet Applications .....	1
OFC	133	Word Processing Software I.....	2
OFC	225	Topics in Office Careers.....	1-6
OFC	227	Business Presentations .....	1
OFC	228	Records Control for the Office .....	1
OFC	229	Meeting and Conference Planning .....	1
OFC	233	Document Processing in the Law Office.....	3
OFC	234	Legal Office Procedures .....	3
OFC	235	Legal Transcription.....	3
OFC	237	Secretarial Seminar and Internship I.....	3

# MANAGEMENT

## Associate in Applied Science Degree: Management

*The program is designed to assist students in a wide variety of business occupations. The curriculum is structured to meet the needs of individuals interested in gaining or improving management skills. The program not only develops abilities to organize, coordinate and evaluate the functions of a unit, department or branch of an organization in either an industrial or an administrative management capacity, but also provides the fundamental management skills needed by the successful owner-manager of a business.*

### FIRST YEAR

#### First Semester

ACC	101	Introduction to Financial Accounting .....	4
ENG	101	Composition .....	3
MGT	111	Introduction to Business Organization .....	3
MGT	150	Business Math <sup>1</sup> .....	3
MGT	160	Principles of Supervision.....	3
PSY	101	Introduction to Psychology .....	3
			<u>19</u>

#### Second Semester

ACC	102	Introduction to Managerial Accounting.....	3
CIS	101	Introduction to Computer Information Systems .....	3
English	elective	.....	3
MGT	270	Principles of Management .....	3
PSY	145	Psychology in Business and Industry .....	3
			<u>15</u>

### SECOND YEAR

#### First Semester

ACC	211	Business Law I .....	3
ECO	200	Introduction to Economics .....	3
Electives <sup>2</sup>		.....	6
MKT	245	Principles of Marketing .....	3
			<u>15</u>

#### Second Semester

Humanities	elective	.....	3
Electives <sup>2</sup>		.....	6
MGT	218	Introduction to Finance .....	3
MGT	291	Problems in Management and Supervision .....	3
			<u>15</u>

<sup>1</sup> A proficiency test, available in the testing office, may be utilized to meet the MGT 150 requirement.

<sup>2</sup> Electives: ACC 216, MGT 115, MGT 154, MGT 165, MGT 168, MGT 170, MGT 204, MGT 205, MGT 206, MGT 207, MGT 211, MGT 215, MGT 216, MGT 225, MGT 230, MGT 254, MGT 265, MGT 266, MGT 274, MGT 275, MGT 276

# MANAGEMENT

## Associate in Applied Science Degree: Small Business Management

*This program is designed as pre-service training for those people planning a career in small business. Additionally, the program may provide in-service training for people working in the field.*

### FIRST YEAR

#### First Semester

ACC	101	Introduction to Financial Accounting .....	4
ENG	101	Composition .....	3
MGT	111	Introduction to Business Organization .....	3
MGT	150	Business Math .....	3
PSY	101	Introduction to Psychology .....	<u>3</u>
			16

#### Second Semester

ACC	211	Business Law I .....	3
CIS	122	Data Base for Micros .....	1
		Elective <sup>1</sup> .....	3
ENG	130	Business Writing .....	3
MGT	154	Small Business Management .....	3
OFC	133	Word Processing Software I <sup>2</sup> .....	<u>2</u>
			15

### SECOND YEAR

#### First Semester

CIS	124	Advanced Spreadsheet for Micros .....	1
		Elective <sup>1</sup> .....	6
MGT	160	Principles of Supervision .....	3
PHI	150	Business Ethics .....	3
PSY	145	Psychology in Business and Industry .....	<u>3</u>
			16

#### Second Semester

		Electives <sup>1</sup> .....	7
MGT	254	Small Business Formation .....	3
MKT	245	Principles of Marketing .....	<u>3</u>
			13

<sup>1</sup> Electives: ECO 115, MAT 101, MGT 115, MGT 165, MGT 211, MGT 230, MGT 265, MGT 270, MGT 274, MGT 275, MGT 280, MKT 106, MKT 140, MKT 217, MKT 240, MKT 250

<sup>2</sup> Prerequisite waived for Small Business Management students.

# MANAGEMENT

## Advanced Management Certificate

*This 18-credit hour certificate program continues the development of management skills learned in the General Management certificate. It is designed for those students who wish to further explore the specific qualifications and requirements necessary for mid- to upper level management positions.*

**Required:**

MGT	111	Introduction to Business Organization.....	3
MDG	160	Principles of Supervision.....	3
MGT	270	Principles of Management.....	3

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

MGT	150	Business Math.....	3
MGT	168	OSHA Standards and Compliance Procedures.....	3
MGT	205	Leadership Foundation.....	1
MGT	206	Leadership Skills.....	1
MGT	207	Leadership Trends.....	1
MGT	218	Introduction to Finance.....	3
MGT	225	Applied General Statistics.....	4
MGT	230	Topics in Business.....	5-3
MGT	274	Operation Management.....	3
MGT	280	Human Relations in Business.....	3
MGT	291	Problems of Management and Supervision.....	3

## General Management Certificate

*This certificate offers the student the opportunity to receive fundamental management skills for entry-level management positions. This certificate program requires the completion of 12 credit hours.*

**Required:**

MGT	111	Introduction to Business Organization.....	3
MGT	160	Principles of Supervision.....	3
MGT	270	Principles of Management.....	3
Elective <sup>1</sup>		.....	3

<sup>1</sup>Electives: MGT 150, MGT 205, MGT 206, MGT 207, MGT 280, MGT 291

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# MANAGEMENT

## Human Resource Management Certificate

*This 18-credit hour certificate program is designed for those individuals interested in employment in the human resource field.*

**Required:**

MGT	111	Introduction to Business Organization.....	3
MGT	265	Human Resource Management.....	3

**Electives:** Select 12 credit hours from the following courses:

ACC	216	Employment Law.....	3
MGT	204	Training and Development.....	3
MGT	266	Wage Analysis and Administration.....	3
MGT	275	Labor-Management Relations.....	3
MGT	276	Collective Bargaining.....	3
MGT	280	Human Relations in Business.....	3

## Small Business Management Certificate

*This 15-credit hour certificate program is designed for those individuals who want to develop management skills to be used in small businesses.*

**Required:**

MGT	154	Small Business Management.....	3
MGT	254	Small Business Formation.....	3

**Electives:** Select a minimum of 9 credit hours from the following courses:

ACC	101	Introduction to Financial Accounting.....	4
BFC	215	Financial Statements Interpretation and Analysis.....	3
MGT	211	Internship in Small Business.....	3
MKT	245	Principles of Marketing.....	3



# MANUFACTURING ENGINEERING

## Associate in Applied Science Degree: Manufacturing Technology

*This program is designed to give students training and education in the field of manufacturing with emphasis on automated manufacturing techniques.*

*This 69-credit hour program includes courses in production control, process planning, automation, CAD and related areas of study. A general education component is included.*

*Graduates of this program could accept positions as quality control technicians, production controllers, CNC programmers, process technicians or sales engineers.*

*Students completing this program may continue their education by pursuing a bachelor of science in technology degree with a major in manufacturing or industrial technology.*

*All courses in this program are regularly offered at night to meet the needs of those wishing to pursue training while working in local industry.*

*Students wishing to study in this field should consult with a Student Development faculty member or a teaching faculty member in this department when planning their schedule.*

### Required General Education Courses:<sup>1</sup>

ENG	101	Composition .....	3
ENG	103	Technical and Report Writing .....	3
MTH	106	Technical Mathematics I .....	5
MTH	107	Technical Mathematics II .....	5
		Humanities elective .....	3
		Social Science electives .....	6

### Required Core Courses:

EGR	120	Engineering Graphics I (CAD) .....	4
EGR	121	Engineering Graphics II (CAD) .....	3
MET	202	Advanced Technical Drafting .....	3
MET	236	Solid Modeling I .....	3
MFG	101	Introduction to CN/CAM .....	3
MFG	105	Machining Processes I .....	3
MFG	108	Manufacturing Processes and Materials .....	3
MFG	115	Computer-Aided Manufacturing I .....	3
MFG	206	Metallurgy and Heat Treatment .....	3
MFG	211	Process Planning and Tool Design .....	4
MFG	215	Computer-Aided Manufacturing II .....	3
QUA	130	Quality Assurance Concepts .....	3
QUA	160	Dimensional Metrology I .....	3
		Technical elective <sup>2,3</sup> .....	3

<sup>1</sup> In planning a course sequence, prerequisites listed in the course descriptions should be considered.

<sup>2</sup> Technical elective: May be chosen from MET, MFG, and QUA courses with approval of coordinator.

<sup>3</sup> MFG 100 and MFG 200 may be counted as technical electives with approval of coordinator.

# MANUFACTURING ENGINEERING

## Associate in Applied Science Degree: Manufacturing Technology/Machining

*This program is designed to give students training and education in the field of manufacturing with the emphasis on machining. This 69-credit hour program includes courses in manufacturing, processes, materials, machining, computer-aided manufacturing, and quality.*

*Graduates of this program may accept positions as machinists, CNC and CAM programmers, process planners and manufacturing technicians.*

### Required General Education Courses:<sup>1</sup>

ENG	101	Composition .....	3
ENG	103	Technical and Report Writing .....	3
		Humanities elective .....	3
MTH	106	Technical Mathematics I .....	5
MTH	107	Technical Mathematics II .....	5
		Social Science elective .....	6

### Required Core Courses:<sup>1</sup>

EGR	120	Engineering Graphics I (CAD) .....	4
EGR	121	Engineering Graphics II (CAD) .....	3
MFG	101	Introduction to CNC/CAM .....	3
MFG	108	Manufacturing Processes and Materials .....	3
MFG	115	Computer-Aided Manufacturing I .....	3
MFG	206	Metallurgy and Heat Treatment .....	3
QUA	130	Quality Assurance Concepts .....	3
QUA	160	Dimensional Metrology I .....	3
		Technical elective <sup>2,3</sup> .....	4

**Electives:** Select 12 credit hours, with coordinator's approval, from the following courses:

MET	202	Advanced Technical Drafting .....	3
MET	236	Solid Modeling I .....	3
MFG	105	Machining Processes I .....	3
MFG	120	Machining Processes II .....	3
MFG	205	Machining Processes III .....	3
MFG	211	Process Planning and Tool Design .....	4
MFG	240	Machining Applications .....	3

<sup>1</sup> In planning a course sequence, prerequisites listed in the course description should be considered.

<sup>2</sup> Technical elective: May be chosen from MET, MFG and QUA courses with the approval of coordinator.

<sup>3</sup> MFG 100 and MFG 200 may be counted as technical electives with approval of coordinator.

# MANUFACTURING ENGINEERING

## CNC/CAM Technician Certificate

*This 21-credit hour certificate program allows for in-depth course work in computer numerical control, (CNC) and computer-aided manufacturing (CAM). Many aspects of manufacturing are supported by computer applications, including process planning, tool selection, program generation, and machine control. The following courses provide the educational background to perform these tasks in an industrial setting.*

*The recommended program is expected to meet the needs of the majority of students. For special educational needs, alternate plans of study may be approved by the program coordinator.*

CNC/CAM electives <sup>1</sup> .....	9
MFG 101 Introduction to CNC/CAM .....	3
MFG 105 Machining Processes I .....	3
Mathematics elective <sup>2</sup> .....	3
QUA 160 Dimensional Metrology I .....	3

<sup>1</sup> CNC/CAM elective must include at least one course from each of the following groups:

Group I: MFG 125, MFG 126, MFG 225

Group II: MFG 115, MFG 215, MFG 216

<sup>2</sup> Mathematics elective: MTH 100, MTH 104, or MTH 106

## Machinist Certificate

*This 21-23 credit hour certificate program allows those interested or presently engaged in precision metalworking to develop knowledge and skills to assume more responsible positions in the field.*

MET 106 Mechanical Blueprint Reading (1) or	
MET 101 Applied Mechanical Drafting (3).....	1-3
MFG 105 Machining Processes I.....	3
MFG 120 Machining Processes II.....	3
MFG 205 Machining Processes III.....	3
MFG 240 Machining Applications .....	3
MTH 100 Basic Applied Mathematics .....	3
QUA 160 Dimensional Metrology I .....	3
QUA 260 Introduction to Geometric	
Dimensioning and Tolerancing .....	2

# MANUFACTURING ENGINEERING

## Production Engineering Technician Certificate

*This 18-credit hour certificate program allows for in-depth course work in the technical aspects of manufacturing, quality control and production planning. Such a program provides an individual with the necessary background to assume a responsible position in these areas. Any combination of at least 18 credit hours may be selected from the courses list below, provided that the combination has the program approval of the coordinator.*

MAT	120	Production Control Concepts.....	3
MET	101	Applied Mechanical Drafting (3) or	
MET	106	Mechanical Blueprint Reading (1) or	
EGR	120	Engineering Graphics I (CAD) (4).....	1-4
MFG	101	Introduction to CNC/CAM .....	3
MFG	108	Manufacturing Processes and Materials .....	3
MFG	115	Computer-Aided Manufacturing I .....	3
MTH	100	Basic Applied Mathematics <sup>1</sup> .....	3
QUA	130	Quality Assurance Concepts .....	3
QUA	160	Dimensional Metrology I .....	3
QUA	260	Introduction to Geometric Dimensioning And Tolerancing .....	2

<sup>1</sup> Students with appropriate background should elect MTH 106.

## Production Welding Certificate

*This 10-14 credit hour certificate program is designed for those interested or presently working in a welding occupation to prepare for work and/or a more responsible position in the field. This certificate is not to be confused with the American Welding Society or local industrial welding certificates.*

MET	101	Applied Mechanical Drafting (3) or	
MET	106	Mechanical Blueprint Reading (1) .....	1-3
MFG	110	Basic Welding .....	3
MFG	210	Advanced Welding .....	3
MTH	100	Basic Applied Mathematics (3) or	
MTH	106	Mathematics (5) .....	3-5

# MANUFACTURING ENGINEERING

## Quality Assurance Certificate

*This 19-21 credit hour certificate program provides an introduction to the concepts and applications of total quality management. The available courses allow sufficient flexibility for students from both manufacturing and service-oriented institutions to complete the required work.*

Elective <sup>1</sup>	.....	3
MGT 225	Applied General Statistics or	
MTH 165	Elementary Statistics.....	4
Mathematics elective <sup>2</sup>	.....	3-5
QUA 130	Quality Assurance Concepts <sup>3</sup> .....	3
QUA electives <sup>4</sup>	.....	6

<sup>1</sup> Elective to be chosen in conjunction with program coordinator and to reflect basic work in the student's major area. Examples of approved electives: MAT 101, MFG 101, MFG 108, MGT 160, QUA 260.

<sup>2</sup> MGT 150, MTH 080, or MTH 106 or higher level course to be chosen with program coordinator.

<sup>3</sup> Requirements for QUA 130 may be satisfied by taking all three of the following courses: QUA 131, QUA 132, QUA 133. (These three courses are equivalent to QUA 130.)

<sup>4</sup> QUA electives to be chosen from the following: QUA 160, QUA 230, QUA 235, QUA 265, QUA 281.

# MARKETING

## Associate in Applied Science Degree

The curriculum is designed for persons interested in preparing for positions in the dynamic field of marketing.

Career opportunities in marketing are quite extensive and diversified. Career objectives of persons completing this program would be in the areas of advertising, sales, sales promotion, market research, product development, pricing, wholesaling, direct marketing, retailing and merchandising.

Students can choose a basic program of study in marketing or one of the specialized study areas. Students earning an associate in applied science degree in marketing must complete the following required general education courses, required core courses and 21 semester hours of course work from the specialized study areas<sup>1</sup>.

### Required General Education Courses:

ENG	101	Composition .....	3
ENG	102	Composition or	
ENG	130	Business Writing I or	
SPE	101	Fundamentals of Speech Communication.....	3
Humanities	elective	.....	3
MGT	150	Business Math (3) or	
Mathematics	elective <sup>2</sup> (3-4).....		3-4
PSY	101	Introduction to Psychology .....	3
PSY	145	Psychology in Business and Industry.....	3

### Required Core Courses:

ACC	101	Introduction to Financial Accounting .....	4
ACC	102	Introduction to Managerial Accounting or	
ACC	211	Business Law I .....	3
ECO	200	Introduction to Economics <sup>3</sup> or	
ECO	211	Microeconomics.....	3
CIS	100	Computer Literacy or	
CIS	101	Introduction to Computer Information Systems .....	3
MGT	111	Introduction to Business Organization.....	3
MGT	270	Principles of Management .....	3
MKT	245	Principles of Marketing .....	3
Elective:			
MKT	100	Marketing Career Exploration <sup>4</sup> .....	1

### Specialized Study Areas:

Depending on the student's career needs, he/she may choose courses from the following specialized study areas. It is recommended that students pursue one of the following specialized areas and consult with the program coordinator or Student Development faculty member.

#### Marketing

Any combination of 21 credit hours may be selected from the courses listed below.

MKT	106	Retail Merchandising .....	3
MKT	140	Principles of Professional Selling .....	3
MKT	217	Advertising.....	3
MKT	240	Advanced Sales Skills.....	3
MKT	246	Business to Business Marketing .....	3
MKT	247	Consumer Buying Behavior .....	3

# MARKETING

## Associate in Applied Science Degree continued....

MKT	248	Direct Marketing.....	3
MKT	250	Retailing .....	3
MKT	255	Marketing Research.....	3
MKT	260	International Marketing .....	3
MKT	280	Marketing Problems .....	3
MKT	281	Internship in Marketing .....	3
MKT	285	Topics In Marketing.....	5-3
MKT	290	Principles of Exporting and Importing .....	3

### **Retailing**

#### **Required:<sup>5</sup>**

FAS	212	Visual Fashion Merchandising or	
MKT	110	Retail Store Layout and Imaging.....	2
MKT	106	Retail Merchandising .....	3
MKT	120	Customer Service.....	1
MKT	250	Retailing .....	3
MKT	251	Retail Merchandise Management.....	3

#### **Electives: Select at least 9 credit hours from the following:<sup>5</sup>**

MGT	154	Small Business Management.....	3
MGT	160	Principles of Supervision.....	3
MKT	140	Principles of Professional Selling .....	3
MKT	217	Advertising.....	3
MKT	247	Consumer Buying Behavior .....	3
MKT	248	Direct Marketing.....	3
MKT	281	Internship in Marketing .....	3
MKT	285	Topics in Marketing.....	5-3

### **Sales**

#### **Required:<sup>5</sup>**

MKT	140	Principles of Professional Selling .....	3
MKT	141	Sales Management .....	3
MKT	240	Advanced Sales Strategies.....	3
MKT	247	Consumer Buying Behavior .....	3

#### **Electives: Select at least 9 credit hours from the following:<sup>5</sup>**

MGT	160	Principles of Supervision.....	3
MKT	106	Retail Merchandising or	
MAT	125	Purchasing .....	3
MKT	120	Customer Service.....	1
MKT	246	Business to Business Marketing .....	3
MKT	248	Direct Marketing.....	3
MKT	281	Internship in Marketing .....	3
MKT	285	Topics in Marketing.....	5-3

### **Marketing Communications**

#### **Required:<sup>5</sup>**

JNM	137	Media Writing .....	3
JNM	232	Advertising Copywriting and Design or	
MKT	217	Advertising.....	3
MKT	255	Marketing Research.....	3

#### **Electives: Select at least 12 credit hours from the following:<sup>5</sup>**

JNM	136	Broadcast Writing.....	3
JNM	233	Public Relations Writing and Design.....	3
JNM	235	Publications Editing and Design.....	3
MKT	140	Principles of Professional Selling .....	3

# MARKETING

## Associate in Applied Science Degree continued....

MKT	246	Business to Business Marketing .....	3
MKT	247	Consumer Buying Behavior .....	3
MKT	248	Direct Marketing.....	3
MKT	260	International Marketing .....	3
MKT	281	Marketing Internship .....	3

### Merchandising of Home Furnishings

**Required:<sup>5</sup>**

IND	103	Furniture History.....	3
IND	105	Interior Design Theory.....	1
IND	106	Materials and Sources .....	3
IND	109	Design and Color Elements for Interiors.....	3
MKT	106	Retail Merchandising .....	3
MKT	250	Retailing .....	3

**Electives: Select at least 5 credit hours from the following:**

FAS	212	Visual Fashion Merchandising .....	2
IND	101	Basic Interior Design.....	3
MKT	110	Retail Store Layout and Imaging.....	2
MKT	120	Customer Service.....	1
MKT	140	Principles of Professional Selling .....	3
MKT	247	Consumer Buying Behavior .....	3
MKT	281	Internship in Marketing .....	3
MKT	285	Topics in Marketing .....	.5-3

<sup>1</sup> Students are reminded that not all courses are offered each semester. In determining course selection, the student should consult with a Student Development faculty member or program coordinator.

<sup>2</sup> Mathematics elective: MTH 080, MTH 086, MTH 087, MTH 103, MTH 124, MTH 134, MTH 165. Meet with Student Development faculty member or program coordinator for appropriate course.

<sup>3</sup> Meet with Student Development faculty member or program coordinator for appropriate ACC, CIS or ECO course.

<sup>4</sup> MKT 100 is a recommended one-hour elective for students interested in exploring careers in marketing.

<sup>5</sup> Students must satisfy the prerequisites for each course selected except for FAS 212 ( a waiver has been granted for Marketing students.)

<sup>6</sup> The Merchandising of Home Furnishings specialization does not prepare the student to become an interior designer. Please see information on the two-year Interior Design program.



# MARKETING

## Retail Merchandising Certificate

*This is a 17-18 credit hour certificate program designed for individuals with career interests in the retail management field. It is especially appropriate for those individuals employed in retailing who are seeking skills and knowledge which may prepare them for career advancement.*

### Required:

FAS	212	Visual Fashion Merchandising (2) or	
MKT	217	Advertising (3).....	2-3
MKT	106	Retail Merchandising .....	3
MKT	250	Retailing .....	3
MKT	251	Retail Merchandise Management .....	3

### Electives: Select at least 6 credit hours from the following courses:

ACC	099	Business Recordkeeping (3) or	
ACC	101	Introduction to Financial Accounting (4).....	3-4
MGT	111	Introduction to Business Organization .....	3
MGT	154	Small Business Management.....	3
MGT	160	Principles of Supervision.....	3
MKT	140	Principles of Professional Selling .....	3
MKT	245	Principles of Marketing .....	3

## Sales Management and Development Certificate

*This 15-credit hour certificate program is designed to provide in-service and pre-service training and development for industrial sales and sales management personnel representing manufacturers, service marketers, wholesalers or other marketing middlemen. Through the selection of courses, this program can satisfy both the career needs of individuals seeking to develop and expand their selling and account servicing skills and individuals preparing for sales management responsibilities. This certificate program would be especially appropriate for individuals who are entering the professional field without a formal sales or marketing education.*

*Program requirements are satisfied by completing six hours from Group I and nine hours from Group II for a total minimum of 15 credit hours. To achieve an individual program designed to complement the student's industrial and educational background, the selection of courses should be made in consultation with the coordinator.*

### Electives: Group I (Select 6 credit hours from the following):

MKT	140	Principles of Professional Selling .....	3
MKT	141	Sales Management .....	3
MKT	240	Advanced Sales Strategies.....	3
MKT	247	Consumer Buying Behavior .....	3

### Electives: Group II (Select 9 credit hours from the following):

ACC	211	Business Law I .....	3
MAT	125	Purchasing .....	3
MGT	111	Introduction to Business Organization .....	3
MGT	160	Principles of Supervision.....	3
MKT	141	Sales Management .....	3
MKT	240	Advanced Sales Strategies.....	3
MKT	245	Principles of Marketing .....	3
MKT	246	Business to Business Marketing .....	3

# MATERIALS/LOGISTICS MANAGEMENT

## Associate in Applied Science Degree

*The program is designed to provide in-service education for those persons working directly in, or in fields allied to, materials/logistics management. Additionally, the program may provide pre-service training for those who may seek or be transferred into jobs within these fields.*

### FIRST YEAR

#### First Semester

ACC	101	Introduction to Financial Accounting .....	4
CIS	122	Data Base for Micros .....	1
CIS	123	Spreadsheet/Budgeting for Micros .....	1
CIS	124	Advanced Spreadsheet for Micros .....	1
ENG	101	Composition .....	3
MAT	101	Materials/Logistics Management .....	3
MGT	111	Introduction to Business Organization .....	3
			16

#### Second Semester

ACC	102	Introduction to Managerial Accounting.....	3
ENG	130	Business Writing .....	3
MAT	elective <sup>1</sup>	.....	3
MGT	270	Principles of Management .....	3
PSY	145	Psychology in Business and Industry <sup>2</sup> .....	3
			15

### SECOND YEAR

#### First Semester

ACC	211	Business Law I .....	3
ECO	200	Introduction to Economics .....	3
MAT	electives <sup>1</sup>	.....	6
MGT	150	Business Math <sup>3</sup> .....	3
			15

#### Second Semester

	MAT	elective <sup>1</sup> .....	3
		Materials/Logistics Management electives <sup>4</sup> .....	9
PHI	150	Business Ethics.....	3
			15

<sup>1</sup> MAT electives:

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

<sup>2</sup> Prerequisite waived for MAT students.

<sup>3</sup> A competency test, available in the testing office, may be utilized to meet the mathematics requirement. Students in this program who utilize the competency test to meet the mathematics requirement must select an additional 200 level MAT course.

<sup>4</sup> Materials/Logistics Management electives:

MAT	226	Material Requirements Planning .....	3
MAT	227	Just-In-Time (JIT) .....	3
MAT	230	International Materials/Logistics Management .....	3
MAT	259	Advanced Purchasing .....	3
MAT	281	Topics in Materials/Logistics Management .....	1-3
MGT	274	Operations Management .....	3

# MATERIALS/LOGISTICS MANAGEMENT

## Materials/Logistics Management Certificate

*This 18-credit hour certificate program is designed to provide in-service education for those persons working directly in, or in fields related to, materials management and logistics. This particular curriculum format is especially suitable for those who may be in the field and are seeking to fill in knowledge or skill "gaps" in their total preparation. Additionally, the program may provide pre-service training for those who may seek or be transferred into jobs within these fields.*

**Required:**

MAT	101	Materials/Logistics Management.....	3
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**Electives:** Group I (Select 12 credit hours from the following):

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

**Electives:** Group II (Select one course):

MAT	226	Material Requirements Planning (MRP).....	3
MAT	227	Just-In-Time (JIT).....	3
MAT	230	International Material Management.....	3
MAT	259	Advanced Purchasing.....	3
MGT	160	Principles of Supervision.....	3
MGT	270	Principles of Management.....	3
MGT	274	Operations Management.....	3

# MECHANICAL ENGINEERING TECHNOLOGY

## Associate in Applied Science Degree

*This program is designed to give students training and education in the field of mechanical design. Emphasis on computer aided design and automated manufacturing techniques is included in this program.*

*This 67-69 credit hour program includes courses in design, drafting, materials, mechanics and related areas of study. A general education component is included.*

*Graduates of this program could accept positions as mechanical designers, mechanical drafters, CAD operators or designers, mechanical engineering technicians, tool designers or sales engineers.*

*Students completing this program may continue their education by pursuing a bachelor of science in technology degree with a major in mechanical engineering or individual design technology.*

*All courses in this program are regularly offered at night to meet the needs of those wishing to pursue training while working in local industry.*

*Students wishing to study in this field should consult with a Student Development faculty member or a teaching faculty member in this department when planning their schedule.*

### Required General Education Courses:<sup>1</sup>

ENG	101	Composition .....	3
ENG	103	Technical and Report Writing .....	3
		Humanities elective .....	3
MTH	106	Technical Mathematics I .....	5
MTH	107	Technical Mathematics II .....	5
		Social Science electives .....	6

### Required Core Courses:<sup>1</sup>

EGR	120	Engineering Graphics I (CAD) .....	4
EGR	121	Engineering Graphics II (CAD) .....	3
MET	201	Mechanisms .....	4
MET	202	Advanced Technical Drafting .....	3
MET	207	Machine Design .....	4
MET	240	Statics and Strength of Materials .....	5
MFG	101	Introduction to CNC/CAM .....	3
MFG	105	Machining Processes I .....	3
MFG	108	Manufacturing Processes and Materials .....	3
MFG	206	Metallurgy and Heat Treatment .....	3
MFG	211	Process Planning and Tool Design .....	4
PHY	101	Technical Physics I —Mechanics, Heat and Sound or	
PHY	121	Introductory Physics I or	
		Technical elective <sup>2, 3</sup> .....	3-5

<sup>1</sup> In planning a course sequence, prerequisites listed in the course descriptions should be considered.

<sup>2</sup> Technical electives: May be chosen from MET, MFG, and QUA courses with approval of coordinator.

<sup>3</sup> MFG 100 and MFG 200 may be counted as technical electives with approval of coordinator.

# MECHANICAL ENGINEERING TECHNOLOGY

## CAD Technician Certificate

*This 19-20 credit hour certificate program is for individuals interested in a concentrated exposure in computer aided drafting and design (CAD). This is especially suitable for those in the field of engineering who wish to fill the gap in their knowledge or those who wish to receive pre-service training in the area of CAD.*

EGR	120	Engineering Graphics I (CAD).....	4
EGR	121	Engineering Graphics II (CAD).....	3
MET	202	Advanced Technical Drafting.....	3
MET	236	Solid Modeling I.....	3
MET	237	Solid Modeling II.....	3
		Technical elective <sup>1</sup> .....	3-4

<sup>1</sup> Technical electives: MFG 101, MFG 211, QUA 130, QUA 160.

## Mechanical Drafting Certificate

*This 13-15 credit hour certificate program has been developed in conjunction with area industries to prepare students for challenging careers in drafting.*

EGR	120	Engineering Graphics I (CAD).....	4
EGR	121	Engineering Graphics II (CAD).....	3
MET	202	Advanced Technical Drafting.....	3
MTH	100	Basic Applied Mathematics (3) or	
MTH	106	Mathematics I (5).....	3-5

# MEDICAL OFFICE ADMINISTRATION

Please contact the program coordinator for current name(s) and pertinent information regarding the national professional organization(s) affiliated with the programs in the Medical Office Administration department.

## Associate in Applied Science Degree: Medical Office Assistant

This 62-63 credit hour program is designed for the individual who is interested in becoming a medical assistant in a physician's office or other outpatient health care setting.

The curriculum provides training in a variety of administrative and clinical tasks to facilitate the work of the physician. Administrative duties include patient communication, computer skills and record keeping. Clinical duties include assisting with examinations, treatments and diagnostic testing.

A minimum keyboarding speed of 30 words per minute is recommended to enter the program; 40 words per minute is expected in order to progress through externship. The program may be taken part-time and some courses are available on an evening schedule. An orientation and planning session is recommended by the coordinator; detailed information will be sent upon request.

### Professional Accreditation and Certification:

The Medical Office Assistant degree and certificate programs at Harper College have been accredited by the Council on the Accreditation of Allied Health Educational Programs (CAAHEP). Graduates of the programs are eligible to sit for the national certification examination sponsored by the American Association of Medical Assistants (AAMA). The MOA graduate who successfully completes this national examination is credentialed as a Certified Medical Assistant (CMA).

## FIRST YEAR

### First Semester

BIO	135	Introduction to Human Anatomy and Physiology <sup>1</sup> or	
BIO	160	Human Anatomy .....	4
HSC	100	Computer Usage in Health Services.....	1
HSC	105	Introduction to the Health Care Field .....	2
HSC	112	Medical Terminology.....	3
		Communications elective .....	3
		Social Science or Humanities elective .....	3
			<u>16</u>

### Second Semester

BIO	136	Introduction to Human Diseases <sup>1</sup> (3) or	
BIO	161	Human Physiology (4).....	3-4
		Communications elective .....	3
HSC	151	Math Applications in Health Care .....	1
MOA	145	Health Care Records Management <sup>2</sup> .....	2
MOA	195	Health Insurance and Coding <sup>2</sup> .....	2
NUR	120	Pharmacology <sup>3</sup> .....	2
PED	201	First Aid .....	3
			<u>16-17</u>

# MEDICAL OFFICE ADMINISTRATION

## Associate in Applied Science Degree: Medical Office Assistant continued...

### SECOND YEAR

#### First Semester

MOA 215	Clinical Procedures <sup>2</sup> .....	8
MOA 235	Health Care Office Procedures <sup>2</sup> .....	4
Elective <sup>4</sup>	.....	<u>3</u>
		15

#### Second Semester

HSC 213	Health Care Law and Ethics .....	3
Mathematics elective <sup>5</sup>	.....	3
MOA 240	Introduction to Medical Transcription <sup>2</sup> .....	3
MOA 245	Health Care Office Management <sup>2</sup> .....	3
MOA 270	Medical Secretarial Seminar and Externship <sup>2</sup> .....	<u>3</u>
		15

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

<sup>2</sup> Students must satisfy prerequisites for each course selected.

<sup>3</sup> Prerequisite waived for MOA students.

<sup>4</sup> Requires approval of program coordinator.

<sup>5</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the competency test to meet the mathematics requirement must take a three-credit hour elective.

## Associate in Applied Science Degree: Health Care Office Manager

*This 60-64 credit hour program is designed for individuals interested in expanding previous general office experience or health care training in order to gain the necessary skills to supervise a health care facility. Career options are plentiful and diversified, and include employment in an extended care facility, home health care agency, pharmaceutical house, medical supply company or various departments with acute-care settings.*

*The student must complete the general education courses and health care core courses. Additionally, the student has the option to specialize in health care skills and in business-related course work, depending on the student's career objectives.*

*A minimum keyboarding speed of 30 words per minute is recommended to enter the program; 40 words per minute is expected in order to progress through externship. The program may be taken part-time and some courses are available on an evening schedule. An orientation and planning session is recommended by the coordinator; detailed information will be sent upon request.*

#### Required Courses:

BIO 135	Introduction to Anatomy & Physiology or	
BIO 160	Human Anatomy <sup>1</sup> .....	4
BIO 136	Introduction to Human Disease (3) or	
BIO 161	Human Physiology (4) <sup>1</sup> .....	3-4
Communications electives	.....	6

# MEDICAL OFFICE ADMINISTRATION

## Associate in Applied Science Degree: Health Care Office Manager continued...

		Humanities or Social Science elective .....	3
		Mathematics elective <sup>2</sup> .....	3
HSC	100	Computer Usage in Health Services .....	1
HSC	105	Introduction to the HealthCare Field .....	2
HSC	112	Medical Terminology .....	3
HSC	151	Math Applications in Health Care .....	1
HSC	213	Health Care Law and Ethics <sup>3</sup> .....	3
MGT	111	Introduction to Business Organization .....	3
MOA	145	Health Care Records Management <sup>3</sup> .....	2
MOA	195	Health Insurance and Coding <sup>3</sup> .....	2
MOA	235	Health Care Office Procedures <sup>3</sup> .....	4
MOA	245	Health Care Office Management <sup>3</sup> .....	3
MOA	290	Health Care Office Manager Seminar and Externship <sup>3</sup>	3
NUR	120	Pharmacology <sup>4</sup> .....	2
PED	201	First Aid .....	3

**Electives:** Group I Select any combination of a minimum of 6 credit hours from the following courses:

MOA	205	Clinical Principles <sup>3</sup> .....	6
MOA	215	Clinical Procedures <sup>3</sup> .....	8
MOA	240	Introduction to Medical Transcription <sup>3</sup> .....	3
MOA	242	Medical Transcription for the Medical Transcriptionist <sup>3</sup>	3
MOA	244	Advanced Coding and Billing Procedures <sup>3</sup> .....	3

**Electives:** Group II Select any combination of a minimum of 6 credit hours from the following courses:

ACC	101	Introduction to Financial Accounting .....	4
ACC	102	Introduction to Managerial Accounting <sup>3</sup> .....	3
ACC	216	Employment Law .....	3
CIS	101	Introduction to Computer Information Systems .....	3
CIS	120	Introduction to Business Software Packages .....	3
ECO	200	Introduction to Economics <sup>5</sup> .....	3
MGT	150	Business Math <sup>5</sup> .....	3
MGT	205	Leadership Foundations .....	1
MGT	206	Leadership Skills .....	1
MGT	207	Leadership Trends .....	1
MGT	265	Human Resource Management .....	3
MGT	270	Principles of Management <sup>3</sup> .....	3

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

<sup>2</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement.

<sup>3</sup> Students must satisfy prerequisites for each course selected.

<sup>4</sup> Prerequisite waived for Health Care Office Manager students.

<sup>5</sup> May be used to fulfill general education requirement(s); meet with program coordinator or Student Development faculty member for advice on electives.



# MEDICAL OFFICE ADMINISTRATION

## Health Care Secretary Certificate

*This 38-credit hour certificate program is designed for the individual who is interested in expanding her/his previous office experience or health care training. The program offers skills necessary to work as a secretary in a health care facility, insurance company, pharmaceutical house, or in hospital administrative offices.*

*Alternate job titles for the health care secretary would include medical or dental secretary/receptionist, doctor's secretary, insurance secretary, claims clerk, medical typist or nursing unit secretary. Administrative duties include patient reception, insurance claims processing, billing and collections, and health care records management and transcription.*

*A minimum keyboarding speed of 40 words per minute is recommended to enter the program; 50 words per minute is expected in order to progress through externship. The program may be taken part-time and some courses are available on an evening schedule. An orientation and planning session is recommended by the coordinator; detailed information will be sent upon request.*

HSC	100	Computer Usage in Health Services.....	1
HSC	105	Introduction to the Health Care Field .....	2
HSC	112	Medical Terminology.....	3
HSC	151	Math Applications in Health Care .....	1
HSC	213	Health Care Law and Ethics <sup>1</sup> .....	3
MOA	145	Health Care Records Management <sup>1</sup> .....	2
MOA	195	Health Insurance and Coding <sup>1</sup> .....	2
MOA	205	Clinical Principles <sup>1</sup> .....	6
MOA	235	Health Care Office Procedures <sup>1</sup> .....	4
MOA	240	Introduction to Medical Transcription.....	3
MOA	245	Health Care Office Management .....	3
MOA	270	Health Care Secretary Seminar and Externship <sup>1</sup> .....	3
NUR	120	Pharmacology <sup>2</sup> .....	2
PED	201	First Aid.....	3

<sup>1</sup> Students must satisfy prerequisites for each course selected.

<sup>2</sup> Prerequisite waived for Health Care Secretary students.

# MEDICAL OFFICE ADMINISTRATION

## Health Insurance Billing Specialist Certificate

*This concentrated 38-semester hour certificate program is designed for the individual who is interested in becoming an insurance billing specialist in a large health care facility or a claims approver in an insurance company. The program provides a generalized orientation to the health care field, plus specific training in ICD and CPT coding, billing and collections procedures, including the current softwares utilized.*

*A minimum keyboarding speed of 30 words per minute is recommended to enter the program; 40 words per minute is expected in order to progress through externship. The program may be taken part-time and some courses are available on an evening schedule. An orientation and planning session is recommended by the coordinator; detailed information will be sent upon request.*

### **Professional Certification:**

*Students in the Health Insurance Billing Specialist program are encouraged to join the local chapter of the American Association of Procedural Coders (AAPC). An experienced coder is eligible to sit for the national examination in order to become a Certified Procedural Coder (CPC).*

BIO	136	Introduction to Human Diseases.....	3
HSC	100	Computer Usage in Health Services.....	1
HSC	105	Introduction to the Health Care Field.....	2
HSC	112	Medical Terminology.....	3
HSC	151	Math Applications in Health Care.....	1
HSC	213	Health Care Law and Ethics <sup>1</sup> .....	3
MOA	145	Health Care Records Management <sup>1</sup> .....	2
MOA	195	Health Insurance and Coding <sup>1</sup> .....	2
MOA	205	Clinical Principles <sup>1</sup> .....	6
MOA	235	Health Care Office Procedures <sup>1</sup> .....	4
MOA	244	Advanced Insurance Procedures <sup>1</sup> .....	3
MOA	245	Health Care Office Management <sup>1</sup> .....	3
MOA	250	Health Insurance Billing Specialist Seminar and Externship <sup>1</sup> .....	3
NUR	120	Pharmacology <sup>2</sup> .....	2

<sup>1</sup> Students must satisfy prerequisites for each course selected.

<sup>2</sup> Prerequisite waived for Health Insurance Billing Specialist students.

# MEDICAL OFFICE ADMINISTRATION

## Medical Office Assistant Certificate

*This concentrated 43-credit hour certificate program is designed for the individual who is interested in becoming a medical assistant in a physician's office or other outpatient health care setting. The curriculum provides training in a variety of administrative and clinical tasks to facilitate the work of the physician. Administrative duties include patient communication, computer skills and record keeping. Clinical duties include assisting with examinations, treatments and diagnostic testing.*

*A minimum keyboarding speed of 30 words per minute is recommended to enter the program; 40 words per minute is expected in order to progress through externship. The program may be taken part-time and many courses are available on an evening schedule. An orientation and planning session is recommended by the coordinator; detailed information will be sent upon request.*

### **Professional Accreditation and Certification:**

*The Medical Office Assistant certificate and degree programs at Harper College have been accredited by the Council on the Accreditation of Allied Health educational Programs (CAAHEP). Graduates of the programs are eligible to sit for the national certification examination sponsored by the American Association of Medical Assistants (AAMA). The MOA graduate who successfully completes this national examination is credentialed as a Certified Medical Assistant (CMA).*

BIO	136	Introduction to Human Diseases <sup>1</sup> .....	3
HSC	100	Computer Usage in Health Services.....	1
HSC	105	Introduction to the Health Care Field .....	2
HSC	112	Medical Terminology .....	3
HSC	151	Math Applications in Health Care .....	1
HSC	213	Health Care Law and Ethics .....	3
MOA	145	Health Care Records Management <sup>1</sup> .....	2
MOA	195	Health Insurance and Coding <sup>1</sup> .....	2
MOA	215	Clinical Procedures <sup>1</sup> .....	8
MOA	235	Health Care Office Procedures .....	4
MOA	240	Introduction to Medical Transcription <sup>1</sup> .....	3
MOA	245	Health Care Office Management <sup>1</sup> .....	3
MOA	280	Medical Office Assistant Seminar and Externship <sup>1</sup> ....	3
NUR	120	Pharmacology <sup>2</sup> .....	2
PED	201	First Aid .....	3

<sup>1</sup> Students must satisfy prerequisites for each course selected.

<sup>2</sup> Prerequisite waived for Medical Office Assistant students.

# MEDICAL OFFICE ADMINISTRATION

## Medical Transcriptionist Certificate

This concentrated 36-credit hour certificate program is designed for the individual who is interested in expanding her/his previous health care and/or secretarial experience in order to become a medical transcriptionist. A medical transcriptionist is the health information specialist who transcribes patients' records in a hospital, large health care practice, HMO or clinic. Transcribed records are used in follow-up treatment, by insurance companies to verify claims, to authenticate legal documents, and by medical research specialists in the development of new treatment and diagnostic methods.

The curriculum provides the training needed to understand the various types of dictation utilized. Medical transcriptionists must possess excellent keyboarding skills and the ability to memorize spellings and meanings of the health care language. A minimum keyboarding speed of 50 words per minute is recommended to enter the program; however, experienced medical transcriptionists frequently reach keyboarding speeds in excess of 80-100 words per minute; 60 words per minute is expected in order to progress through externship. The program may be taken part-time and some courses are available on an evening schedule. An orientation and planning session is recommended by the coordinator; detailed information will be sent upon request.

### Professional Accreditation and Certification:

Graduates of the Medical Transcriptionist program are eligible to sit for the national certification examination offered by the American Association for Medical Transcription (AAMT). The medical transcriptionist who successfully completes the national examination is credentialed as a Certified Medical Transcriptionist (CMT). Students in the Medical Transcriptionist program are encouraged to join the local chapter of the AAMT.

BIO	136	Introduction to Human Diseases.....	3
HSC	100	Computer Usage in Health Services.....	1
HSC	105	Introduction to the Health Care Field.....	2
HSC	112	Medical Terminology.....	3
HSC	151	Math Applications in Health Care.....	1
HSC	213	Health Care Law and Ethics <sup>1</sup> .....	3
MOA	145	Health Care Records Management <sup>1</sup> .....	2
MOA	205	Clinical Principles <sup>1</sup> .....	6
MOA	235	Health Care Office Procedures <sup>1</sup> .....	4
MOA	242	Medical Transcription for the Medical Transcriptionist <sup>1</sup> .....	3
MOA	245	Health Care Office Management <sup>1</sup> .....	3
MOA	260	Medical Transcriptionist Seminar and Externship <sup>1</sup> .....	3
NUR	120	Pharmacology <sup>2</sup> .....	2

<sup>1</sup> Students must satisfy prerequisites for each course selected.

<sup>2</sup> Prerequisite waived for Medical Transcriptionist students.

# NURSING\*

## Associate in Applied Science Degree

The Nursing program is designed to enable students to receive a certificate in practical nursing at the completion of the first year and an associate in applied science degree in nursing at the completion of the two-year sequence. The program is accredited by the Illinois Department of Professional Regulation and the National League for Nursing.

The associate in applied science degree in Nursing qualifies the graduate for NCLEX-RN and application for Illinois licensure as a registered nurse. Positions are available in a variety of health care settings.

### \*\* Admission requirements include:

- Fulfillment of the General Admission Requirements of Harper College.
- Submission of an official copy of American College Test (ACT) results. (This requirement will be waived for students who have completed 12 or more semester hours of college work.)
- High school graduation or equivalent (GED).
- *Grade Point Average Requirement.* All students must have a high school grade point average of 2.0 or better (on a 4.0 scale), or if twelve (12) semester hours of college credit have been completed, a college grade point average of 2.0 or better (on a 4.0 scale). Students who have previously enrolled at Harper College must be in good academic standing.
- *Course Work Requirements.* Completion of at least two semesters of high school biology with grades of "C" or better or one semester of college biology with a grade of "C" or better; two semesters of high school chemistry with grades of "C" or better or one semester of college chemistry with a grade of "C" or better; and two semesters of high school math (algebra or higher level) with grades of "C" or better or one semester of college math (elementary algebra or higher level) with a grade of "C" or better.

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

- Completion of the Entrance Examination for Schools of Nursing.
- *English Competency Requirement.* Completion of the Harper College Writing/Reading Assessment Test or a college level English composition course with a grade of "C" or better.
- *Math Competency Requirement.* Students must pass the *Harper College Math Assessment for Competency*. This requirement will be waived for students who have completed one semester of college math (elementary algebra or higher level) with a grade of "C" or better.
- Attendance at a Nursing program information meeting.
- Satisfactory Harper College Nursing Admission score.

### FIRST YEAR<sup>1</sup>

#### First Semester

BIO	160	Human Anatomy .....	4
NUR	101	Nursing Fundamentals.....	9
NUR	120	Pharmacology <sup>2</sup> .....	2
PSY	101	Introduction to Psychology .....	3
Mathematics <sup>3</sup>		.....	0
			18

# NURSING

## Associate in Applied Science Degree continued...

### Second Semester

BIO	161	Human Physiology <sup>4</sup> .....	4
		Computer elective <sup>5</sup> .....	1
NUR	102	Nursing Care of Clients with Commonly Occurring Health Needs .....	9
PSY	228	Human Development .....	3
			17

### SECOND YEAR

#### First Semester

BIO	130	Microbiology .....	4
ENG	101	Composition .....	3
NUR	201	Advanced Nursing I .....	10
			17

#### Second Semester

ENG	102	Composition .....	3
NUR	202	Advanced Nursing II .....	10
SOC	101	Introduction to Sociology .....	3
NUR	210	Physical Assessment <sup>6</sup> .....	1
			17

<sup>4</sup> Nursing is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details.

<sup>5</sup> Subject to change. Contact the Admissions Office for additional information.

<sup>1</sup> A grade of "C" or better in all NUR courses, BIO 130, BIO 160 and BIO 161 is required for all students.

<sup>2</sup> Must be completed no earlier than three years before graduation.

<sup>3</sup> Group II math requirement is met by Nursing program admission requirements.

<sup>4</sup> Must be taken within three years of the required semester.

<sup>5</sup> CIS 100, CIS 101, CIS 117, CIS 125, HSC 100, OFC 133.

<sup>6</sup> Can be taken any time after NUR 102.

## Certified Nursing Assistant Certificate \*

*This 7-credit hour certificate program prepares individuals to deliver safe, competent and quality care under the supervision of a registered nurse. The course includes basic nursing skills necessary to provide direct care to patients with special emphasis on skills and knowledge required to care for residents in long term care and sub acute settings. Clinical experience is held off campus. Students are required to provide their own transportation. Students successfully completing the program are eligible to sit for the IDPH certification examination and enter the State of Illinois Nurse Aide Registry. Opportunities for employment are found in settings such as long term care facilities, home health agencies, hospitals, and private duty.*

#### Required:

CNA	101	Nursing Assistant Training .....	7
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\* Certified Nursing Assistant is a limited enrollment program and has special admission requirements. Contact the Admissions Office for details.

# NURSING

## Licensed Practical Nursing Certificate \*

*Admission Requirements: Same as Associate in Applied Science Degree*

*Licensed practical nurses are eligible for admission into the RN completion program. Contact the Nursing Department for details.*

*The Licensed Practical Nursing certificate qualifies the graduate to sit for the NCLEX-PN and application for Illinois licensure as a practical nurse.*

### FIRST YEAR<sup>1</sup>

#### First Semester

BIO	160	Human Anatomy .....	4
NUR	101	Nursing Fundamentals .....	9
NUR	120	Pharmacology <sup>2</sup> .....	2
PSY	101	Introduction to Psychology .....	3
Mathematics <sup>3</sup>		.....	<u>0</u>
			18

#### Second Semester

BIO	161	Human Physiology <sup>4</sup> .....	4
		Computer elective <sup>5</sup> .....	1
NUR	102	Nursing Care of Clients with Commonly Occurring Health Needs .....	9
PSY	228	Human Development .....	<u>3</u>
			17

#### Summer Semester

NUR	104	Nursing Field Experience.....	4
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\* Licensed Practical Nursing is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details.

<sup>1</sup> A grade of "C" or better in all NUR courses, BIO 130, BIO 160 and BIO 161 is required for all students.

<sup>2</sup> Must be completed no earlier than three years before graduation.

<sup>3</sup> Group II math requirements is met by Nursing program admission requirements.

<sup>4</sup> Must be taken within three years of the required semester.

<sup>5</sup> CIS 100, CIS 101, CIS 117, CIS 125, HSC 100, OFC 133.

# PARALEGAL STUDIES

## Associate in Applied Science Degree

*The program is designed to prepare men and women as technically qualified assistants to a lawyer. Under the supervision of a lawyer, the paralegal may perform such functions as legal research, investigation, detail work with regard to probate matters, preparation of tax forms and returns, searching public and court records, office management, library service, bookkeeping, serving and filing legal documents and preparing legal forms.*

### FIRST YEAR

#### First Semester

ENG	101	Composition .....	3
		Humanities elective <sup>1</sup> .....	3
PLS	101	Introduction to Paralegal Studies .....	3
PSY	101	Introduction to Psychology .....	3
SOC	101	Introduction to Sociology .....	<u>3</u>
			15

#### Second Semester

ENG	103	Technical and Report Writing .....	3
PLS	102	Fundamentals of Legal Research .....	3
PLS	103	Litigation .....	3
PLS	105	Family Law .....	3
PLS	123	Real Property Law .....	<u>3</u>

### SECOND YEAR

#### First Semester

		Mathematics elective <sup>2</sup> .....	3
PLS	201	Tort and Insurance Law .....	3
PLS	205	Contract Law .....	3
PLS	210	Corporate and Securities Law .....	3
PSC	101	American Politics and Government .....	<u>3</u>
			15

#### Second Semester

CIS	120	Introduction to Business Software Packages .....	3
		Electives <sup>3</sup> .....	12
PLS	208	Externship in Paralegal Studies <sup>4</sup> .....	<u>3</u>
			18

<sup>1</sup> Humanities electives must be chosen from the following ABA-approved humanities, listed with the requirements for AAS degrees: ART 105, any FNA, any FRN, any GER, any HST, any HUM, any JPN, any LIT, LNG 105, MUS 103, MUS 104, MUS 120, any PHI but not PHI 160, any SPA, any SPE but not SPE 212 or SPE 216.

<sup>2</sup> A competency test, available in the testing office, may be utilized to meet the mathematics requirement. Students in this program who utilize the competency test to meet the mathematics requirement must take an additional humanities elective course for the required credit hours from the courses listed in footnote 1. Only 100 level or higher mathematics courses are acceptable for the mathematics elective.

<sup>3</sup> CRJ 201 or CRJ 202, PLS 200, PLS 202, PLS 203, PLS 204, PLS 212, PLS 220, PLS 221, PLS 230.

<sup>4</sup> Required for individuals without any legal experience. Individuals with legal experience may substitute another PLS course with coordinator approval.



# PARALEGAL STUDIES

## Paralegal Studies Certificate

*This 21-credit hour certificate program is designed for those individuals who are currently employed or employable in the legal field or those who, because of legal experience, could benefit from these specialty options. The various choices available allow the student to develop special interests and skills.*

*To receive a certificate in Paralegal Studies, students must have earned an associate in applied science degree which includes general education courses equivalent to those required in Harper College's associate in applied science degree in paralegal studies, an associate in arts degree or a bachelor's degree. Verifications of the degree must be submitted before the certificate will be awarded.*

*Students who complete the 21-credit hour certificate are eligible to use our computerized placement service and otherwise work as paralegals for a practicing attorney. Students should be aware that there are legal restrictions on the practice of law by laymen.*

*Students electing to earn a certificate in paralegal studies are eligible to apply credits earned toward completion of the associate in applied science degree.*

### Required:

PLS	101	Introduction to Paralegal Studies.....	3
PLS	102	Fundamentals of Legal Research.....	3
PLS	103	Litigation.....	3

**Electives:** Select at least 12 credit hours from the following courses, providing the combination has the approval of the coordinator or a Student Development faculty member.

CRJ	201	Criminal Law <sup>1</sup> or	
CRJ	202	Criminal Procedures.....	3
PLS	105	Family Law.....	3
PLS	123	Real Property Law.....	3
PLS	200	Probate.....	3
PLS	201	Tort and Insurance Law.....	3
PLS	202	Estate Planning.....	3
PLS	203	Income Taxation I.....	3
PLS	204	Income Taxation II.....	3
PLS	205	Contract Law.....	3
PLS	208	Internship in Paralegal Studies.....	3
PLS	210	Corporate and Securities Law.....	3
PLS	212	Law Office Systems.....	3
PLS	220	Community Law.....	3
PLS	221	Bankruptcy Law.....	3
PLS	230	Topics in Paralegal Studies.....	3

<sup>1</sup> Students may take CRJ 201 or CRJ 202, but not both

# PARK AND GOLF MAINTENANCE

## Associate in Applied Science Degree

*Students can prepare for employment with municipal park districts, property management agencies, cemetery/memorial parks, industry/office parks, educational facilities, golf courses and other related careers.*

*Students earning an associate in applied science degree in Park and Golf Maintenance are required to complete 64 credit hours.*

### Required General Education Courses:

BIO	120	Botany	4
Communications electives <sup>1</sup>			6
Mathematics elective <sup>2</sup>			3
PED	201	Safety and First Aid <sup>3</sup>	3
Students must select 5 credit hours from at least two of the following areas:			
Humanities, Natural Sciences or Social Sciences			5

### Required Core Courses:

PKM	100	Park and Horticulture Careers <sup>4</sup>	1
PKM	140	Grounds Equipment and Shop Operation	4
PKM	210	Drainage and Irrigation <sup>4</sup>	3
PKM	214	Landscape Design	4
PKM	220	Arboriculture <sup>5</sup>	4
PKM	250	Park Management Seminar <sup>5</sup>	1
PST	101	Woody Plants <sup>4</sup>	4
PST	102	Plant Diseases and Pests <sup>5</sup>	4
PST	110	Soil Science	4
PST	111	Basic Horticultural Skills	4
PST	212	Turfgrass Science <sup>4</sup>	4

### Electives: Select a minimum of 6 credit hours from the following:

ELT	142	Basic Electricity (Residential/Commercial)	2
PKM	141	Basic Carpentry Skills	3
PKM	143	Basic Plumbing Skills	3
PKM	144	Basic Masonry Skills	3
PKM	150	Park and Plant Science Technology Internship <sup>6</sup>	5
PKM	230	Contracts, Specifications and Estimating <sup>7</sup>	3
PKM	240	Grounds Equipment and Power Units <sup>7</sup>	4
PKM	242	Golf Course Management <sup>7</sup>	4
PST	244	Nursery Management <sup>7</sup>	3
PST	248	Garden Center Management <sup>7</sup>	3

<sup>1</sup> Students may elect ENG 100, ENG 101 or ENG 102, depending on their test scores and advice of a Student Development faculty member. ENG 130 may be taken as the second English course.

<sup>2</sup> A competency test, available in the testing office, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a 3-credit hour PKM or PST elective.

<sup>3</sup> May be waived if a comparable certificate is presented.

<sup>4</sup> Offered during fall semester only.

<sup>5</sup> Offered during spring semester only.

<sup>6</sup> See coordinator.

<sup>7</sup> May be offered every other year.

# PARK AND GOLF MAINTENANCE

## Arboriculture Certificate

*Graduates of this 21-credit hour certificate program will be able to select, operate and care for the appropriate tools and equipment used in this field, as well as diagnosing and correcting tree problems and performing all tree maintenance procedures in a safe and efficient manner.*

PKM	100	Park and Horticulture Careers .....	1
PKM	140	Grounds Equipment and Shop Operation .....	4
PKM	220	Arboriculture .....	4
PST	101	Woody Plants .....	4
PST	110	Soil Science .....	4
PST	111	Basic Horticultural Skills.....	4

## Golf Course Maintenance Certificate

*Graduates of this 20-credit hour certificate program are prepared for employment or promotion in the golf course industry, turfgrass production and athletic field maintenance.*

PKM	100	Park and Horticulture Careers .....	1
PKM	210	Drainage and Irrigation .....	3
PKM	242	Golf Course Management.....	4
PST	110	Soil Science .....	4
PST	212	Turfgrass Science .....	4
PKM	140	Grounds Equipment and Shop Operation .....	4

## Grounds Equipment Operator Certificate

*Graduates of this 20-credit hour certificate program are prepared for employment or promotion as grounds equipment operators with landscape construction and landscape maintenance firms, golf courses, park districts and other enterprises engaging in grounds management.*

ELT	142	Basic Electricity (Residential/Commercial) .....	2
PKM	100	Park and Horticulture Careers .....	1
PKM	140	Grounds Equipment and Shop Operation .....	4
PKM	141	Basic Carpentry Skills.....	3
PKM	143	Basic Plumbing Skills.....	3
PKM	144	Basic Masonry Skills .....	3
PKM	240	Grounds Equipment and Power Units .....	4

# PARK AND GOLF MAINTENANCE

## Nursery Operations Certificate

*Graduates of this 20-credit hour certificate program will be able to identify, culture and produce nursery plant materials free of disease and pests for use by the landscape industry.*

PKM	100	Park and Horticulture Careers .....	1
PST	101	Woody Plants .....	4
PST	102	Plant Diseases and Pests .....	4
PST	110	Soil Science .....	4
PST	111	Basic Horticultural Skills.....	4
PST	244	Nursery Management .....	3

## Turfgrass Maintenance Certificate

*Graduates of this 17-credit hour certificate program are prepared for employment or promotion in lawn care, sod production and sports turf.*

PKM	100	Park and Horticulture Careers .....	1
PKM	140	Grounds Equipment and Shop Operation .....	4
PST	102	Plant Diseases and Pests .....	4
PST	110	Soil Science .....	4
PST	212	Turfgrass Science .....	4

# PHARMACY TECHNICIAN

## Pharmacy Technician Certificate

*This 29-credit hour certificate program provides technical and practical pharmaceutical knowledge leading to employment as an assistant to a registered pharmacist. It offers basic academic training in prescription order processing, inventory activities, over-the-counter drug sales, recordkeeping, product prepackaging, bulk compounding and manufacturing, computer operations and related tasks. A practicum serves to expand the technical training of the technician by actual on-the-job pharmacy experience.*

*Currently, the State of Illinois requires a pharmacy apprentice license for internship (practicum) and employment in a pharmacy. The applicant for a pharmacy license should be free of conviction of any criminal offense (other than minor traffic violations).*

### First Semester

HSC	100	Computer Usage in Health Services.....	1
HSC	112	Medical Terminology.....	3
HSC	151	Math Applications in Health Care .....	1
PHT	101	Introduction to Pharmacy Technology .....	1
PHT	102	Pharmacy Law .....	1
PHT	110	Pharmacology I.....	3
PHT	111	Pharmacy Operations I .....	3
PSY	107	Humanistic Psychology.....	2

### Second Semester

BIO	136	Introduction to Human Disease .....	3
PHT	112	Pharmacy Operations II .....	5
PHT	120	Pharmacology II .....	3
PHT	140	Sterile Products and Aseptic Techniques .....	3

# PLANT SCIENCE TECHNOLOGY

## Associate in Applied Science Degree

Students can prepare for employment in floral design, garden centers, greenhouses, grounds maintenance, landscape design and construction, nurseries, pesticide application, plant propagation, and other green industry careers.

Students earning an associate in applied science degree in Plant Science Technology are required to complete 65 credit hours.

### Required General Education Courses:

BIO	120	Botany .....	4
		Communications electives <sup>1</sup> .....	6
		Mathematics elective <sup>2</sup> .....	3
PED	201	Safety and First Aid <sup>3</sup> .....	3

Students must select 5 credit hours from at least two of the following areas:  
Humanities, Natural Sciences or Social Sciences .....

### Required Core Courses:

PKM	100	Park and Horticulture Careers <sup>4</sup> .....	1
PKM	213	Landscape Graphics .....	4
PKM	214	Landscape Design .....	4
PKM	220	Arboriculture <sup>5,6</sup> .....	4
PKM	250	Park Management and Plant Science Seminar <sup>5</sup> .....	1
PST	101	Woody Plants <sup>4,6</sup> .....	4
PST	102	Plant Diseases and Pests <sup>5</sup> .....	4
PST	103	Herbaceous Plants .....	4
PST	110	Soil Science .....	4
PST	106	Introductory Horticulture (2) <sup>7</sup> and	
PST	108	Introductory Horticulture Laboratory (2) <sup>7</sup> or	
PST	111	Basic Horticultural Skills (4) .....	4

### Specialized Study Areas:

It is recommended that students pursue one of the following specialized study areas.

#### Floral Design

##### Required:

PST	104	Floral Design .....	3
PST	204	Intermediate Floral Design .....	3
PST	205	Advanced Floral Design I .....	3
PST	206	Advanced Floral Design II .....	3
PST	207	Advanced Floral Design III .....	3
PST	247	Floral Shop Management <sup>5</sup> .....	3

#### Horticulture

##### Required:

MGT	elective <sup>8</sup>	.....	3
PKM	140	Grounds Equipment and Shop Operation .....	4

**Electives:** Horticulture students must select at least 3 credit hours from the following:

ELT	143	Basic Electricity (Residential/Commercial) .....	2
PKM	141	Basic Carpentry Skills .....	3
PKM	143	Basic Plumbing Skills .....	3
PKM	144	Basic Masonry Skills .....	3
PKM	210	Drainage and Irrigation <sup>4</sup> .....	3
PKM	230	Contracts, Specifications, Estimating <sup>9</sup> .....	3
PKM	240	Grounds Equipment Power Units <sup>9</sup> .....	4

# PLANT SCIENCE TECHNOLOGY

## Associate in Applied Science Degree, continued

PKM	242	Golf Course Management <sup>9</sup> .....	4
PST	104	Floral Design <sup>4</sup> .....	3
PST	212	Turfgrass Science <sup>4</sup> .....	4
PST	244	Nursery Management <sup>9</sup> .....	3
PST	248	Garden Center Operations <sup>9</sup> .....	3

<sup>1</sup> Students may elect ENG 100, ENG 101 or ENG 102, depending on their test scores and advice of a Student Development faculty member. ENG 130 may be taken as a second English course.

<sup>2</sup> **Floral Design option:** A competency test, available in the testing office, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a 3-credit hour PKM or PST elective.

**Horticulture option:** Students may elect any mathematics course offered, depending on their test score and advice of a Student Development faculty member; however, only MTH 100 or higher will satisfy this requirement. MGT 150 will also satisfy this requirement.

<sup>3</sup> May be waived if a comparable certificate is presented.

<sup>4</sup> Offered during fall semester only.

<sup>5</sup> Offered during spring semester only.

<sup>6</sup> Floral Design students are not required to take these courses.

<sup>7</sup> PST 106 and PST 108 may be substituted for PST 111 with consent of coordinator.

<sup>8</sup> MGT elective: MGT 111, MGT 154, MGT 160.

<sup>9</sup> May be offered every other year.

## Advanced Floral Design Certificate

*Graduates of this 19-credit hour certificate program are prepared for advanced floral design work and are able to work in all phases of design within the floral industry.*

PKM	100	Park and Horticulture Careers .....	1
PKM	104	Floral Design .....	3
PKM	204	Intermediate Floral Design .....	3
PKM	205	Advanced Floral Design I .....	3
PKM	206	Advanced Floral Design II .....	3
PKM	207	Advanced Floral Design III .....	3
PKM	247	Floral Shop Management .....	3

## Floral Design Certificate

*Graduates of this 10-credit hour certificate program are prepared for employment or promotion in retail and wholesale floral businesses.*

PKM	100	Park and Horticulture Careers .....	1
PST	104	Floral Design .....	3
PST	204	Intermediate Floral Design .....	3
PST	247	Floral Shop Management .....	3

# PLANT SCIENCE TECHNOLOGY

## Garden Center Operations Certificate

*Graduates of this 23-24 credit hour certificate program are prepared for employment or promotion with garden center and retail outlets of plant materials and associated merchandise.*

PKM	100	Park and Horticulture Careers .....	1
PKM	214	Landscape Design (4) or	
PST	104	Floral Design (3).....	3-4
PST	101	Woody Plants .....	4
PST	103	Herbaceous Plants.....	4
PST	105	Indoor Plants .....	4
PST	111	Basic Horticultural Skills.....	4
PST	248	Garden Center Operations .....	3

## Greenhouse Operations Certificate

*Graduates of this 25-credit hour certificate program are prepared for employment or promotion in commercial and retail greenhouses and interior plant management.*

ELT	142	Basic Electricity (Residential/Commercial) .....	2
PKM	100	Park and Horticulture Careers .....	1
PKM	141	Basic Carpentry Skills .....	3
PKM	143	Basic Plumbing Skills.....	3
PST	102	Plant Diseases and Pests .....	4
PST	103	Herbaceous Plants.....	4
PST	110	Soil Science .....	4
PST	111	Basic Horticultural Skills.....	4

## Grounds Maintenance Certificate

*Graduates of this 21-credit hour certificate program are prepared for employment or promotion in culture and care of gardens, landscapes, parks, turfgrass and other passive or active grounds areas.*

PKM	100	Park and Horticulture Careers .....	1
PKM	140	Grounds Equipment and Shop Operation .....	4
PST	101	Woody Plants or	
PST	212	Turfgrass Science .....	4
PST	102	Plant Diseases and Pests .....	4
PST	110	Soil Science .....	4
PST	111	Basic Horticultural Skills.....	4



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# PLANT SCIENCE TECHNOLOGY

## Landscape Design Certificate

*Graduates of this 28-credit hour certificate are prepared for employment or promotion in residential and commercial landscape design and landscape construction planning and estimating.*

PKM	100	Park and Horticulture Careers .....	1
PKM	213	Landscape Graphics .....	4
PKM	214	Landscape Design.....	4
PKM	230	Contracts, Specifications, Estimating .....	3
PST	101	Woody Plants .....	4
PST	103	Herbaceous Plants.....	4
PST	110	Soil Science .....	4
PST	111	Basic Horticultural Skills.....	4

## Pesticide Applicator Certificate

*Graduates of this 17-credit hour certificate program are prepared for employment or promotion in the application of chemicals used to prevent pest infestation or eradicate pests from landscape and turf areas. An Illinois Pesticide Applicator or Pesticide Operators license is also required prior to applying pesticides. The student is prepared to take licensing tests through this course of study; however, such tests are only available through the State of Illinois Department of Agriculture, and are, therefore, not an integral part of this program.*

PKM	100	Park and Horticulture Careers .....	1
PKM	140	Grounds Equipment and Shop Operation .....	4
PST	101	Woody Plants .....	4
PST	102	Plant Diseases and Pests .....	4
PST	111	Basic Horticultural Skills.....	4

## Plant Propagation Certificate

*Graduates of this 17-credit hour certificate program will be able to produce disease and pest free plants from seed as well as by a variety of vegetative methods as commonly encountered in the greenhouse and nursery industry.*

PKM	100	Park and Horticulture Careers .....	1
PST	101	Woody Plants .....	4
PST	110	Soil Science .....	4
PST	111	Basic Horticultural Skills.....	4
PST	102	Plant Disease and Pests .....	4

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# REAL ESTATE

*See: Financial Services*

# REFRIGERATION AND AIR CONDITIONING TECHNOLOGY

## Associate in Applied Science Degree

*The courses in this curriculum are theory design and service oriented. Theory courses deal with energy conversions. Service courses are strongly related to a hands-on philosophy. Emphasis is placed upon operating, servicing and installing equipment.*

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

### Summer Semester

RAC	100	Heating and Cooling Exploration <sup>1</sup> .....	1
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### FIRST YEAR<sup>2</sup>

#### First Semester

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

#### Second Semester

MET	101	Applied Mechanical Drafting <sup>4</sup> .....	3
RAC	102	Refrigeration Systems.....	4
RAC	104	Residential Comfort Systems.....	4
RAC	106	Advanced Controls.....	<u>4</u>
			15

#### Summer Semester

RAC	200	Heating and Cooling Internship <sup>1</sup> .....	2
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### SECOND YEAR<sup>2</sup>

#### First Semester

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

#### Second Semester

Humanities elective <sup>5</sup>		.....	3
Mathematics elective <sup>6</sup>		.....	3
RAC	202	Refrigeration System Design II.....	4
RAC	204	Air Distribution.....	3
Social Science elective		.....	<u>3</u>
			16

<sup>1</sup> RAC 100 and RAC 200 may be counted as technical electives with approval of coordinator.

<sup>2</sup> RAC 290 may be substituted for some of the listed RAC courses, with approval of coordinator.

<sup>3</sup> Students may take ENG 100 or ENG 101 the first semester, depending upon their test scores and the advice of a Student Development faculty member. ENG 102, ENG 103 or ENG 130 are suggested second semester electives.

<sup>4</sup> Students will enroll in sections of MET 101 designed for RAC students.

<sup>5</sup> Suggested humanities elective: ART 122 or PHI 110.

<sup>6</sup> A competency test, available in the testing office, may be utilized to meet the mathematics elective requirement. Students in this program who utilize the proficiency test to meet the mathematics requirement must complete a three (3) credit hour course from the following list: MET 110, MGT 111, MGT 154, MGT 160, RAC 208, RAC 211 or RAC 290.

# REFRIGERATION AND AIR CONDITIONING TECHNOLOGY

*The following certificate programs are designed to prepare the students for servicing refrigeration and heating equipment or selling environment equipment to contractors and/or servicemen.*

## Domestic Refrigeration and Heating Certificate

RAC	101	Refrigeration Fundamentals.....	4
RAC	103	Heating Principles.....	4
RAC	105	Heating and Cooling Controls.....	4
RAC	108	Domestic Refrigeration Appliances.....	4

## Heating Services Certificate

RAC	103	Heating Principles.....	4
RAC	105	Heating and Cooling Controls.....	4
RAC	106	Advanced Controls.....	4

## Refrigeration Service Certificate

RAC	101	Refrigeration Fundamentals.....	4
RAC	102	Refrigeration Systems.....	4
RAC	105	Heating and Cooling Controls.....	4
RAC	106	Advanced Controls.....	4

## Refrigeration and Air Conditioning Service Certificate

MET	101	Applied Mechanical Drafting.....	3
RAC	101	Refrigeration Fundamentals.....	4
RAC	102	Refrigeration Systems.....	4
RAC	103	Heating Principles.....	4
RAC	104	Residential Comfort Systems.....	4
RAC	105	Heating and Cooling Controls.....	4
RAC	106	Advanced Controls.....	4

## Residential Comfort Systems Certificate

RAC	101	Refrigeration Fundamentals.....	4
RAC	103	Heating Principles.....	4
RAC	104	Residential Comfort Systems.....	4
RAC	105	Heating and Cooling Controls.....	4
RAC	106	Advanced Controls.....	4

Harper College is an EPA sanctioned refrigeration technician certifier under Section 608 of the Federal Clean Air Act. As such, Harper College offers a pre-test workshop, as well as testing for EPA, Type I, Type II, Type III, and Universal certifications. Please contact the Refrigeration and Air Conditioning program coordinator for additional information.

# SIGN LANGUAGE INTERPRETING

## Sign Language Interpreting Certificate

*This 40-credit hour certificate program is designed to provide students with entry level interpreting and transliterating skills, a general knowledge of deaf culture and an understanding of the interpreting profession. Students enrolled in the program need to possess fluency in American Sign Language and English and need to have met the prerequisites for entry into the program. For individuals who do not yet possess sign language fluency, Harper College offers the following courses to assist in acquiring the necessary skills: SGN 101, SGN 102, SGN 103, SGN 104, SGN 201, and SGN 202. (See Sign Language course information.) Upon completion of the program, students are eligible to take written and performance examinations leading to state and/or national credentialing.*

ITP	101	Introduction to Interpreting.....	3
ITP	110	Consecutive Interpreting: English to ASL <sup>1</sup> .....	3
ITP	111	Consecutive Interpreting: ASL to English <sup>1</sup> .....	3
ITP	120	Simultaneous Interpreting: English to ASL.....	3
ITP	121	Simultaneous Interpreting: ASL to English I.....	3
ITP	200	Transliteration and Educational Interpreting <sup>2</sup> .....	3
ITP	211	Simultaneous Interpreting: ASL to English II.....	3
ITP	215	Interpreting Dialogic Discourse .....	4
ITP	216	Interpreting Monologic Discourse.....	3
ITP	220	Sign Language Interpreting Practicum .....	5
SGN	205	American Sign Language V .....	3
SGN	210	American Sign Language Community: A Cultural Perspective .....	4

<sup>1</sup> Prerequisites include a grade of "B" or better in ITP 101 and SGN 205 before ITP 110 and ITP 111 may be taken.

<sup>2</sup> ITP 201 (Topics in Interpreting) is an elective course and may be substituted for ITP 200 with the consent of the coordinator.

## **COURSE DESCRIPTIONS**

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Discipline/Prefix

Illinois Articulation Initiative (IAI)

Course Numbering System

Courses Offered at Harper College

## COURSE DESCRIPTIONS

Below is an alphabetized list of disciplines followed by a prefix. (Course descriptions contained on the following pages are in alphabetical order by prefix.)

<i>Discipline</i>	<i>Prefix</i>
Accounting .....	ACC
Administrative Technology .....	OFC
Adult Educational Development .....	AED
Anthropology .....	ANT
Architectural Technology .....	ATE
Art .....	ART
Astronomy .....	AST
Automation Skills .....	AUT
Biology .....	BIO
Building Codes and Enforcement .....	BCE
Cardiac Technology .....	HPI
Career Development .....	CDV
Certified Nursing Assistant .....	CNA
Chemistry .....	CHM
Computer Information Systems .....	CIS
Computer Science .....	CSC
Cooperative Work Experience .....	CWE
Criminal Justice .....	CRJ
Dental Hygiene .....	DHY
Dietetic Technician .....	DIT
Diversity .....	DIV
Early Childhood Education .....	CCA
Economics .....	ECO
Education .....	EDU
Electronics .....	ELT
Electronics Manufacturing Technician .....	EMF
Engineering .....	EGR
English .....	ENG
English as a Second Language .....	ESL
Fashion Design/Merchandising .....	FAS
Financial Services .....	BFC
Fine Arts .....	FNA
Fire Science .....	FIS
French .....	FRN
Geography .....	GEG
Geology .....	GEO
German .....	GER
History .....	HST
Hospitality Management .....	FSM
Humanities .....	HUM
Human Services .....	HSC
Independent Study .....	IDS
Interior Design .....	IND
Japanese .....	JPN
Journalism .....	JNM
Linguistics .....	LNG
Literature .....	LIT
Management .....	MGT
Manufacturing .....	MFG

Marketing .....	MKT
Materials/Logistics Management .....	MAT
Mathematics .....	MTH
Mechanical Engineering .....	MET
Medical Office Administration .....	MOA
Music .....	MUS
Nursing .....	NUR
Orientation .....	ORN
Paralegal Studies .....	PLS
Park and Golf Maintenance .....	PKM
Pharmacy Technician .....	PHT
Philosophy .....	PHI
Physical Education .....	PED
Physical Science .....	PHS
Physics .....	PHY
Plant Science Technology .....	PST
Political Science .....	PSC
Psychology .....	PSY
Quality Assurance .....	QUA
Reading .....	RDG
Real Estate .....	RES
Refrigeration/Air Conditioning .....	RAC
Sign Language .....	SGN
Sign Language Interpreting .....	ITP
Sociology .....	SOC
Spanish .....	SPA
Speech .....	SPE

### Illinois Articulation Initiative (IAI) General Education Core Curriculum Codes

To assist students with identifying qualifying general education core courses, the following coding system will appear after the course description:

<i>Discipline</i>	<i>Prefix</i>
Communications .....	IAI C
Social and Behavioral Sciences .....	IAI S
Humanities .....	IAI H
Humanities/Fine Arts .....	IAI HF
Fine Arts .....	IAI F
Mathematics .....	IAI M
Physical Sciences .....	IAI P
Life Sciences .....	IAI L

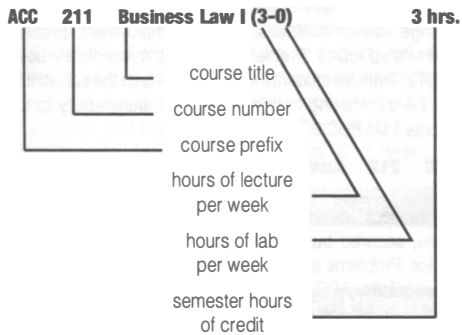
## Course Numbering System

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 AA., A.S., A.E.S or A.F.A 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 to transfer to all four-year institutions. Students should see a Student Development faculty member for clarification of the transferability of these courses.

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

### Sample Course Listing



The following outlines of courses offered at Harper College describe the content of each course at the time of publication of the Catalog. Harper College reserves the right to revise course content to reflect changing conditions, trends and information within the discipline.

### Course Outlines

In accordance with Illinois law, Harper College maintains a file of course outlines for all courses listed in the Catalog. Complete information is given on course content, methodology and objectives. The outlines are available for student review in the Division offices or in the Office of the Executive Dean of Instruction.

### Prerequisites

Many course descriptions state that a prerequisite (for example—satisfactory completion of a specific course or instructor consent) is necessary for enrollment in such a course. Students are advised that enrolling in a course without satisfying the prerequisite may result in the student being withdrawn from such course at the request of the instructor. Refer carefully to Catalog course descriptions.



## COURSE DESCRIPTIONS

### Accounting

**ACC 099 Business Recordkeeping (3-0) 3 hrs.**

Presents standard bookkeeping procedures for small firms, both business and professional. The material covers journalizing, posting, preparing a work sheet, financial statements, bank reconciliation, petty cash and payroll.

**ACC 101 Introduction to Financial Accounting (4-0) 4 hrs.**

Presents accounting as an information system that produces summary financial statements primarily for users external to a business. Emphasizes the reporting of the effect of transactions and other economic events on the financial condition and operating results of a business. Topics include: basic accounting concepts, financial statements, accrual and cash basis, the accounting cycle, monetary assets, inventories, fixed assets, current and long-term liabilities and owner's equity. The course assumes a corporate form of organization. IAI BUS 903

**ACC 102 Introduction to Managerial Accounting (3-0) 3 hrs.**

Presents accounting as a system of producing information for internal management use in a business. Emphasis is on the identification, accumulation and interpretation of information for planning, controlling and evaluating the performance of the separate components of a business. Topics include: theory and application of product costing, operational control, cost allocation, performance evaluation for manufacturing and service organizations, standard costing, job order and process costing, budgeting, JIT inventory control, decentralized operations, differential analysis, capital investment analysis and financial statement analysis. IAI BUS 904

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

**ACC 155 Tax and Payroll Accounting (4-0) 4 hrs.**

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

**ACC 201 Intermediate Accounting I (3-0) 3 hrs.**

Presents accounting and reporting process, accounting theory, inventories, tangibles and intangible fixed assets. This is a problem solving course that continues accounting principles begun in ACC 101 and ACC 102.

Prerequisite: ACC 102 with a grade of "C" or better.

**ACC 202 Intermediate Accounting II (3-0) 3 hrs.**

Presents course materials in the following sequences: Accounting for corporations, including capital stock, retained earnings, bonds payable, income statement and balance sheet analysis, pensions and leases, fund flow analysis, consignments and installment sales.

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

**ACC 203 Introductory Cost Accounting (3-0) 3 hrs.**

Includes an examination of the nature of costs and the use of relevant accounting data for purposes of improved decision making. Topics covered are product costs (process, job order and standard), overhead variance, by-product costs, joint-product cost and direct and variable costing.

Prerequisite: ACC 102 with a grade of "C" or better.

**ACC 211 Business Law I (3-0) 3 hrs.**

Presents the history of the source of law, civil and criminal wrongs, law of contracts, agency, employment, property and related topics. Problems and case materials are used. (NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.) IAI BUS 912

**ACC 212 Business Law II (3-0) 3 hrs.**

Presents business organizational concepts, commercial transactions, basic legal concepts of commercial paper, sales, secured transactions, creditors' rights and related topics. Problems and case materials are used.

Prerequisite: ACC 211 with a grade of "C" or better.

(NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

**ACC 213 Legal Environment of Business (3-0) 3 hrs.**

Introduces the student to the nature, function and application of law in the commercial context. Emphasizes the regulation of business by statutes, administrative regulations and court decisions. IAI BUS 913

**ACC 216 Employment Law (3-0) 3 hrs.**

Examines past and present employment laws in the United States and their impact on employers and employees. Creates an understanding of the rights, duties and obligation of both employment groups under the law.

**ACC 250 Income Tax Accounting (3-0) 3 hrs.**

Offers a practical study of current federal and Illinois taxes as they relate to business and individual income tax procedures. Topics studied include income inclusions and exclusions, capital gains and losses, business and personal deductions and accounting methods.

Prerequisite: ACC 102 with a grade of "C" or better.



## COURSE DESCRIPTIONS

### **ACC 251 Advanced Tax Accounting (3-0) 3 hrs.**

Presents the basic concepts of corporation income taxation, partnerships, estates and trusts. The course includes a study of the taxation on the transfer of wealth, both during lifetime and testamentary.

**Prerequisite:** ACC 102 with a grade of "C" or better.

### **ACC 253 Advanced Accounting I (3-0) 3 hrs.**

Studies municipal accounts, business combinations and the preparation of consolidated financial statements. Topics will include branches, consolidated statements, elimination of intercompany transactions, general funds and nonprofit service organizations.

**Prerequisite:** ACC 202 with a grade of "C" or better.

### **ACC 254 Auditing (3-0) 3 hrs.**

Examines the auditory theory and procedures involving the topical areas of audit reporting, auditing standards and evidence, statistical, sampling and electronic data processing. The legal and ethical dimensions of auditing will also be studied with emphasis on how government affects financial reporting through court decisions, federal securities laws, the S.E.C. and the Foreign Corrupt Practice Act.

**Prerequisite:** ACC 202 with a grade of "C" or better.

## **Administrative Technology**

See: OFC Administrative Technology

## **AED Adult Educational Program**

### **AED 001 Nonnative Literacy Skills I (1-0 to 4-0) 1-4 hrs.**

Introduces basic English conversation and literacy skills. Develops the listening, speaking, reading and writing skills necessary to basic survival needs. Concentrates on the following topic areas: general information, social skills/American culture, health, environment, community skills, consumer skills, employment skills and transportation. Grammar points are integrated as appropriate. Focuses on vocabulary acquisition and beginning listening and literacy skills. This course is for students of English who have minimal native literacy skills. It is the first in a sequence of four courses.

### **AED 002 Nonnative Literacy Skills II (1-0 to 4-0) 1-4 hrs.**

Continues to introduce basic English conversation and literacy skills. Develops the listening, speaking, reading and writing skills necessary to basic survival needs. Concentrates on the following topic areas: general information, social skills/ American culture, health, environment, community skills, consumer skills, employment skills and transportation. Grammar points are integrated as appropriate. Focuses on using basic vocabulary and literacy skills in daily routine situations. This course is for students of English who have minimal native language literacy skills. It is the second in a sequence of four courses.

### **AED 003 Nonnative Literacy Skills III (1-0 to 4-0) 1-4 hrs.**

Extends basic English conversation and literacy skills. Develops the listening, speaking, reading and writing skills necessary to basic survival needs. Concentrates on the following topic areas: general information, social skills/American culture, health, environment, community skills, consumer skills, employment skills and transportation. Grammar points are integrated as appropriate. Focuses on building vocabulary in everyday situations. This course is for students of English who have minimal native language literacy skills. It is the third in a sequence of four courses.

### **AED 004 Nonnative Literacy Skills IV (1-0 to 4-0) 1-4 hrs.**

Reviews basic English conversation and literacy skills. Develops the listening, speaking, reading and writing skills necessary to basic survival needs. Concentrates on the following topic areas: general information, social skills/American culture, health, environment, community skills, consumer skills, employment skills and transportation. Grammar points are integrated as appropriate. Focuses on effective communication and literacy strategies used in everyday situations. This course is for students of English who have minimal native language literacy skills. It is the fourth in a sequence of four courses.

### **AED 013 Topics in Adult Educational Development/Basic (.5-0 to 4-0) .5-4 hrs.**

Studies selected problems or topics in Adult Educational Development (AED) at the basic level. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with registration materials each time that the course is offered. This course may be repeated up to a maximum of four credit hours.

**Prerequisite:** A languages skills or a reading skills placement test which identifies the Nonnative Literacy, Basic Skills, or Pre-GED (General Educational Development) student.

### **AED 015 Topics in Adult Educational Development (.5-0 to 4-0) .5-4 hrs.**

Studies selected problems or topics in Adult Educational Development (AED). The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with registration materials each time that the course is offered. This course may be repeated up to a maximum of four credit hours.

**Prerequisite:** A reading skills placement test which identifies the Adult Secondary Education (ASE) student.

## COURSE DESCRIPTIONS

### **AED 021 Basic Reading Skills (1-0 to 6-0) 1-6 hrs.**

Introduces basic word recognition and word attack skills including prereading skills, sight words, phonics skills and structural analysis skills; comprehension and advanced reading skills in relation to words, sentences, selections and sequence; and specialized skills in locating and organizing information, reading maps, interpreting graphs, tables or diagrams, and developing personal reading skills. Introduces skills of application, analysis and evaluation of reading materials. Prepares the student for AED 023.

### **AED 023 Pre-GED Reading Skills (1-0 to 3-0) 1-3 hrs.**

Reinforces and reviews word recognition and word attack skills of structural analysis; comprehension and advanced reading skills including deriving meaning from words, sentences, selections and identifying sequence; specialized reading skills including locating and organizing information, reading maps and interpreting graphs, tables or diagrams; and personal reading skills. Introduces skills of application, analysis and evaluation. Prepares the student for AED 025.

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

Reviews specific social studies, science and U.S./Illinois Constitution content areas and skills. Emphasis is upon review of comprehension, application, analysis and evaluation levels of cognitive skills. Prepares the student for the GED Social Studies, Science and U.S./Illinois Constitution tests.

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

Presents basic English grammar and usage, spelling rules, vocabulary/dictionary use, capitalization and punctuation. Develops skills in producing short, clear writing examples. Prepares the student for AED 033.

### **AED 033 Pre-GED English Skills (1-0 to 3-0) 1-3 hrs.**

Reinforces basic English grammar and usage, spelling rules, vocabulary/dictionary use, capitalization, punctuation and sentence/paragraph development. Introduces skills of application, analysis and evaluation. Prepares the student for AED 035.

### **AED 035 GED Writing Skills and Literature (1-0 to 3-0) 1-3 hrs.**

Reviews basic grammar and usage; sentence structure, style, logic and paragraph organization, punctuation, capitalization and spelling. Produces writing samples that require the writer to take a position and defend it with appropriate evidence, detail and argumentative strategies. Prepares students for the GED Writing Skills Test. Reviews literacy types, terms, techniques, interpretation and commentary to prepare the student for the GED Interpreting Literature and the Arts Test.

### **AED 041 Basic Mathematical Skills (1-0 to 6-0) 1-6 hrs.**

Introduces basic arithmetic skills including the fundamental operations with whole numbers, decimals, fractions and mixed numbers, verbal reasoning and measurement systems. Prepares the student for AED 043.

### **AED 043 Pre-GED Mathematical Skills (1-0 to 3-0) 1-3 hrs.**

Reinforces arithmetic skills including the fundamental operations with decimals, fractions, mixed numbers, verbal reasoning and measurement systems. Introduces percents, ratio and proportion and charts and graphs. Introduces comprehension, application, analysis and evaluation levels of cognitive skills. Prepares the student for AED 045.

### **AED 045 GED Mathematics (1-0 to 3-0) 1-3 hrs.**

Reviews arithmetic skills including decimals, fractions, numbers, verbal reasoning, measurement, percents, ratio and proportion and charts and graphs. Introduces algebra and geometry concepts, multi-step problem solving, using formulas and numeration statistics. Emphasizes review of comprehension, application, analysis and evaluation levels of cognitive skills. Prepares the student for the GED Mathematics Test.

### **AED 063 Adult Employment Skills/Basic (.5-0 to 3-0) .5-3 hrs.**

Acquaints the Nonnative Literacy, Basic Skills and Pre-GED (General Educational Development) student with the American workplace. Explores the world of work and current issues and trends that affect employability. Integrates and compares students' work experiences in American and non-native work cultures. Introduces topics such as job/career assessment, individual education/ employment plans, employment/life skills, job search skills, employment documents, interviewing skills, employment practices and personnel programs, job retention skills and job departure. Personal biographies are used for needs assessments.

**Prerequisite:** A language skills or reading skills placement test which identifies the Nonnative Literacy, Basic Skills or Pre-GED student.

### **AED 065 Adult Employment Skills (.5-0 to 3-0) .5-3 hrs.**

Introduces, reinforces, and reviews the world of work and current issues and trends that affect employability. Explores topics such as job/career assessment, individual education/employment plans, employment life skills, job search skills, employment documents, interviewing skills, employment practices and personnel programs, job retention skills and job departure. Aptitude/ career interest tests and personal biographies are used for needs assessments. Introduces the William Rainey Harper College Job Opportunities Bulletin System (JOBS).

**Prerequisite:** A reading skills placement test which identifies the Adult Secondary Education (ASE) student.

**AED 071 Citizenship Training 1-3 hrs.**  
**(1-0 to 3-0)**

Introduces the basic structure, functions and purposes of U.S. federal, state and local government and major aspects of American history. Reviews the responsibilities and application/test procedures for U.S. citizenship. Studies American customs and institutions.

**ANT Anthropology**

**ANT 101 Introduction to Anthropology (3-0) 3 hrs.**

Addresses such central questions as "What does it mean to be human?" and "How did we get to be the way we are?" Among the topics to be examined will be human, physical and cultural evolution, the origin of culture, language, religion, kinship, economics and the impact of contemporary life on the world's populations. IAI S1 900N

**ANT 202 Cultural Anthropology (3-0) 3 hrs.**

Describes and analyzes how people throughout the world define and resolve the problems of life that are found everywhere. Some of the specific topics studied will be religion, social structure, law, "the unknown," economics and the formation of behavior within particular groups. IAI S1 901N

**ANT 203 Native Americans (3-0) 3 hrs.**

Acquaints the student with our American heritage. There are detailed studies of various Native American groups, both before and after the arrival of the Europeans. The religion, social organization, art work, archaeology and their relationship to the natural and cultural environment of the Native American is viewed with an appreciation and understanding of non-European cultures. Discussion of possible solutions for some of the problems that confront Native Americans in Western society today is included.

**ANT 205 Physical Anthropology (2-2) 3 hrs.**

Studies the origins and evolution of humans as physical and cultural beings. Includes origin, history and behavior of primates, fossil records and the principles of population genetics and their application to study of human variation. IAI S1 902

**ANT 206 Archeology (3-0) 3 hrs.**

Surveys archeological concepts, research and methods for the study of prehistoric cultures. Includes rise and development of modern civilization, land and land use, agriculture, current archeological investigations, interpretations of finds and introduction to field work techniques. IAI S1 903

**ANT 207 Ancient Civilization of Mexico and Central America (3-0) 3 hrs.**

Studies the origin and development of ancient civilizations of Mexico and Central America using historical and archeological evidence. This course will explore the world of the Aztec, Maya, Toltec and others as seen through architecture, art, food production, politics and religion.

**ANT 208 Archeology of the Near East (3-0) 3 hrs.**

Studies origins and development of civilization of ancient Near East. Includes archeology and cultural history of such countries as Egypt, Mesopotamia and Palestine.

**ANT 209 Anthropological Theory (3-0) 3 hrs.**

Surveys the theoretical origin and development of modern anthropology. Includes examination of works by Benedict, Boas, Dukheim, Khaldun, Malinowski, Mead, Morgan, Tylor, Weber and others.

**Prerequisite:** ANT 101 or SOC 101 with a grade of "C" or better.

**ANT 210 Cultural Ecology (3-0) 3 hrs.**

Examines the technologies and behaviors that people have applied to the natural environment to sustain themselves and their societies. Also, the resultant environmental changes will be investigated with emphasis on food production, industrialization and population increase and their historic and prehistoric impact on our world.

**ANT 220 Topics in Anthropology (1-0 to 6-0) 1-6 hrs.**

Studies selected problems or topics in social science. The exact content and instructional methodology will vary from semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated two times to a maximum of six credit hours.

**ANT 250 Field Methods in Archeology I (1-4) 3 hrs.**

Provides intensive introduction to the methods and techniques of archeological survey and excavation through practical fieldwork, accompanied by lecture and discussion. The student will participate in laboratory analysis of materials excavated within the Midwest.

**Prerequisite:** ANT 101 with a grade of "C" or better and/or consent of instructor.

(NOTE: This course is taught only at an archeological site during the summer.)

**ANT 255 Field Methods in Archeology II (1-4) 3 hrs.**

Designed for students who have had previous field school experience at the introductory level. This is an intensive course in advanced field methods in archeology. In addition to the continued pursuit of excavation procedures and techniques, the student will be concerned with some of the theoretical and interpretative aspects of archeological analysis.

**Prerequisite:** ANT 101 and ANT 250 with grades of "C" or better and/or consent of instructor.

(NOTE: This course is taught only at an archeological site during the summer.)

## COURSE DESCRIPTIONS

### ART Art

**ART 100 Art Seminar (1-0) 1 hr.**

Problems relating to the artist and art student. Required of all majors. May be repeated up to two hours credit.

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

Introduces visual arts with an emphasis on the following aspects: building the student's awareness of aesthetic concepts, theory and criticism; developing sensitivity to works of art; and acquainting the student with vocabulary applicable to describe visual situations. IAI F2 900

**ART 110 Drawing I (0-6) 3 hrs.**

Emphasizes the design elements and principles as applied to visual imagery. IAI ART 904

**ART 111 Drawing II (0-6) 3 hrs.**

Emphasizes the interaction between design abilities, image and content. IAI ART 905

**Prerequisite:** ART 110 with a grade of "C" or better or consent of instructor.

**ART 121 Design I (0-6) 3 hrs.**

Emphasizes the use of design elements and principles as applied to concepts of second dimension. IAI ART 907

**ART 122 Design II (0-6) 3 hrs.**

Emphasizes the use of design elements and principles as applied to concepts of third dimension. IAI ART 908

**Prerequisite:** ART 121 with a grade of "C" or better or consent of instructor.

**ART 201 Drawing Studio (0-6) 3 hrs.**

Emphasizes drawing as visual idea. May be repeated up to six hours credit.

**Prerequisite:** ART 111 with a grade of "C" or better or consent of instructor.

**ART 206 Printmaking Studio (0-6) 3 hrs.**

Emphasizes traditional and contemporary methods of graphic reproduction of visual ideas pertaining to the fine arts. May be repeated up to six hours credit. IAI ART 914

**Prerequisite:** ART 111 and ART 121 with grades of "C" or better or consent of instructor.

**ART 225 Figure Drawing Studio (0-6) 3 hrs.**

Emphasizes drawing the human figure in action and from still poses. Rapid sketching, long poses, memory work, studio and lecture. May be repeated up to six hours credit. IAI ART 906

**Prerequisite:** ART 111 with a grade of "C" or better or consent of instructor.

**ART 236 Composition (0-6) 3 hrs.**

Emphasizes pictorial composition in line, value, pattern and color. May be repeated up to six hours credit.

**Prerequisite:** ART 111 and ART 121 with grades of "C" or better.

**ART 240 Computer Graphics Studio (0-6) 3 hrs.**

Presents a computer software-based approach to visual image manipulation and generation. Includes the integration of computer hardware, software and peripheral devices as tools to manufacture, capture and combine traditional and contemporary visual ideas as applied to art and design. IAI ART 919

**Prerequisite:** ART 111 and ART 121 with grades of "C" or better or consent of instructor

**ART 261 Painting Studio (0-6) 3 hrs.**

Emphasizes the relationship between painting and visual ideas. May be repeated up to six hours credit. IAI ART 911

**Prerequisite:** ART 121 with a grade of "C" or better or consent of instructor.

**ART 291 Ceramics Studio (0-6) 3 hrs.**

Emphasizes the exploration of ceramic media as related to the expression of visual ideas. May be repeated up to six hours credit. IAI ART 912

**Prerequisite:** ART 122 with a grade of "C" or better or consent of instructor.

**ART 296 Sculpture Studio (0-6) 3 hrs.**

Emphasizes the exploration of sculptural media as related to visual ideas. May be repeated up to six hours credit. IAI ART 913

**Prerequisite:** ART 122 with a grade of "C" or better or consent of instructor.

### AST Astronomy

**AST 101 Introductory Astronomy (3-2) 4 hrs.**

Introduces the various topics of astronomy using a non-mathematical approach. Covers the origin of the universe, structure and composition of galaxies, the solar system, historical astronomy, constellations, meteors, comets and the latest from space exploration. Laboratory experience will complement the above. IAI P1 906L

**AST 201 Advanced Astronomy (3-2) 4 hrs.**

Extends topics in stellar and galactic astronomy using a mathematical approach. Covers stellar magnitudes, Hertzsprung-Russell Diagram, stellar formation, the interstellar medium, Mass-Luminosity Relationship, element synthesis, active galaxies and quasars. Laboratory experiences will quantitatively address these topics. **Prerequisite:** AST 101 and MTH 080 with grades of "C" or better.

**ATE Architectural Technology**

**ATE 100 Architectural Career Exploration (.5-10) 1 hr.**

Studies an overview of career and employment possibilities in architecture. Includes observation of practices in architecture and attendance at a seminar to discuss related experiences. For Tech Prep students with no prior courses or work experience in the architecture field. (NOTE: Summer semester only.)

**Prerequisite:** Consent of coordinator.

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

Introduces fundamentals of architecture and technical procedures. Covers drafting, lettering, orthographic projection, dimensioning, program development, proximities, circulation studies, sketching, orientation, and coding and zoning formats. Design development drawings including schedules are based on a one or two story residence.

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

Extends technical procedures to include oblique and perspective projections. Covers cross-referencing, indexing, outline specifications, estimating and working drawings. State accessibility code, office and toilet room planning and reflected ceiling plans are addressed. Includes a case study project program of a steel industrial building with offices.

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

Studies masonry and wood construction for one and two story buildings. Residential lot and permit requirements are reviewed, concrete foundation and footing details, wall and building sections are covered.

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

Introduces steel construction for one and two story buildings which covers framing design and detailing using rolled and fabricated sections. Open web steel joists framing, metal panel and window wall construction and roof slopes and details are investigated.

**ATE 105 Architectural CAD I (2-2) 3 hrs.**

Introduces computer hardware and state-of-the-art software as applied to applications in architecture, interior design and other parameters for design and drafting technologies; entity creating and editing, printing and plotting, and file/data management. Projects are correlated primarily to architectural design issues.

**ATE 106 Architectural CAD II (2-2) 3 hrs.**

Covers advanced CAD techniques and procedures developed in two-dimensional architectural drafting and detailing. Develops a working knowledge and understanding of command structures, detailed data management and manipulation techniques, and software customization procedures. Projects are correlated primarily to detailing issues.

**Prerequisite:** ATE 105 with a grade of "C" or better or consent of instructor.

**ATE 107 Architectural Principles for the Interior Designer I (1-6) 4 hrs.**

Introduces fundamentals and procedures of architecture applied to a residential project. Develops drafting and lettering skills, applicable to programming, space and circulation diagrams, dimensioning, schedules, specifying, zoning and building code standards, evaluations and sections, stair details, millwork and cabinetry details. Isometric and one point perspective will be covered.

**ATE 108 Architectural Principles for the Interior Designer II (1-6) 4 hrs.**

Extends application of architectural drafting conventions in the development of a commercial office building. Investigates programming, specifications, accessibility standards, project costs, plans, security systems, reflected ceiling elevations and acoustics. Oblique projections and two point perspective will be covered.

**Prerequisite:** ATE 107 with a grade of "C" or better.

**ATE 109 Chicago's Great Architectural Tradition (3-0) 3 hrs.**

Introduces an historical survey of culture and technology impact on Chicago's architecture. Emphasizes ideas and trends in modern building originating with the balloon frame and continuing through to the skyscraper.

**ATE 200 Architectural Internship (1-15) 2 hrs.**

Applies appropriate skills to the architectural technology field. (NOTE: Summer semester only.)

**Prerequisite:** ATE 100 with a grade of "C" or better and consent of coordinator.

**ATE 201 Comprehensive Building Project I (0-8) 4 hrs.**

Covers the designing of a multi-storied steel office building program of 40,000 square feet. Planning of building core includes stairs, elevators, mechanical rooms and toilet rooms. Investigations of building module, prototypical offices, building elevations and enclosure strategies, zoning height and area limitations, and site planning including parking, grading and landscaping.

**Prerequisite:** ATE 101 with a grade of "C" or better or consent of instructor.

## COURSE DESCRIPTIONS

**ATE 202 Comprehensive Building Project II (0-8) 4 hrs.**

Emphasizes the study of multi-storied concrete residential buildings on a suburban and a city site. Develops apartment and townhouse plans, minimum property standards, permitted zoning uses, orientation, parking and site amenities.

**Prerequisite:** ATE 101 with a grade of "C" or better or consent of instructor.

**ATE 203 Construction Problems I (2-4) 4 hrs.**

Develops construction strategies of a multi-storied steel commercial building. Covers stairs, elevators and toilet room layouts. Reviews fire resistive construction technologies: window walls, lighting, ceiling grids and partition systems.

**Prerequisite:** ATE 104 with a grade of "C" or better or consent of instructor.

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

Covers multi-storied reinforced concrete construction. Analysis of precast walls: their connections and textural finishes. Covers concrete beam, column, slab, drop panel and flat plate systems.

**Prerequisite:** ATE 104 with a grade of "C" or better or consent of instructor.

**ATE 205 Architectural Computer Applications I (2-2) 3 hrs.**

Introduces three-dimensional architectural computer graphic techniques and applications. Covers the transition from two-dimensional to three-dimensional drawings, creation and manipulation of wireframe and solid modeling techniques.

**Prerequisite:** ATE 106 with a grade of "C" or better or consent of instructor.

**ATE 206 Architectural Computer Applications II (2-2) 3 hrs.**

Provides in-depth exposure to advanced three-dimensional representations of architectural forms. A variety of post-processing programs introduces advanced three-dimensional representations to include modeling, shades and shadows, texture applications, walk-throughs, and photorealistic rendering. Special problems are investigated.

**Prerequisite:** ATE 205 with a grade of "C" or better or consent of instructor.

**ATE 207 Architectural Statics (3-0) 3 hrs.**

Introduces architectural statics and covers concepts of force systems in equilibrium: parallel forces, perpendicular forces, analysis of concentrated and distributed loads in live and dead load applications resulting in tension and compression members and members subjected to combined forces.

**ATE 208 Architectural Strength of Materials (3-0) 3 hrs.**

Covers strength of materials in critical force systems using loading, shear, moment and deflection diagrams and analysis. Applies principles of design analysis to steel, concrete and wood construction materials in beam, column, foundation and beam configurations.

**Prerequisite:** ATE 207 with a grade of "C" or better.

**ATE 209 Principles of Building Construction (3-0) 3 hrs.**

Emphasizes survey of building processes. Covers zoning and code requirements, legal description, surveys, foundations, masonry and frame walls, roofing, insulation, interior finishes, mechanical and electrical systems and cost estimating. Useful for those contemplating home design and construction.

**ATE 210 Cost Estimating (3-0) 3 hrs.**

Introduces development of preliminary estimates. Covers building plan take-offs and unit costs applied to residential and small scale construction projects.

**ATE 211 Solar Energy Architecture (3-0) 3 hrs.**

Covers history of solar energy, climatic data, energy conservation, heat loss and solar calculations. Includes passive design analysis, construction methods and building costs.

**ATE 212 Architectural Rendering (2-2) 3 hrs.**

Introduces media, methods and techniques for various types of architectural presentation graphics. Provides a hands-on approach to architectural design exploration, presentation and color composition.

**ATE 213 Construction Management Process (3-0) 3 hrs.**

Includes the study of contracts, preconstruction services, construction services, process liabilities, cost estimating, planning and scheduling, phasing and packaging of work and controlling the projects time and cost.

**ATE 214 Architectural Models (1-4) 3 hrs.**

Introduces variety of materials, methods and techniques for various types of architectural presentation models: site contour models, building enclosure models and interior space models. Covers scale, selection of landscape materials, colors and details.

### AUT Automation Skills

**AUT 101 Analog Electricity-Electronics (2-4) 4 hrs.**

Presents a practical comprehensive introduction to students who are new to electricity-electronics. Material focuses upon properties, measurement and uses of electricity. Basic theory and extensive applications are the goal.

**AUT 105 Digital Electronics (2-4) 4 hrs.**  
 Details the basics of combinatorial digital logic elements. The emphasis is on applied skills in the laboratory environment to complement the theory. Introduces digital applications to controls: timers, counters, shift registers, display circuits.

**AUT 108 Industrial Computer Overview (0-2) 1 hr.**

Provides basic overview of computers in technical or industrial applications. Introduces principles of computer use with common applications, basic terminology and operation of computers and peripheral equipment. Describes typical industrial, manufacturing and technical service uses. For those with no computer experience.

**AUT 110 Safety and OSHA (1-0) 1 hr.**  
 Studies safety relating to the individual and his co-workers in the world of work. OSHA right to know materials are presented.

**AUT 125 Optics: Fiber (1-2) 2 hrs.**  
 Investigates optics for the purpose of working with communication control and measuring systems. Principles of physical and geometric optics are presented.

**AUT 130 Pneumatic and Hydraulics (1-4) 3 hrs.**  
 Considers the properties of hydraulic fluids as a medium to transmit control energy and supply power to do work. Studies the individual components and circuits found in typical pneumatic-hydraulic applications. Electrical and hydraulic servo controls are introduced.

**AUT 135 Sensors (1-2) 2 hrs.**  
 Investigates sensor operation and application for a variety of applications: tactile, photo, fiber-optic, magnetic, thermal, sonic, pressure and vision systems.

**AUT 140 Controllers—PLC's (1-2) 2 hrs.**  
 Examines the procedures and mechanisms by which programmable controller's functions are used. Programming in ladder logic and controller code focuses on the direct application of a variety of input and output devices. Hardware, programming, peripherals and accessories are emphasized.

**AUT 145 Electronic Schematics and QC (1-4) 3 hrs.**  
 Develops skill in reading and drawing electrical and electronic schematics. Schematic software packages are used extensively along with components of "Total Quality Curriculum." These are tools for use in the world of work.

**AUT 147 Measurements and Instruments (0-3) 1 hr.**  
 Develops skills in the use and handling of precision and semi-precision measuring instruments. Emphasizes data gathering uses of hand instruments in context of quality improvement systems.  
**Prerequisite:** MET 106 with a grade of "C" or better.

**AUT 148 Quality Skills (1-1) 1 hr.**  
 Introduces quality control concepts with particular emphasis on statistical process control (SPC). Covers application of sampling, normal distributions and variance, control charts, process capability, variables and attributes.

**AUT 161 Robotic Applications (2-2) 3 hrs.**  
 Emphasizes an application with a project focus as the goal. This course is self-paced. The student is responsible for planning, organizing and assembling a project that integrates many of the following: computer, data acquisition, hydraulics, motion, PLC's, pneumatics and sensors.

**AUT 165 CNC Setup and Operation (-5-1) 1 hr.**  
 Includes discussion, demonstration and practice of various CNC setup and operations such as tool location, holding techniques and precision measuring tools used to set up CNC machining systems. Covers operation of CNC machines including zero location and tool offset. Also introduces CNC program loading and editing.  
**Prerequisite:** Demonstrate ability to use micrometers and vernier calipers and to measure to .016 (1/64) of an inch or .4 mm with a machinist rule.

**AUT 170 Data Acquisition I (1-2) 2 hrs.**  
 Applies laboratory virtual instrument engineering. Workbench basics are the targeted focus using the personal computer as a tool. A graphical programming language is presented to create virtual instrumentation and learn the basics of data acquisition.

**AUT 175 Data Acquisition II (2-2) 2 hrs.**  
 Continues AUT 170 with specific focus on advanced topics of data acquisition, data analysis and data presentation.

### BCE Building Codes and Enforcement

**BCE 101 Basic Construction for Building Codes (3-0) 3 hrs.**  
 Introduces materials used in building construction, their growth or manufacture, preparation and application. Emphasizes frame and masonry construction types, working drawings and structural details for code compliance.

**BCE 102 Basic Code Enforcement Techniques (3-0) 3 hrs.**  
 Introduces building inspection principles. Includes application of building codes to structures in the inspection process. Covers application of zoning restrictions and regulations, code interpretation using reference documents, components of field inspection and report requirements. Emphasizes plan and specification review, permit processes and issuance, legal ramifications in inspection law.

## COURSE DESCRIPTIONS

**BCE 104 Basic Mechanical and Energy Conservation Codes (3-0) 3 hrs.**

Introduces the theory and code requirements for mechanical and energy conservation systems. Covers procedures, layouts and safety principles for heating, cooling and ventilation systems; application of HVAC code requirements for residential units (up to six dwelling units) and light commercial buildings. Includes application of energy conservation code requirements to principles of building inspection and identification of components in heating, ventilating and air conditioning systems to discern code violations.

**BCE 105 Basic Plumbing Codes (3-0) 3 hrs.**

Introduces basic theory and code requirements for plumbing systems and their installation. Concentrates on procedures, practices and layouts, and codes inspection problems for residential, commercial and industrial installations.

**BCE 106 Basic Electrical Codes (3-0) 3 hrs.**

Introduces basic theory and code requirements for electrical systems and their installation. Concentrates on procedures, practices and layouts, and code inspection problems for residential, commercial and industrial installations.

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

Covers the latest edition of the BOCA National Building Code. Explains its use, intent, rationale and interpretation. Includes enforcement and administration, liability, plan review and permit process definitions, use groups, types of construction, general building limits, special uses, means of egress, materials and tests, fire resistive construction, mechanical equipment and systems, fire protection systems, electric wiring and equipment, elevators, plumbing systems and use of reference standards.

### **BFC Financial Services**

**BFC 100 Banking Career Exploration (.5-10) 1 hr.**

Studies an overview of career and employment possibilities in the banking or insurance industry. Each student will observe practices in this industry and attend a seminar to discuss his/her experience. This course is intended for students with no prior courses or work experience in the banking/finance field (NOTE: Summer semester only).

**Prerequisite:** Consent of coordinator

**BFC 101 Principles of Financial Institution Operations (3-0) 3 hrs.**

Surveys the internal operations of a bank and of a savings and loan association. Emphasizes the general principles of operations applicable to institutions of all sizes. Provides a sound foundation for newcomers to the industry regardless of age or prior academic experience.

**BFC 102 Commercial Law (3-0) 3 hrs.**

Provides a general knowledge of, and prepares the banker or credit manager to act in accordance with, legal principles pertaining to business and to banking. Topics include contracts, commercial paper, bank deposits and collections, bankruptcy, the Statute of Frauds, insurance law and appropriate articles of the Uniform Commercial Code.

**BFC 115 Advanced Principles of Financial Institution Operations (3-0) 3 hrs.**

Continues the study of financial institution operations by analyzing banking products and services. Topics include checking accounts, N.O.W. accounts, time deposits, money market accounts and the contractual nature of these accounts. Also includes ownership methods, insurance coverage and an introduction to consumer lending. Recommended **Prerequisite:** BFC 101 with a grade of "C" or better.

**BFC 117 Marketing for Financial Institutions (3-0) 3 hrs.**

Provides an overview of the essentials of public relations and marketing for financial institutions. Includes the goals, development, implementation and evaluation of internal and external public relations and marketing plans.

**BFC 118 Credit Administration in Financial Institutions (3-0) 3 hrs.**

Emphasizes the identification and examination of factors influencing and determining a financial institutional loan policy. Topics include methods of credit investigation and analysis, credit operation techniques, case problems in credit administration and standard and unconventional types of loans.

**BFC 121 Principles of Property and Liability Insurance (3-0) 3 hrs.**

Presents the basic principles of insurance, provides an introduction to insurance contracts and surveys the nature and operation of the insurance business. Meets the requirements for the Insurance Institute of America's Program in General Insurance INS 21 national examination. (Formerly INS 121.)

**BFC 122 Principles of Personal Insurance (3-0) 3 hrs.**

Analyzes personal loss exposures and personal insurance coverages including homeowners, personal liability, inland marine, auto, life, health and government programs. This course meets the preparation requirements of the Insurance Institute of America's Program in General Insurance INS 22 national examination. (Formerly INS 122) **Prerequisite:** BFC121 with a grade of "C" or better.



**BFC 123 Principles of Commercial Insurance (3-0) 3 hrs.**

Analyzes commercial coverages including property, business income, inland and ocean marine, crime, boiler-and-machinery, general liability, auto, workers compensation and package policies. Meets the requirements for the Insurance Institute of America's Program in General Insurance INS 23 national examination. (Formerly INS 123.)  
**Prerequisite:** BFC 121 with a grade of "C" or better.

**BFC 200 Investment Management (3-0) 3 hrs.**

Introduces the student to the fundamentals of equity and fixed income investing. The course will also explore other investment management subjects such as mutual funds, international investing and retirement planning as well as tax-advantaged investments. Basic derivatives such as futures and options will also be discussed. Credit will be given for either BFC 200 or MGT 170, but not both.

**BFC 201 Commercial Credit and Collection Principles (3-0) 3 hrs.**

Provides the principles of commercial credit management. Emphasizes analysis and control of funds advanced to customers through sales (accounts receivable management). Topics include credit associations, asset management, credit policies, basic principles of credit analysis and collection principles. Completion of ACC 101 or interview with coordinator prior to enrollment helpful.

**BFC 202 Advanced Commercial Credit and Collection (3-0) 3 hrs.**

Continues study of commercial credit management. Emphasis is placed on Accounts Receivable Management. Topics include financial statement analysis, budgeting, bad debts and receivables cash flow and a detailed study of bankruptcy proceedings and international credit transactions.

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

**BFC 211 Accounting for Financial Institutions (3-0) 3 hrs.**

Studies basic accounting procedures, techniques and systems used in banks, savings and loans and other financial institutions. Emphasis on the components of the statement of condition and income statement.

**Prerequisite:** ACC 101 and BFC 101 with grades of "C" or better.

**BFC 212 Home Mortgage Lending (3-0) 3 hrs.**

Emphasizes the role of the mortgage loan officer seeking to develop a sound mortgage portfolio. The mortgage market is described, followed by the acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan processing and servicing and finally the obligations of the mortgage loan officer in overall portfolio management.

Recommended **Prerequisite:** ACC 211 with a grade of "C" or better.

**BFC 213 Trust Functions and Services (3-0) 3 hrs.**

Introduces trust operations. Presents the duties of, and services rendered by, institutions engaging in trust business, differentiating between the business and legal aspects of trust functions. Intended for all bankers and not limited to only those specializing in trust functions and services.

**BFC 215 Financial Statements Interpretation and Analysis (3-0) 3 hrs.**

Explores the characteristics of financial statements and financial statements analysis. Emphasis is on the income statement, balance sheet and sources and uses of funds statement. Effects of reserves, inventory valuations, depreciation, depletion, amortization, subsidiaries and affiliates are studied. Also addressed are cash flow, reported earnings, taxable earnings and interpretation of the financial data by means of ratio analysis.

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

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

Explores principles, standards, techniques and professionalism in bank auditing. External audits and the role of the external auditor. Internal control, audit procedures and the role of the internal auditor. Audits by directors, trust department audits, EDP audits, other audits. Customer confirmations. Completion of MGT 111 would be helpful.

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

**BFC 217 Uniform Commercial Code (3-0) 3 hrs.**

Explores the Uniform Commercial Code and related uniform acts and their impact upon common documents. Instruments considered include negotiable instruments, nonnegotiable instruments and quasi-negotiable instruments. Topics include formal requirements, form and content, interpretation, delivery, negotiation, endorsement, presentment, notice of dishonor and protest, acceptance and certification and discharge.

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

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

**Prerequisite:** BFC 118 with a grade of "C" or better.

**BFC 220 Human Resource Management in Banking (3-0) 3 hrs.**

Presents the theories and application of human resource management in banking. Surveys the techniques of selecting, motivating and controlling bank employees. Personnel selection, interviewing, training and rewarding employees will be stressed in this course.

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

## COURSE DESCRIPTIONS

**BFC 225 International Finance (3-0) 3 hrs.**  
Emphasizes international trade financing. Presents mechanics of importing and exporting, credit and political considerations. Focuses on credit considerations, market product profiles, letters of credit, collection, credit information outside the United States and entry into these markets.  
**Prerequisite:** ACC 101 with a grade of "C" or better.

**BFC 230 Banking Internship (1-15) 2 hrs.**  
Applies student's appropriate skills to the banking work-place setting. (NOTE: Summer semester only.)  
**Prerequisite:** Consent of coordinator.

**BFC 235 Banking Internship (1-15) 3 hrs.**  
Provides cooperative work experience as a banking trainee. Credit for this course will be given for participation in supervised cooperative work experience. The experience must be provided through an organized training plan in a college-approved training station. One lecture hour per week will be devoted to job analysis and banking issues.  
**Prerequisite:** Consent of coordinator.

### BIO Biology

**BIO 101 Biology Survey (3-0) 3 hrs.**  
Surveys the science of biology, emphasizing the human organism. Includes chemical and physical properties, physiological systems of control, growth, differentiation, reproduction, genetics, ecology, evolution and ethical considerations. Also includes a broader overview of the plant and animal kingdoms and humans' place in, and interaction with, those kingdoms. IAI L1 900  
**(Note: Not science lab credit.)**

**BIO 103 Man and Environment (3-0) 3 hrs.**  
Surveys and analyzes man's role as an environmental modifier. Ecological, social cultural, economic and political influences on environment are considered. The historical and current pollution problems and other environmental disruptions are analyzed and evaluated. Possible remedial courses of action are discussed and evaluated. IAI L1 905  
**(Note: Not science lab credit.)**

**BIO 104 Environmental Laboratory 4 hrs.**  
**Biology (2-4)**  
Examines and analyzes the parameters of the biosphere as a biological support system and the implications of natural and human caused changes in that support system. An examination of biosphere (natural world) and industriosphere (technological world) interactions is included. IAI L1 905L  
**(Note: Lab science credit.)**

**BIO 105 Heredity, Evolution and Culture (3-0) 3 hrs.**  
Examines life and the evolutionary record with emphasis on humans and the gene pool. Factors such as social and environmental entities and the problems of the 20th century are considered. IAI L1 907  
**(Note: Not science lab credit.)**

**BIO 110 Principles of Biology (3-3) 4 hrs.**  
Studies and emphasizes cell structure and function by exploring the various patterns that have evolved within cells for carrying out important life functions. This includes cell ultrastructure, cell surface-volume relationships, cellular metabolism and energetics, mitosis and meiosis, genetics, DNA, RNA and protein synthesis, gene action, population genetics, development and environment. IAI L1 900L IAI BIO 913  
**Prerequisite:** High school biology with a grade of "C" or better or BIO 101 with a grade of "C" or better or consent of instructor.  
**(Note: Lab science credit.)**

**BIO 120 General Botany (3-3) 4 hrs.**  
Surveys the plant kingdom emphasizing ecological relationships, plants and their growth, structure, physiology and reproduction. IAI L1 901L IAI BIO 914  
**Prerequisite:** High school biology with a grade of "C" or better or BIO 101 with a grade of "C" or better or consent of instructor.  
**(Note: Lab science credit.)**

**BIO 130 Microbiology (2-4) 4 hrs.**  
Examines characteristics and importance of microorganisms; emphasis on identification, anatomy and physiology, control, relationship to health and disease and economic importance. IAI L1 903L  
**Prerequisite:** High school biology with a grade of "C" or better or BIO 101 or BIO 110 with a grade of "C" or better or consent of instructor. College chemistry or equivalent is desirable.  
**(Note: Lab science credit.)**

**BIO 135 Introduction to Human Anatomy and Physiology (4-0) 4 hrs.**  
Surveys the human body, with emphasis on basic physical and chemical concepts, anatomy, physiology and embryology. Designed to meet the needs of students in certain allied health career programs. IAI L1 904  
**Prerequisite:** High school biology with a grade of "C" or better or BIO 101 with a grade of "C" or better or consent of instructor.  
**(Note: Not science lab credit.)**

**BIO 136 Introduction to Human Disease (3-0) 3 hrs.**

Surveys the nature of human disease, with emphasis on the functional disturbances within the body systems. Designed to meet the needs of students in certain allied health career programs. IAI L1 904

**Prerequisite:** High school biology with grade of "C" or better or consent of instructor.

**(Note: Not science lab credit.)**

**BIO 140 General Zoology (3-3) 4 hrs.**

Surveys the animal kingdom based on theory of organic evolution, including morphology, histology, physiology, taxonomy, parasitology, embryology and ecology. IAI L1 902L IAI BIO 915.

**Prerequisite:** High school biology with grade of "C" or better or BIO 101 with a grade of "C" or better or consent of instructor.

**(Note: Lab science credit.)**

**BIO 150 Field Biology (2-4) 4 hrs.**

Emphasizes field and laboratory work with local soils, flora, fauna, their collection, identification and ecological relationships. Assists students in acquiring basic working knowledge in field work. Field work or field trips every class day, weather permitting. IAI L1 905L

**Prerequisite:** High school biology with a grade of "C" or better, and consent of instructor.

**(Note: Lab science credit.)**

**BIO 151 Field Biology Cape Cod (2-4) 4 hrs.**

Emphasizes field and laboratory work with local, as well as Cape Cod coastal marine soils, flora, fauna, their collection, identification and ecological relationships. Assists students in acquiring basic working knowledge in field work. Weather permitting, field work or field trips will be offered every day including an extended trip to Cape Cod, Massachusetts. IAI L1 905L

**Prerequisite:** High school biology with a grade of "C" or better, and consent of instructor.

**(Note: Lab science credit.)**

**BIO 152 Field Biology Isle Royale (2-4) 4 hrs.**

Emphasizes field and laboratory work with local, as well as Isle Royale soils, flora, fauna, their collection, identification and ecological relationships. Assists students in acquiring basic working knowledge in field work. Weather permitting, field work or field trips will be offered every day including an extended trip to Isle Royale, Michigan. IAI L1 905L

**Prerequisite:** High school biology with a grade of "C" or better or consent of instructor.

**(Note: Lab science credit.)**

**BIO 153 Field Biology Tropical (2-4) 4 hrs.**

Emphasizes field and laboratory work with local, as well as tropical (Belize) fauna, flora, soils, their collection, identification and ecological relationships. Assists students in acquiring basic working knowledge in field work. Weather permitting, field work or field trips will be offered every day including an extended trip to Belize. IAI L1 905L

**Prerequisite:** High school biology with a grade of "C" or better and consent of instructor.

**(Note: Lab science credit.)**

**BIO 154 Field Biology—Mountain Ecology (2-4) 4 hrs.**

Emphasizes field and laboratory work with local, as well as mountain (Smoky Mountains) soils, flora, fauna, their collection, identification and ecological relationships. Assists students in acquiring basic working knowledge in field work. Weather permitting, field work or field trips will be offered every day including an extended field trip to the Smoky Mountains. IAI L1 905L

**Prerequisite:** High school biology with a grade of "C" or better and consent of instructor.

**(Note: Lab science credit.)**

**BIO 160 Human Anatomy (3-2) 4 hrs.**

Introduces the anatomy of the human body; the following systems studied either regionally or systemically: integumentary, skeletal, articular, muscular, circulatory, lymphatic, nervous, respiratory, digestive, excretory, endocrine and reproductive. Includes some introductory histology. Specially designed for studies in health careers, biology and physical education. IAI L1 904L

**Prerequisite:** High school biology with a "C" or better or BIO 101 with a grade of "C" or better or consent of instructor.

**(Note: Lab science credit.)**

**BIO 161 Human Physiology (3-2) 4 hrs.**

Emphasizes physiological principles at the molecular, cellular, tissue, organ and system level, as they pertain to the human organism. The following systems are studied in detail: skeletal, muscular, circulatory, nervous, digestive, respiratory, urinary, reproductive and endocrine. In this course, special applications will be made to meet the needs of students in health careers, biology and physical education.

**Prerequisite:** BIO 160 with a grade of "C" or better or consent of instructor.

**(Note: Lab science credit.)**

## COURSE DESCRIPTIONS

### **BIO 210 Biological Principles (3-3) 4 hrs.**

Emphasizes the following topics: the origin and evolution of life, cell structure and functions, transformation of energy, biological chemistry, physical and chemical life processes, regulatory mechanisms, cellular reproduction, inheritance, gene action and development. Primarily for biology major and minor students. IAI L1 900L

**Prerequisite:** One semester of college chemistry, CHM 121 with a grade of "C" or better or two years of high school chemistry and physics.

**(Note: Lab science credit.)**

### **BIO 220 Botanical Principles (3-3) 4 hrs.**

Studies the plant kingdom emphasizing ecological relationships, evolutionary relationships, growth, structure, physiology, energy relationships, life cycles, and reproduction. Primarily for biology major and minor students.

**Prerequisite:** BIO 210 with a grade of "C" or better.

**(Note: Lab science credit.)**

### **BIO 240 Zoological Principles (3-3) 4 hrs.**

Studies the animal kingdom emphasizing evolutionary study from protozoans through vertebrates including organic evolution, morphology, histology, physiology, taxonomy, parasitology, embryology and ecology. Primarily for biology major and minor students.

**Prerequisite:** BIO 210 with a grade of "C" or better.

**(Note: Lab science credit.)**

## **Cardiac Technology**

See: HPI Cardiac Technology

## **CCA Early Childhood Education**

### **CCA 100 Early Childhood Career Exploration (.5-10) 1 hr.**

Provides an overview of career and employment opportunities in early childhood education. Each student will observe and participate in an early childhood site and attend a seminar to discuss her/his experience. (NOTE: Summer semester only.)

**Prerequisite:** Consent of instructor or coordinator.

### **CCA 101 Introduction to Early Childhood Education (3-0) 3 hrs.**

Provides an overview of early childhood care and education, including the basic values, structure, organization and programming. Examination of the student's personal qualities in relationship to expectations of the field. Directed observation in a variety of programs and settings. IAI ECE 911

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

Provides basic theories and principles of development, pre-natal through early adolescence with emphasis on the young child. In-depth study of physical, social/emotional, cognitive, language and aesthetic development. Examines theories of Erikson, Piaget, Skinner, Vygotsky and others. Explores child development in the context of gender, family, culture and society. Emphasis on the implication for early childhood professional practice. IAI ECE 912 IAI EED 902

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

Presents research, theory and practical application related to development from adolescence through maturity. Discusses social, emotional, physical and cognitive growth within age-related stages. Stresses relevance of developmental theory in working with children and adults in an early childhood program.

**Prerequisite:** CCA 102 with a grade of "C" or better or consent of instructor.

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

Examines the theories and research related to infants and toddlers with a focus on methods of care given in home-based and school-based infant programs. Observation of infants/toddlers and infant/toddler programs.

### **CCA 112 Play and Assessment of the Young Child (3-0) 3 hrs.**

Develops observational skills to assess and record a child's level of development during play. Identification of types, goals and appropriate materials for play, strategies for communicating and working with parents and team members.

**Prerequisite:** CCA 102 and CCA 111 with grades of "C" or better.

### **CCA 115 Principles of Early Childhood Curriculum (3-0) 3 hrs.**

Provides an overview of principles involved in planning, implementing and evaluating developmentally appropriate curriculum. Includes lesson plans, emerging curriculum, scheduling, room arrangement, materials and equipment; individual, small and large group activities; short and long term goals; and teacher's roles and responsibilities in curriculum development.

### **CCA 120 Introduction to Special Education for Paraprofessionals (3-0) 3 hrs.**

Examines characteristics of children with special needs and the methods used in special education. The role of the special education teacher's aide will be studied with a focus on implementing educational plans, family issues, legal rights and responsibilities.

## COURSE DESCRIPTIONS

**CCA 121 Behavioral Management In Special Education Setting (3-0) 3 hrs.**

Studies the role of behavioral management within the special education population and provides understanding of rationale, terminology and methods used when working with special needs children and their families.

**CCA 140 Family Child Care Management (1-0) 1 hr.**

Provides guidelines and responsibilities in providing home day care for infants and young children.

**CCA 143 Safety for the Young Child (1-0) 1 hr.**

Focuses on safety for the young child in group settings.

**CCA 144 Nutrition for the Young Child (1-0) 1 hr.**

Focuses on nutrition for the young child in group settings.

**CCA 146 Programming for School Age Care (1-0) 1 hr.**

Relates theory and practice of school age programming. Emphasizes daily program planning, implication and assessment.

**CCA 149 Topics in Early Childhood Education (1-0 to 3-0) 1-3 hrs.**

Studies selected problems or topics in early childhood. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. This course may be repeated up to a maximum of three credit hours.

**CCA 151 Communicating with Parents and Children (1-0) 1 hr.**

Establishes parent relationships through effective listening, speaking, writing. Develops communication skills in relation to children and co-workers.

**CCA 152 Principles of Child Growth and Development, Birth-5 (1-0) 1 hr.**

Discusses principles of child growth and development from birth through age five. Emphasis on developmental milestones and cultural influences.

**CCA 153 Guiding Children and Managing the Classroom (1-0) 1 hr.**

Provides methods of guiding children's behavior, encouraging prosocial behavior and dealing with common problems. Emphasis on principles and skills in classroom management.

**CCA 154 Activities and Resources for Young Children I (1-0) 1 hr.**

Aids in planning the learning environment, which includes the schedule, themes and activities incorporating art, motor, music and movement, health and safety, and nutrition.

**CCA 155 Activities and Resources for Young Children II (1-0) 1 hr.**

Aids in planning the learning environment to incorporate appropriate themes and activities in math, science, social studies, language, literature, dramatic play and group time.

**CCA 156 Effective Teaching (1-0) 1 hr.**

Provides methods for maintaining and increasing effective teaching behaviors. Also includes relations with parents and co-workers, teacher behaviors, burnout and professional growth.

**CCA 209 Language Development and Activities for the Young Child (3-0) 3 hrs.**

Provides an in-depth knowledge and understanding of language development, the stages involved, the role that adults play and the relationship of language to other aspects of development. Introduces the student to a wide variety of language activities appropriate for young children and develops skills in preparing, presenting and evaluating language activities.

**CCA 210 Creative Activities for Young Children (2-2) 3 hrs.**

Examines the theoretical framework for art, creativity, music and movement. Acquaints the student with a variety of creative art materials and methods appropriate for use in programs for young children. Includes firsthand experience with materials and planning an arts program. Stresses the relationship of creative experiences within the curriculum and the role of creative experiences within the early childhood program.

**CCA 219 Psychology of Exceptional Children (3-0) 3 hrs.**

Presents an overview of children with exceptional cognitive, physical, social and emotional characteristics. Analysis of development and educational needs imposed by exceptionality. Identification, intervention strategies, methods, and programs designed to meet their needs, including, but not limited to, children identified as learning disabled. Study of applicable federal and state laws and requirements: Individuals with Disabilities Education Act, Americans with Disabilities Act, Individualized Family Service Plan, Individualized Education Plan and inclusive programs. Fulfills requirements of School Code, Article 21-2a. IAI ECE 913

**CCA 221 Math and Science for the Young Child (3-0) 3 hrs.**

Introduces the theory and practice related to math and science for young children. Emphasis will be placed on the development and evaluation of developmentally appropriate activities and instructional materials.

## COURSE DESCRIPTIONS

### **CCA 223 Exceptional Child in Early Childhood Programs (3-0) 3 hrs.**

Examines the characteristics of the young child with special needs and provides programming considerations for integrating the child with special needs into early childhood programs. Practical issues include adapting classroom environments, equipment and providing developmentally appropriate educational experiences. Presents guidelines for working with educators, young children, families and community resources. Identifies the legal and program compliance requirements for early childhood programs.

### **CCA 226 Observation and Guidance of the Young Child (3-0) 3 hrs.**

Studies of guidance practices which support the development of the young child. Emphasizes theories and practices that support the caregiver's analysis of child behavior as well as the development of guidance skills. Students will develop and understand the relationship between careful observation, communication and effective interaction with children.

**Prerequisite:** CCA 101, CCA 102 and CCA 115 with grades of "C" or better.

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

Presents research, theory and practical application as it relates to teaching music and movement; illustrates appropriate methods, materials and equipment for use in classroom programming.

### **CCA 235 Principles of School Age Care (3-0) 3 hrs.**

Relates theory and practice of school age programming. Emphasizes program planning, implementation and assessment, use of materials, principles of growth and development, role of teacher and techniques of classroom management. Students will observe and participate in school age child care.

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

Concentrates on teacher's role in working with the child's family and community, stresses parent education, changing families and legal responsibilities. Specifies criteria and methods for effective parent-teacher communication. Includes an in-depth study of community resources.

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

Provides guidelines for the establishment and operation of a child development center. Emphasizes the director's role in programming, school policies, budgeting, record keeping, licensing, municipal codes, insurance, staff development, evaluation procedures, parent communication and community resources.

**Prerequisite:** Completion of 15 credit hours including CCA 101, CCA 102 and CCA 115 with grades of "C" or better or consent of coordinator.

### **CCA 254 Interpersonal Relationships in Early Childhood Education (1-0) 1 hr.**

Explores personal experiences within the work environment, impact of sex-roles, organizational policies and professional standards. Emphasizes team building and the development of effective interpersonal communication skills.

**Prerequisite:** Completion of 18 hours in CCA prefix courses with grades of "C" or better or consent of coordinator.

### **CCA 291 Early Childhood Practicum I (1-10) 3 hrs.**

Emphasizes the practical application of principles and theories in early childhood education within a supervised setting, while working with young children. The student will be supervised by a qualified professional and meet weekly for a seminar. IAI ECE 914

**Prerequisite:** ENG 101, CCA 101, CCA 102, CCA 115, CCA 226 and 6 additional credit hours in CCA prefix courses with grades of "C" or better and consent of instructor.

### **CCA 292 Early Childhood Practicum II (1-10) 3 hrs.**

Emphasizes the practical application of early childhood education principles and theories in a supervised setting, while working with young children. The student will be supervised by a qualified professional and meet weekly for a seminar.

**Prerequisite:** CCA 291 with a grade of "C" or better and consent of instructor.

## **CDV Career Development**

### **CDV 110 Career Development (2-0) 2 hrs.**

Provides the opportunity to explore career interests, experiences, skills, abilities and work related values. Examines information about the world of work including the nature of various careers, labor market trends, job search strategies, education and training requirements and diversity in the workplace. Information will be integrated so students will be able to develop educational and career goals.

**CHM Chemistry**

**CHM 100 Chemistry for the Health Sciences (3-3) 4 hrs.**

Introduces basic concepts of inorganic and organic chemistry and biochemistry. Emphasizes chemical principles applied to biological systems. Laboratory exercises apply theory to biological and consumer products. Especially designed for students in allied health sciences. Meets the prerequisite of the Nursing Program. IAI P1 902L

**CHM 110 Fundamentals of Chemistry (3-3) 4 hrs.**

Introduces concepts of chemistry. Emphasizes the composition of matter, the periodic table, the chemistry of solutions and chemical calculations. The laboratory experiments utilize many common household materials to demonstrate applications of chemical concepts. For students whose preparation does not permit enrollment in CHM 121 and CHM 131. IAI P1 902L

**Prerequisite:** MTH 080 or MTH 087 with a grade of "C" or better or concurrent enrollment.

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

Studies principles of atomic and molecular structure, bonding, stoichiometry, thermochemistry, states of matter and kinetic molecular theory. Corresponding laboratory experiments include volumetric and gravimetric analyses, qualitative studies of reactions and calorimetry.

IAI P1 902L IAI BIO 906 IAI EGR 961

**Prerequisite:** Two semesters of high school chemistry or CHM 110 with a grade of "C" or better and MTH 080 or MTH 087 with a grade of "C" or better or concurrent enrollment in MTH 080 or MTH 087.

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

Continues CHM 121. Principles of chemical kinetics, equilibria, electro-chemistry, thermo-dynamics, redox, descriptive chemistry of metals and non-metals, an introduction to organic chemistry and nuclear chemistry. Laboratory includes experiments related to the lecture material along with the theory and practice of qualitative analysis.

IAI BIO 907 IAI EGR 962

**Prerequisite:** CHM 121 with a grade of "C" or better.

**CHM 125 Organic and Biochemistry for the Health Sciences (3-3) 4 hrs.**

Introduces principles and health applications of organic chemistry and biochemistry. Studies the structure, nomenclature and reactions of organic compounds. Also studies carbohydrates, lipids, proteins, enzymes, nucleic acids, metabolic pathways and bioenergetics. Includes related laboratory exercises. Intended for students in the allied health sciences but open to all non-physical science majors.

**Prerequisite:** CHM 110 or CHM 121 with a grade of "C" or better or placement exam and consent of the chemistry department chairperson.

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

Studies principles of chemistry including molecular, atomic and electronic theories of matter and their relations to the periodic table. Quantitatively treats thermochemistry, bonding, behavior of gases, solids and liquids, and solutions. Emphasizes interpretation of laboratory data. Primarily for students in chemistry, chemical engineering or physical sciences. IAI P1 902L

**Prerequisite:** Two semesters of high school chemistry with a grade of "B" or better, or CHM 110 with a grade of "B" or better, and credit or registration in MTH 103 with a grade of "C" or better or equivalent.

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

Continues CHM 131 with emphasis on kinetics, thermodynamics, equilibria, acid-base reactions, coordination chemistry, electrochemistry and nuclear chemistry. Primarily for students in chemistry, chemical engineering or physical science curricula. Laboratory includes qualitative analysis.

**Prerequisite:** CHM 131 with a grade of "C" or better.

**CHM 201 Basic Organic Chemistry (3-3) 4 hrs.**

Survey of organic chemistry covering nomenclature, structure, reactions and synthesis of the major classes of organic compounds, including hydrocarbons, alcohols, aldehydes, ketones, carboxylic acids and amines. The laboratory includes experiments in distillation, crystallization, chromatography, extraction, synthesis and analysis.

**Prerequisite:** CHM 122 with a grade of "C" or better or consent of instructor.

**CHM 204 Organic Chemistry I (3-6) 5 hrs.**

Application of modern theories of electronic structures to the study of chemical and physical properties of organic compounds. Laboratory includes syntheses, qualitative organic analyses, IR and visible spectrophotometry, gas chromatography, thin-layer chromatography, polarimetry and refractometry. IAI BIO 908 IAI EGR 963

**Prerequisite:** CHM 122 or CHM 132 with a grade of "C" or better.

**CHM 205 Organic Chemistry II (3-6) 5 hrs.**

Continues CHM 204. IAI BIO 909 IAI EGR 964

**Prerequisite:** CHM 204 with a grade of "C" or better.

**CHM 210 Quantitative Analysis (3-6) 5 hrs.**

Studies chemical, theoretical and applied methods relevant to sampling, gravimetric analysis, titrimetry, acid-base reactions, chemical separations, chromatography and spectroscopy.

**Prerequisite:** CHM 122 or CHM 132 or equivalent with a grade of "C" or better.

## COURSE DESCRIPTIONS

### CIS Computer Information Systems

#### **CIS 100 Computer Literacy (2-2) 3 hrs.**

Provides the student with an understanding of computers and software as they are used in the business environment. Laboratory time will be used to look at a few applications of software packages (like word processing, possibly spreadsheets, data bases and/or graphics) with the intent of helping students become familiar with a microcomputer. This course is not intended for computer information majors and does not include programming.

IAI BUS 902

#### **CIS 101 Introduction to Computer Information Systems (2-2) 3 hrs.**

Introduces a student to the computer through lecture and laboratory assignments. No prior knowledge of computers is necessary. The student will learn the fundamentals of computers and how computers are used in a business environment, including learning how to use a word processor, data base manager, spreadsheet, and other packages. The student will also learn to write simple programs using the BASIC language.

(NOTE: Transfer students should check with the school they will be transferring to regarding the transferability of this course.)

IAI BUS 902

#### **CIS 102 NetPrep™ Networking Fundamentals (3-0) 3 hrs.**

Introduces students to the underlying concepts of data communications, telecommunications, and networking. This course provides a general overview of computer networks and focuses on the terminology and technologies in current networking environments.

#### **CIS 103 Computer Information Systems Career Exploration (.5-10) 1 hr.**

Studies an overview of career and employment possibilities in the computer industry. Each student will observe practices in this industry and attend a seminar to discuss her/his experiences. This course is for students with no prior courses or work experience in the computer field. An interview with the coordinator is required before enrollment. (NOTE: Summer semester only.)

**Prerequisite:** Consent of coordinator.

#### **CIS 104 Multimedia Presentations (1-2) 2 hrs.**

Provides an introduction to the theory of presentations and communication using multimedia technology. The course will cover presentation styles, development methodologies and skills. It will also provide in-depth, hands-on experience with multimedia software in order to teach how multimedia can enhance, improve and make presentations more effective.

#### **CIS 105 Introduction to Multimedia (2-2) 3 hrs.**

Introduces terminology, uses of multimedia, creation of presentations and tutorials. Students will use pictures, both still and animated, music and text in a multimedia project. (NOTE: Some previous typing and personal computer experience helpful.)

#### **CIS 106 Computer Logic and Programming Technology (2-2) 3 hrs.**

Familiarizes the student with the necessary tools to design efficiently the steps in a business computer program. Includes advanced concepts of the BASIC programming language. Requires the students to code and debug their own sample cases. Also teaches documentation, problem analysis, structured programming logic, decision tables, system flowcharting, table utilization and file maintenance.

**Prerequisite:** CIS 101 or concurrent enrollment and MTH 080 or MTH 087 with a grade of "C" or better.

#### **CIS 107 NetPrep™ Local Area Networks (2-2)**

Covers how LANs are built: what physical cables are used, how those cables are connected together, and how hardware platforms (such as servers and workstations) attach to LANs. The student will also learn about the Network Operating Systems (NOS) software and applications that run on LANs.

**Prerequisite:** CIS 102 with a grade of "C" or better, or consent of instructor.

#### **CIS 108 Computer Programming—COBOL (4-4) 5 hrs.**

Provides an in-depth study of COBOL. Extensive laboratory experiences in writing, testing, debugging and documenting programs for business applications. Emphasis on structured design and documentation.

**Prerequisite:** CIS 101, CIS 106, and MTH 080 or MTH 087 with a grade of "C" or better or consent of instructor.

#### **CIS 110 Computer Programming—Assembler Language (4-4) 5 hrs.**

Utilizes program writing, testing, debugging, and documentation using the IBM S/360-730, 4300, etc., assembler language. Extensive laboratory experience in planning, writing and testing programs for typical business applications.

**Prerequisite:** CIS 108 with a grade of "C" or better or consent of instructor.

#### **CIS 111 Introduction to the AS 400 (2-2) 3 hrs.**

Introduces the AS 400 computer system, its basic components and their capabilities.



**CIS 112 AS 400 System Operations (2-2) 3 hrs.**

Introduces the operation of an integrated minicomputer system and how to manage jobs and perform system maintenance.

**Prerequisite:** CIS 111 with a grade of "C" or better or consent of instructor.

**CIS 113 AS 400 Facilities (2-2) 3 hrs.**

Builds on the information in CIS 112 to reinforce and introduce advanced topics for the operation of the AS 400.

**Prerequisite:** CIS 112 with a grade of "C" or better or consent of instructor.

**CIS 115 NetPrep™ Wide Area Networks (2-2) 3hrs.**

Covers networking topics related to Wide Area Networks (WANs). These topics include the telecommunications components and concepts used to build WANs, as well as protocols used to transport voice and data over a wide area.

**Prerequisite:** CIS 107 with a grade of "C" or better, or consent of instructor.

**CIS 117 Introduction to Windows (.5-1) 1 hr.**

Introduces the student to the use of a graphical interface for the operating system. Includes the use of graphical interface, and some of the built-in desktop and system accessories.

**CIS 118 Introduction to the Internet (.5-1) 1 hr.**

Introduces the student to the capabilities of the internet and the world wide web through the use of currently popular software packages. Students must have working knowledge of Microsoft Windows environment prior to registration.

**CIS 119 Web Site Development I (1-2) 2 hrs.**

Provides the student with a foundation in the fundamentals of internet technology and web authoring using currently popular web authoring software. Introductory HTML, web page design, web site hosting, security, internet protocols, and e-commerce are among the topics covered in a lecture and lab-based format. Students utilize the skills learned to create a web site of their choice and design. A working knowledge of Microsoft Windows is recommended.

**Prerequisite:** CIS 118 with a grade of "C" or better.

**CIS 120 Introduction to Business Software Packages (2-2) 3 hrs.**

Provides an opportunity to become proficient in the use of currently popular software packages on a variety of microcomputers.

**CIS 121 General Accounting for Micros Applications (1-2) 2 hrs.**

Provides an opportunity to become proficient in the use of a currently popular general accounting package.

**Prerequisite:** ACC 101 with a grade of "C" or better or consent of instructor.

**CIS 122 Data Base for Micros (.5-1) 1 hr.**

Provides an opportunity to become proficient in the use of a currently popular data base package. May be repeated up to a maximum of three credit hours utilizing different software packages for each unit of credit.

**CIS 123 Spreadsheet/Budgeting for Micros (.5-1) 1 hr.**

Provides an opportunity to become proficient in the use of a currently popular spreadsheet package. May be repeated up to a maximum of three credit hours utilizing different software packages for each unit of credit.

**CIS 124 Advanced Spreadsheet for Micros (.5-1) 1 hr.**

Provides an opportunity to become proficient in the use of a currently popular advanced spreadsheet package. May be repeated up to a maximum of three credit hours utilizing different software packages for each unit of credit.

**Prerequisite:** CIS 123 with a grade of "C" or better or consent of instructor.

**CIS 125 Word Processing for Micros (.5-1) 1 hr.**

Provides an opportunity to become proficient in the use of a currently popular word processing package. Previous typing helpful but not required. May be repeated up to a maximum of three credit hours utilizing different software packages for each unit of credit.

**CIS 126 Graphics for Micros (.5-1) 1 hr.**

Provides an opportunity to become proficient in the use of a currently popular microcomputer business graphics package. May be repeated up to a maximum of three credit hours utilizing different software packages for each unit of credit.

**CIS 127 Advanced Business Graphics (.5-1) 1 hr.**

Includes advanced features of a business graphics package, such as chart styling, importing, exporting, maps, templates, macros and drawing.

**Prerequisite:** CIS 126 with a grade of "C" or better or consent of instructor.

**CIS 128 DOS Basics for Micros (.5-1) 1 hr.**

Provides instruction in the most commonly used DOS commands. Designed as an introduction of applications software such as word processing, spreadsheets or data bases. This course does not include extensive use of batch files, EDLIN or DEBUG.

## COURSE DESCRIPTIONS

**CIS 129 Personal Information Management (.5-1) 1 hr.**

Uses a currently popular personal information management package. Provides techniques to manage time, analyze reports, manage accounts and import data from other sources.

**CIS 130 BASIC for Business (3-2) 4 hrs.**

Utilizes elementary and advanced features of BASIC programming language, with particular emphasis on practical, business-oriented applications appropriate for stand-alone and networked PC's.

**Prerequisite:** CIS 101 and CIS 106 and either MTH 080 or MTH 087 with grades of "C" or better, or consent of coordinator.

**CIS 131 Microcomputer Printers (.5-1) 1 hr.**

Includes a survey of current printer hardware. Methods of communicating commands to printers from the operating system, programming languages, and software packages will be included as well as programming micros for printers and creating new characters or fonts.

**CIS 132 Advanced Business Software Packages (3-2) 4 hrs.**

Provides an opportunity to build an integrated business system using BASIC programming and a currently popular applications suite. Advanced word processing, spreadsheet and database features will be included in the system.

**Prerequisite:** ACC 101, CIS 106 or CIS 130 and 3 credit hours chosen from CIS 120, CIS 122, CIS 123 and CIS 125 with grades of "C" or better, or consent of instructor.

**CIS 133 Personal Computer Programming—Assembler Language (3-2) 4 hrs.**

Introduces assembler language programming on a personal computer with emphasis on writing well-formed programs for a variety of business applications.

**Prerequisite:** CIS 101 and CIS 106 or CIS 130 with grades of "C" or better or consent of instructor.

**CIS 134 Personal Computer (DOS) (2-2) 3 hrs.**

Covers beginning and advanced personal computer DOS commands with a special emphasis on business file management. Some previous personal computer experience helpful.

**CIS 135 Computer Operator (3-0) 3 hrs.**

Covers the terminology in a computer operations environment including learning about the major functions in a computer operations department and how other areas interface with operations.

**Prerequisite:** Prior or concurrent enrollment in CIS 101 with a grade of "C" or better.

**CIS 136 Job Control/Utilities (2.5-1) 3 hrs.**

Provides the student with an understanding of Job Control Language and Utility Programs. Emphasis is placed on the operational aspects of these topics. There will be numerous assignments requiring coding and running of utility programs and job control.

**Prerequisite:** CIS 101, CIS 106 and CIS 135 with grades of "C" or better or consent of instructor.

**CIS 137 Computer Operator Internship (1-15) 3 hrs.**

Provides students with coordinated computer operations or related experience in a data processing installation. Case studies will be used in the event that training stations are not available. Provides students with coordinated computer operations or related experience in a data processing installation.

**Prerequisite:** Second semester standing with a 2.5 overall GPA and a 3.0 GPA in computer courses. Consent of coordinator.

**CIS 138 Web Site Development II (2-2) 3 hrs.**

Provides experience with web authoring utilizing HTML, coding, currently popular scripting languages, and advanced markup languages. Web site design and web site construction are the major activities in a lab and lecture format. Topics related to server-side scripts, client-side scripts, multimedia, XML, and integrating Java Applets into a web page.

**Prerequisite:** CIS 119 with a grade of "C" or better, or consent of instructor.

**CIS 140 RPG Programming (2-2) 3 hrs.**

Gives experience in writing, testing, debugging, and documenting programs for business applications using a report writing type language (RPG II).

**Prerequisite:** CIS 101 and CIS 106 with grades of "C" or better or consent of instructor.

**CIS 141 Advanced Data Base for Micros (.5-1) 1 hrs.**

Provides the student with knowledge and practice of utilizing the advanced capabilities of a currently popular database application. Designed for a non-programmer to make better use of the software package to solve common information requirements.

**Prerequisite:** CIS 122 with a grade of "C" or better.

**CIS 144 Advanced DOS (2-2) 3 hrs.**

Provides a continuation of CIS 134. The new or expanded coverage includes the DOS environment, device drivers, CONFIG SYS, hard disk management, graphics, batch files, memory allocation and DEBUG.

**Prerequisite:** CIS 134 with a grade of "C" or better or consent of instructor.

**CIS 145 Microcomputer Hardware and Software (2-2) 3 hrs.**

Introduces basic vocabulary and information regarding the essential hardware and software components in today's PC systems. This class is not a survey and comparison course of PC products; it is designed for the PC user who wants to know more about the internal hardware-software components available in today's market. The process of performing basic diagnostics, installation of hardware and software and upgrades will be covered.

**Prerequisite:** CIS 101 and CIS 134 with grades of "C" or better or consent of instructor.

**CIS 146 Operating System — OS/2 (2-2) 3 hrs.**

Provides an introduction to the OS/2 operating system. It will cover beginning and advanced commands including device control, redirection, subdirectories, backups and batch files.

**Prerequisite:** CIS 134 with a grade of "C" or better or consent of instructor.

**CIS 147 Windows (1-2) 2 hrs.**

Introduces a student to the use of a graphical interface for the operating system. The course includes the use of the graphical interface, built-in desktop accessories and built-in system accessories. Special features of application packages when used in a Windows environment, networking considerations and switching between applications will also be covered.

**Prerequisite:** CIS 134 with a grade of "C" or better or consent of instructor.

**CIS 148 Personal Computer Utilities (1-2) 2 hrs.**

Provides instruction about a popular utility package. The general functions of such packages are performance enhancement, preventive maintenance, disk repair, data recovery and data security.

**Prerequisite:** CIS 134 with a grade of "C" or better or consent of instructor.

**CIS 149 Personal Computer UNIX (2-2) 3 hrs.**

Provides in-depth laboratory-oriented discussion of the UNIX operating system. Applies to a wide variety of problems in business data processing.

**Prerequisite:** CIS 134 and either CIS 160 or CIS 166 with grades of "C" or better or consent of instructor.

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

Introduces FORTRAN as it applies to business applications using a current compiler. Programming projects will include applications such as accounting, finance and marketing.

**Prerequisite:** CIS 101, CIS 106 and MTH 080 and MTH 087 with grades of "C" or better or consent of instructor.

**CIS 151 Introduction to Telecommunications (3-0) 3 hrs.**

Introduces the basic vocabulary, skills and concepts associated with voice communications networks that are developed and used by the telephone industry. Topics covered will be the history of voice networks, voice and digital coding schemes, regulatory actions and bodies, switch development including their uses and implementations, voice traffic engineering, switching concepts and switch services. The class should not be confused with a basic data communication course. The emphasis of this course is on developing a working vocabulary in communicating with telephone (voice) networking professionals and understanding the telephone industry and voice networks.

**Prerequisite:** CIS 170 with a grade of "C" or better.

**CIS 152 Data Base Programming, Microcomputers (2-2) 3 hrs.**

Uses the command language from a currently popular data base package for microcomputers. A set of business-oriented programs will be developed making extensive use of the command language.

**Prerequisite:** CIS 122 and CIS 130 with grades of "C" or better.

**CIS 153 Expert Systems (2-2) 3 hrs.**

Contrasts the types of expert systems available. Uses a currently popular expert system package and develops business applications using the package.

**Prerequisite:** CIS 120 with a grade of "C" or better or consent of instructor.

**CIS 154 Desktop Publishing (2-2) 3 hrs.**

Introduces the concepts and practices found in microcomputer based desktop publishing. Provides an opportunity to become proficient in the use of a currently popular desktop publishing software package with the associated hardware.

**CIS 155 NetPrep™ Networking Architectures (2-2) 3 hrs.**

Details four networking architectures that are widely used in corporate networks, with the greatest emphasis falling on TCP/IP, the most significant and popular architecture.

**Prerequisite:** CIS 115 with a grade of "C" or better or consent of instructor.

**CIS 156 NetPrep™—The Internet (2-2) 3 hrs.**

Provides a broad overview of the internet and teaches effective ways to use the internet, such as electronic mail, creating World Wide Web (WWW) pages and electronic commerce. This course also includes a review of TCP/IP, the internet's networking architecture.

**Prerequisite:** CIS 155 with a grade of "C" or better or consent of instructor.

## COURSE DESCRIPTIONS

### **CIS 157 NetPrep™ Internetworking Devices and Concepts (2-2) 3 hrs.**

Details the interconnection of computer networks, or internetworking. Topics include the use of internetworking components such as repeaters, hubs, bridges, switches, routers, and gateways, as well as component selection.

**Prerequisite:** CIS 155 with a grade of "C" or better or consent of instructor.

### **CIS 158 NetPrep™ Protocol Analysis (2-2) 3 hrs.**

Details the networking processes and protocols used today, including the protocols used at the OSI Model's Data Link Layer, Network Layer, Transport Layer, and higher layers. This course also provides many sample traces as reference.

**Prerequisite:** CIS 155 with grades of "C" or better or consent of instructor.

### **CIS 159 NetPrep™ Network Analysis Design (2-2) 3 hrs.**

Covers topics related to the design of computer networks, including user requirements, considerations in physical media and topology, and choosing Network Operating Systems (NOSs), computing platforms, applications, software, and internetworking components.

**Prerequisite:** CIS 155 with grades of "C" or better or consent of instructor.

### **CIS 160 Introduction to Pascal Programming (3-2) 4 hrs.**

Provides an introduction to the elements of Pascal programming. The course uses the Pascal programming language to develop problem-solving skills for business applications.

**Prerequisite:** CIS 101 and CIS 106 with grades of "C" or better or consent of instructor.

### **CIS 161 Introduction to Perl Programming (2-2) 3 hrs.**

Introduces and develops programming techniques in the Perl language. A wide range of problems of both a business and non-business nature will be studied, including utilization of Perl's object-oriented approach to write Common Gateway Interface (CGI) programs for web-based applications.

**Prerequisite:** CIS 106 with a grade of "C" or better or consent of instructor.

### **CIS 166 Introduction to Programming in C (3-2) 4 hrs.**

Introduces and develops programming techniques in the C language. A wide range of problems of both a business and non-business nature will be studied, including system programming type problems. Language features unique to C will be addressed, along with problem-solving techniques. IAI CS 911

**Prerequisite:** CIS 101 and CIS 106 or CIS 130 with grades of "C" or better or consent of instructor.

### **CIS 168 Java Programming I (3-2) 4 hrs.**

Introduces students to the Java programming language and its object-oriented approach for developing platform independent applications. The emphasis of the course will be on using Java for the internet and web page. The course will cover Java applets, Java classes, interfaces, data types and Java AWT for portable GUI. Students will design, code and debug Java applets with GUI and animation. Completion of CIS 166 is highly recommended for those students that completed CIS 106 with a grade less than "B".

**Prerequisite:** CIS 106 with a grade of "C" or better.

### **CIS 170 Introduction to Data Communications (3-0) 3 hrs.**

Provides an introduction to telecommunications, information analysis, system design, terminal equipment, data modems, common carrier facilities and communications processing equipment.

**Prerequisite:** CIS 101 with a grade of "C" or better or consent of instructor.

### **CIS 171 Introduction to Local Area Networks (2-2) 3 hrs.**

Introduces the concept of computer networks and when to use them in the business environment. The advantages and disadvantages of micro to mainframe or mini-computer and micro to micro links will be discussed. Various configurations will be compared.

**Prerequisite:** CIS 170 and either CIS 128 or CIS 134 with grades of "C" or better or consent of instructor. (Concurrent enrollment in CIS 170 is allowable.)

### **CIS 172 Network Administration (2-2) 3 hrs.**

Expands upon CIS 170 and CIS 171 by taking a detailed look at the OSI layered model, TCP/IP, IPX/SPX, ATM and many other standard protocols. The course provides an analysis of network components and applications for LANs and WANs. The course also identifies the major issues surrounding distributed network and communication in a client server networking environment.

**Prerequisite:** CIS 171 with a grade of "C" or better.

### **CIS 176 Advanced C Programming (3-2) 4 hrs.**

Addresses the advanced features of the C programming language, along with advanced programming techniques. Algorithms and data structures are presented and applied to a wide variety of business programming problems.

**Prerequisite:** CIS 166 with a grade of "C" or better or consent of instructor.

### **CIS 178 Java Programming II (2-2) 3 hrs.**

Expands upon CIS 168 by utilizing an integrated development environment to develop advanced Java applications and applets. Introduces students to Java networking threads, exception handling data I/O, remote method invocation and Java beans. Students will design, code and debug complex Java applications interacting with files and databases.

**CIS 186 C Programming for Graphical User Interfaces (3-2) 4 hrs.**

Introduces and develops programming techniques necessary to write graphical user interfaces for interactive application programs. Emphasis is on the use of business software tools (C function libraries) provided in currently popular software for development of windowing environments on microcomputers.

**Prerequisite:** CIS 176 and CIS 266 with grades of "C" or better or consent of instructor.

**CIS 196 Advanced C Programming for Graphical User Interfaces (3-2) 4 hrs.**

Teaches concepts which complement those learned in CIS 186. Introduces advanced topics in developing applications with graphical user interfaces with enhanced graphical content deploying vector and raster graphics, dynamics data exchange and dynamic link libraries. Emphasis is placed on the use of software development tools and paradigms currently popular in the microcomputer software industry.

**Prerequisite:** CIS 186 with a grade of "C" or better or consent of instructor.

**CIS 202 Programming Systems (3-0) 3 hrs.**

Indicates purpose and function of various programming systems such as program compilers, operating systems, utility program, sortmerges and job control language.

**Prerequisite:** CIS 110 with a grade of "C" or better.

**CIS 203 Systems Analysis and Design (3-0) 3 hrs.**

Includes the functions and techniques of system analysis, design and development using the Life Cycle Methodology. These include analyzing and using management data, establishing system specifications and equipment needs and implementing management information systems. Stresses methods and tools used in business systems analysis and design and stresses communications with users in order to design systems meeting the user's needs.

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

**CIS 204 Advanced Systems Analysis and Design II (3-0) 3 hrs.**

Continues CIS 203. The student will individually, or in a group, actually carry a project from the beginning (study phase) to the finish (implementation) including interviewing and making presentations. Various software, if appropriate, will be utilized to aid in the design and implementation of the project.

**Prerequisite:** CIS 203 with a grade of "C" or better or consent of instructor.

**CIS 205 Multimedia Development (2-2) 3 hrs**

Expands on the topics in CIS 105. Students will create more complex presentations and tutorials. Students will use advanced scripting, shared scripts, and include video, pictures, music and text in multimedia projects. In addition, design considerations will be covered for various formats including creating projects for the web, and packaging the final project in order to distribute it.

Completion of CIS 106 is highly recommended for those students who completed CIS 105 with a grade less than "B".

**CIS 208 Computer Programming—Advanced COBOL (3-2) 4 hrs.**

Allows the student to both increase and expand upon previously developed skills. Emphasis will be placed on sound problem solving techniques (prior to decoding) and structured program design. Phased implementation will be enforced. Source code documentation will be stressed. Extensive coding, testing and debugging of assigned cases will be expected. Maintenance of functioning programs will be provided. Teams will be used at various times in the semester.

**Prerequisite:** CIS 108 and CIS 110 with grades of "C" or better or consent of instructor.

**CIS 210 Computer Programming—Advanced Assembler Language (3-4) 4 hrs.**

Continues CIS 110. Programming magnetic tape, random storage devices, and remote terminal systems. Includes the use of IOCS for input-output devices.

**Prerequisite:** CIS 110 with a grade of "C" or better or consent of instructor.

**CIS 218 Internet Topics and Trends 3 hrs.**

Provides an understanding of the latest in internet, extranet and intranet advanced technologies and trends. Topics related to web infrastructure are explored; including internet transport protocols, internet standards, organizations, internet security, internet e-mail, internet management tools, web extensions, and directory services.

**Prerequisite:** CIS 170 and CIS 119 with grades of "C" or better or consent of instructor.

**CIS 219 Web Site Management (2-2) 3 hrs.**

Provides an understanding of the technical skills needed to set up and maintain a web site. Students develop a web site while addressing topics integral to web site management including: web servers, establishing a presence on the web, web server configuration, server-side scripts, firewalls, server configuration, scripts, general maintenance considerations, data communications and applications integration, managing the web server, intranet and training issues. Project management issues and system development life cycle methodologies are discussed and practiced.

**Prerequisite:** CIS 138 with a grade of "C" or better or consent of instructor.

## COURSE DESCRIPTIONS

### **CIS 220 Topics in Computer Information Systems (1-0 to 6-0) 1-6 hrs.**

Studies selected problems, computer software or computer languages. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information with preregistration materials will be available each time the course is offered. This course may be repeated up to a maximum of six credit hours.

**Prerequisite:** Consent of instructor.

### **CIS 223 Spreadsheet Graphics (.5-1) 1 hr.**

Uses currently popular software designed to enhance spreadsheet graphics with original drawings, catalogued symbols and text.

**Prerequisite:** CIS 123 with a grade of "C" or better or consent of instructor.

### **CIS 224 Spreadsheet Macros and Other Advanced Topics (.5-1) 1 hr.**

Provides an opportunity to become proficient in the use of spreadsheet macros and other advanced topics used with a currently popular spreadsheet package. May be repeated up to a maximum of three credit hours utilizing different software packages for each unit of credit.

**Prerequisite:** CIS 124 with a grade of "C" or better or consent of instructor.

### **CIS 230 Computer Programmer Internship (1-15) 3 hrs.**

Applies computer skills in practical situations and also involves a field project in local computer installation. Open only to computer degree candidates. Fourth semester standing with an overall GPA of 3.0 and a 3.5 GPA in computer courses.

**Prerequisite:** Consent of coordinator.

### **CIS 231 Advanced BASIC with Graphical User Interfaces (3-2) 4 hrs.**

Presents the basic principles for the design, use and understanding of computer graphical user interfaces in business. Other advanced topics include designing menu-driven interactive software, custom controls and data file management. Emphasis is on building various software in Visual BASIC, or similar programming languages, to solve common business programming problems using relevant controls, data structures and algorithms. May be repeated three times, up to a maximum of 12 credit hours utilizing different software for each unit of credit.

**Prerequisite:** CIS 130 with a grade of "C" or better, or equivalent.

### **CIS 240 Advanced RPG (2-2) 3 hrs.**

Provides instruction in advanced concepts of the RPG language. Emphasis is on disk and tape applications involving multiple input and output files, tables, arrays and subroutines.

**Prerequisite:** CIS 140 with a grade of "C" or better or consent of instructor.

### **CIS 266 C++ and Object Oriented Software Development (3-2) 4 hrs.**

Reviews the concepts of pointers and structures in the 'C' language. Introduces the concept of object-oriented programming, in general, and C++, in particular. The various features of C++ as a business programming language, and as a superset of the "C" language, will be presented. Problems will be presented and solved both as a tool for learning C++ and as a means of learning the overall philosophy of object-oriented programming.

**Prerequisite:** CIS 176 with a grade of "C" or better or consent of instructor.

### **CIS 270 Data Communications with CICS Applications (3-2) 4 hrs.**

Introduces Customer Information Control System (CICS) as a data communications operating system. Command level CICS will be used.

**Prerequisite:** CIS 108 and CIS 170 with grades of "C" or better or consent of instructor.

### **CIS 280 Database Programming, Client Server (3-2) 4 hrs.**

Allows the student to learn to utilize Visual Basic's many tools for accessing multiple types of databases, including writing and utilizing SQL to access SQL. Server and other databases through use of database object models and other Visual Basic tools. Introduces web-server site scripting as a way to publish reports electronically to one or more users. Provides hands-on experience with the client-server model.

**Prerequisite:** Student must have completed both CIS 152 and CIS 231 with grades of "C" or better or consent of instructor.

## **CNA Certified Nursing Assistant**

### **CNA 101 Nursing Assistant Training (4.5-5) 7 hrs.**

Provides theory and training in the basic skills essential to the practice of health care workers who will assist the nurse in the care of patients in a variety of health care settings. Includes simulated practice and opportunity for clinical application. This course is approved by the Illinois Department of Public Health, Office of Health Regulations and successful completion is required for application for the Nurse Aide Competency exam.

## **CRJ Criminal Justice**

### **CRJ 101 Introduction to Criminal Justice (3-0) 3 hrs.**

Studies the history, role, development, and constitutional aspects of law enforcement and public safety. Review of agencies and functions involved in processes of administration of criminal justice. IAI CRJ 901

## COURSE DESCRIPTIONS

### **CRJ 104 Introduction to Corrections (3-0) 3 hrs.**

Provides the student with an integrated knowledge about the system through which the criminal offender is processed. Emphasis will be placed upon the philosophical bases of punishment and treatment techniques in institutional community-based programs plus parole programs. IAI CRJ 911

### **CRJ 105 Criminal Courts of the U.S. (3-0) 3 hrs.**

Provides the student with a broad body of knowledge concerning the court structures of the United States. The course will examine the historical development of the judicial branch of government, the role of the courts in the criminal justice system, levels of courts and roles of persons employed in this unit of the Criminal Justice program.

### **CRJ 116 Introduction to Forensics (3-0) 3 hrs.**

Introduces student to the use of scientific disciplines in crime investigation. Identifies the variety of sources of evidence and the means by which comparative analysis can be made. Introduces student to probability theory. Develops skills in crime scene technology, fingerprinting, photography and recording.

### **CRJ 201 Criminal Law (3-0) 3 hrs.**

Examines local, state and federal criminal law. Topics include a definition of the crimes, their elements, and attendant circumstances and related defenses. IAI CRJ 913

### **CRJ 202 Criminal Procedures (3-0) 3 hrs.**

Examines and analyzes federal and state law relating to arrest, search and seizure, First Amendment activities, interrogation, civil liability of police, and trial procedures.

### **CRJ 203 Law and Society (3-0) 3 hrs.**

Focuses on the concept of law and its relationship to crime and the administration of criminal justice in a democratic society. Attention is directed toward the historical background of American law, social norms, criminal law, law and force, morals, justice, freedom and custom. An examination of the functions of the executive, legislative and judicial branches of government is made in relationship to law and the administration of criminal justice in present and future societal problems.

### **CRJ 205 Juvenile Delinquency (3-0) 3 hrs.**

Examines organization, jurisdiction and functions of juvenile agencies. Juvenile court movement, juvenile detection, 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. IAI CRJ 914

### **CRJ 207 Vice and Drug Control (3-0) 3 hrs.**

Studies historical and sociological development problems in drug addiction and vice control; fundamental understanding of narcotic addiction and effects of hypnotic drugs; the operation of lotteries, bookmaking and other types of gambling and prostitution as these factors are involved in the daily routine of police work.

### **CRJ 210 Introduction to Criminology (3-0) 3 hrs.**

Examines the nature and extent of crime in American society, theories of crime causation and control of criminal behavior. IAI CRJ 912

### **CRJ 214 Community Policing (3-0) 3 hrs.**

Examines issues in community policing with emphasis on the concept of public and community relations as well as police involvement in community problems. Stresses the role of the police in maintaining public order and safety as a member of the community and in partnership with other community constituencies.

### **CRJ 215 Alternatives to Confinement (3-0) 3 hrs.**

Studies formal and informal alternatives to custodial handling of offenders. Takes systems approach to examine traditional and contemporary offender diversion programs. Theories, objectives and the systematic consequences of change are examined.

### **CRJ 216 Investigative Process (3-0) 3 hrs.**

Studies the art of investigation to reconstruct facts and circumstances of any event. Prepares students to plan and execute investigations commonly performed in civil and criminal work with concentration on obtaining direct evidence through interviewing, interrogation, observation and the use of documents and records.

### **CRJ 220 Police Administration (3-0) 3 hrs.**

Introduces basic principles of police administration and management as applied to the police function. Emphasis is on organization structure and management processes, identifying the police role in staff functions.

### **CRJ 222 Police Operations (3-0) 3 hrs.**

Examines police operations, including patrol, investigation, traffic, juvenile and special operations. Manpower distribution, analysis of operations and enforcement policy will be stressed.

### **CRJ 224 Police Supervision (3-0) 3 hrs.**

Focuses on supervisory problems within a police organization, equating sound principles of human relations and supervisory techniques to effective police performance. Course includes the topics of morale and discipline motivation, authority and control, the supervisory process and its responsibilities, principles of communications, professional ethics and the decision-making process.

**Prerequisite:** CRJ 101 with a grade of "C" or better or consent of coordinator.

## COURSE DESCRIPTIONS

### **CRJ 226 Case Management (3-0) 3 hrs.**

Studies the investigative process from a supervisory and managerial perspective. Emphasizes means of assessing case priorities, resource allocation, performance evaluation and the investigator's relationships with others, influencing the successful completion and prosecution of criminal investigation.

### **CRJ 235 Street Procedures (3-2) 4 hrs.**

Introduces techniques and procedures used by police and security personnel in job-related activities. Includes discussion and practice in areas such as vehicle stops, initiating investigations, responding to calls, building checks, emergency situations, crowd control and report preparation.

**Prerequisite:** Sophomore standing.

### **CRJ 238 Defensive Techniques (2-2) 3 hrs.**

Introduces principles of self-defense and weaponless control for police and security personnel. Includes psychology, physical and mental preparation, practice in defense and control techniques.

**Prerequisite:** Sophomore standing and consent of instructor.

### **CRJ 250 Industrial Security Administration (3-0) 3 hrs.**

Studies the organization and management of industrial security units including government security; protection of commercial and industrial manpower, facilities, and installations; security and police operations; administrative, legal and technical problems; specialized programs for factories, railroads, retail stores, insurance firms, credit bureaus, etc.

### **CRJ 252 Industrial Fire Protection Disaster and Control (3-0) 3 hrs.**

Studies the administration of fire and accident prevention programs; development of policy, rules, and regulations; operations for fire and accident control; equipment facilities, inspections, investigations and records, special problems and hazards.

### **CRJ 253 Safety Management (3-0) 3 hrs.**

Principles, responsibility and procedures of management for controlling operations to provide safety in business and industry. Analysis of accident costs, organization and operation of a safety program, psychological aspects, physical conditions and radiation hazards.

### **CRJ 299 Criminal Justice Practicum (1-10) 3 hrs.**

Provides students with a broad educational experience through appropriate observation and directed experience in operating segments of the criminal justice agency in addition to participation in a seminar.

**Prerequisite:** Sophomore standing and consent of coordinator.

## CSC Computer Science

### **CSC 121 Computer Science I (3-2) 4 hrs.**

Introduces a disciplined approach to problem solving and algorithm development. Introduces procedural approach; data abstraction; selection, repetition and sequence control structures; arrays, records and files; and an introduction to recursion. Emphasizes program design, testing and documentation using good programming style in a block-structured, high-level programming language. Designed as the first of a sequence of courses (CSC 121, CSC 122, CSC 216 and CSC 217) for students majoring in Computer Science. IAI CS 911

**Prerequisite:** MTH 103 and MTH 104 with grades of "C" or better or consent of instructor.

### **CSC 122 Computer Science II (3-2) 4 hrs.**

Introduces the design and implementation of large scale problems. Introduces data structures: files, sets, pointers, lists, stacks, queues, trees and graphs. Introduces program verification and complexity. Builds previous knowledge of recursion, text processing, and searching and sorting algorithms. Designed as the second of a sequence of courses (CSC 121, CSC 122, CSC 216, CSC 217) for students majoring in Computer Science. IAI CS 912

**Prerequisite:** CSC 121 and MTH 200 with grades of "C" or better or consent of instructor.

### **CSC 208 Problem Solving for Science and Engineering Using FORTRAN (3-2) 4 hrs.**

Emphasizes problems analysis and problem solving. Includes problem formulation, data storage and retrieval techniques, algorithm analysis and development, flow chart or pseudocode construction. Introduces the student to numerical methods and simulations. Develops working knowledge of current version of FORTRAN. Designed to use the computer in the study of problems in engineering, mathematics and/or physical sciences. Intended for the mathematics, science, computer science or engineering student. IAI EGR 921

**Prerequisite:** MTH 200 with a grade of "C" or better or consent of instructor.

### **CSC 211 Introduction to "C" Programming and UNIX (3-2) 4 hrs.**

Develops working knowledge in the use of the computer in the "C" programming language. Includes problem formulation, data storage and retrieval, algorithms, flowcharts or pseudocode, numerical analysis and structured programming, lexical analysis and string manipulation. Introduces student to a UNIX-like operating system environment. Intended for the computer science or engineering student.

**Prerequisite:** CSC 121 or CSC 208 with a grade of "C" or better or consent of instructor.



**CSC 216 Data Structures and Algorithm Analysis (2-2) 3 hrs.**

Provides exposure to techniques for storing and manipulating data. Includes discussion of addition, deletion and insertion algorithms for stacks, queues, deques, linked lists and trees. Emphasizes algorithm analysis as it builds on topics from previous course, CSC 122. Designed as the third of a sequence of courses (CSC 121, CSC 122, CSC 216 and CSC 217). IAI CS 921

**Prerequisite:** CSC 122 with a grade of "C" or better or consent of instructor.

**CSC 217 Assembler Programming and Machine Organization (3-2) 4 hrs.**

Emphasizes machine-level programming, instruction sets, data representation, subroutines, I/O hardware and software, linking and loading related to higher level languages. Designed as the fourth in a sequence of courses (CSC 121, CSC 122, CSC 216 and CSC 217) for students majoring in Computer Science. IAI CS 922

**Prerequisite:** CSC 216 with a grade of "C" or better or consent of instructor.

**CWE Cooperative Work Experience**

**CWE 220 Cooperative Education I 2-5 hrs.**

Provides cooperative work experience integrating classroom theory with on-the-job training. The College will assist in securing employment related to the student's major field of study and/or career interest. A training plan is developed by the student, employer and Cooperative Faculty Advisor. One hour per week is required for a seminar devoted to issues dealing with job preparation and success. This course is not a substitute for a required internship, externship or practicum and will not be applicable to certain career programs.

Two Credits: A minimum of 120 training hours is required.  
Three Credits: A minimum of 240 training hours is required.  
Four Credits: A minimum of 400 training hours is required.  
Five Credits: A minimum of 560 training hours is required.

**Prerequisite:** Approval of the program coordinator/department chair and Cooperative Education office. See program enrollment guidelines for major field of study or career programs.

**CWE 221 Cooperative Education II 2-5 hrs.**

Continues CWE 220. A student can continue employment with current employer or select a different area of concentration related to major field of study or career interest. Work experience must go beyond what was learned in CWE 220 or consist of an entirely different learning experience. A training plan is developed by the student, employer and Cooperative Faculty Advisor. One hour per week is required for a seminar devoted to issues dealing with job success. Two Credits: A minimum of 120 training hours is required. Three Credits: A minimum of 240 training hours is required. Four Credits: A minimum of 400 training hours is required. Five Credits: A minimum of 560 training hours is required.

**Prerequisite:** CWE 220 and approval of the program coordinator/department chair and Cooperative Education office. See program enrollment guidelines for major field of study or career programs.

**DHY Dental Hygiene**

**DHY 100 Pre-Clinic (3-6) 5 hrs.**

Introduces the student to clinical dental hygiene with emphasis on the role of the dental hygienist in the control and prevention of dental disease.

**Prerequisite:** Consent of coordinator.

**DHY 101 Clinical Dental Hygiene I (2-9) 5 hrs.**

Applies theoretical concepts in a clinical setting and introduces periodontology. Refines clinical skills and emphasizes the preventive aspects of dentistry. The student performs traditional dental hygiene clinical functions.

**Prerequisite:** Consent of coordinator.

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

Provides theory in radiation physics, safety and the biological effects of ionizing radiation. Intraoral exposure techniques, darkroom procedures and film interpretation are emphasized in the laboratory. Practical experience provided on manikins and selected patients.

**Prerequisite:** Consent of coordinator.

**DHY 119 Oral Health Management of Special Needs Populations (2-0) 2 hrs.**

Introduces characteristics and oral health management needs of geriatrics, special populations and the medically compromised with diabetes and cardiovascular disease. Physical, psycho/social and oral characteristics associated with special needs populations are discussed. Modifications of comprehensive dental hygiene care will be emphasized. The caregiver team concept will be incorporated.

**Prerequisite:** DHY and DHY 101 with grades of "C" or better. or consent of coordinator.

## COURSE DESCRIPTIONS

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

Provides clinical practice in oral prophylaxis on adult patients, including preventive techniques, exposing radiographs and patient management.

**Prerequisite:** DHY 100 and DHY 101 with grades of "C" or better or consent of coordinator.

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

Introduces anatomy of the head and neck regions with special emphasis on the human dentition. Skeletal, muscular, glandular, circulatory, nervous and epithelial structures are considered in detail. Also includes introductory material on human histology and orofacial embryology.

**Prerequisite:** Consent of coordinator.

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

Introduces the student to terms and anatomic structures of the oral cavity including a detailed study of crown and root morphology of both primary and permanent dentitions.

**Prerequisite:** Consent of coordinator.

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

Studies fundamentals of microscopic and gross pathology and general pathological processes. Specifically emphasizes diseases of dental and periodontal tissues and of the supporting oral structures. Correlates clinical manifestations of disease with dental hygiene practice.

**Prerequisite:** Consent of coordinator.

### **DHY 200 Periodontology (1-2) 2 hrs.**

Reviews etiological and histological components of periodontal disease emphasizing current theoretical concepts in treatment and management of periodontally involved patients. Provides laboratory experience to refine non-surgical techniques.

**Prerequisite:** DHY 100 and DHY 101 with grades of "C" or better or consent of coordinator.

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

Studies the development of dental office and clinic practice management procedures and professional interrelationships. Considers the role of the dental hygienist in the various dental specialties and various employment modalities.

**Prerequisite:** Consent of coordinator.

### **DHY 202 Radiology I (0-2) 1 hr.**

Continues practice in the techniques of exposing, processing, mounting and evaluating dental radiographs.

**Prerequisite:** DHY 111 with a grade of "C" or better and DHY 151 with a grade of "P" or consent of coordinator.

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

Continues DHY 202.

**Prerequisite:** DHY 202 with a grade of "C" or better or consent of coordinator.

### **DHY 220 Community Dental Health I (1-2) 2 hrs.**

Introduces the principles of dental public health and its application to dental hygiene, including: epidemiology, disease prevention, assessment methods, program planning and resource identification. Reviews and interprets dental scientific literature and introduces the utilization of research tools and statistical analysis.

**Prerequisite:** DHY 119 with a grade of "C" or better and sophomore standing, or consent of coordinator.

### **DHY 221 Community Dental Health II (1-2) 2 hrs.**

Emphasizes the direct application of preventive dentistry services in the community and the design of treatment plans to meet identified community needs. Community fluoridation, school-based services, tobacco cessation, and consumer education and health promotion will be included. Students will be required to participate in group activities to share service learning experiences.

**Prerequisite:** DHY 119 and DHY 220 with grades of "C" or better and sophomore standing, or consent of coordinator.

### **DHY 240 Dental Pharmacology (2-0) 2 hrs.**

Examines the principles of drug actions and characteristics of major drug groups. Emphasis is placed on drugs used in dentistry and the management of dental patients who receive drug treatment for medical problems.

**Prerequisite:** Consent of coordinator.

### **DHY 250 Clinical Dental Hygiene III (1-12) 5 hrs.**

Continues clinical practice of dental hygiene with emphasis on the comprehensive treatment of periodontally involved patients.

**Prerequisite:** DHY 151 with a grade of "P" or consent of coordinator.

### **DHY 251 Clinical Dental Hygiene V (1-12) 5 hrs.**

Continues DHY 250.

**Prerequisite:** DHY 250 with a grade of "C" or better or consent of coordinator.

### **DHY 269 Science of Dental Materials (1-0) 1 hr.**

Studies the characteristics, properties, composition and function of materials used in dentistry. Includes familiarization with techniques and procedures used in the dental profession.

**Prerequisite:** Consent of coordinator.

### **DHY 270 Dental Materials Laboratory Techniques (0-2) 1 hr.**

Introduces the student to the use and manipulation of materials used in dentistry, with an emphasis on the clinical application of materials that relate directly to the functions of the dental hygienist.

**Prerequisite:** Consent of coordinator.

**DIT Dietetic Technician**

**DIT 100 Introduction to Dietetics (2-0) 2 hrs.**

Introduces the profession of dietetics, career opportunities, relationship to other health care professions and the nutritional care planning process with emphasis on the role of the dietetic technician.

**DIT 101 Basic Nutrition (3-0) 3 hrs.**

Introduces the principles of human nutrition and their application to the needs of normal individuals of all age groups.

**DIT 102 Advanced Nutrition (3-0) 3 hrs.**

Studies the nutritional care of a patient through the prescription of modified diets.

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

**DIT 110 Principles of Food Preparation (2-2) 3 hrs.**

Introduces the scientific principles of food preparation; retail labeling, supermarket shopping; and menu planning for individuals and families of different socioeconomic backgrounds. Laboratory practice includes preparation of foods, sensory evaluation, adjusting recipes for modified diets, along with demonstration and use of equipment.

**Prerequisite:** Prior or concurrent enrollment in DIT 101 and FSM 114 with grades of "C" or better or consent of instructor.

**DIT 150 Dietetic Clinical Laboratory I (1-6) 3 hrs.**

Offers integrated clinical approach to the nutritional care of patients in a community hospital. Provides practice processing diet orders, assisting patients with menu selection, checking meal trays, taking diet histories and making nutrient analyses.

**Prerequisite:** BIO 135 and DIT 100 with grades of "C" or better and prior or concurrent enrollment in BIO 136 and DIT 102 with grades of "C" or better.

**DIT 200 Dietetic Clinical Laboratory II (1-12) 5 hrs.**

Offers clinical experience in community agencies that include nutrition as one of their services. Assigned progression can include school lunch, day care centers, retirement centers, home-delivered meals, commercial processors and hospitals.

**Prerequisite:** DIT 150 and HSC 112 with grades of "C" or better and prior or concurrent enrollment in DIT 201 with a grade of "C" or better, or consent of instructor.

**DIT 201 Nutritional Services in Institutions (3-0) 3 hrs.**

Surveys institutions, agencies and organizations that assist the community in meeting nutritional needs of its people. Emphasis will be placed on developing appropriate educational techniques for individuals and groups of various backgrounds.

**Prerequisite:** DIT 150 with a grade of "C" or better or consent of instructor.

**DIT 202 Nutrition Care Seminar (2-0) 2 hrs.**

Reviews planning, implementing and evaluating nutrition care given to individuals and groups of people having specific disease conditions, both acute and chronic.

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

**DIT 203 Dietetic Technician Seminar (1-0) 1 hr.**

Covers current topics related to the dietetic technician in the workplace.

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

Concurrent enrollment in DIT 250 is strongly recommended.

**DIT 220 Food Systems Administration (3-0) 3 hrs.**

Introduces the principles of administering food systems, with emphasis on menu planning, procurement of quantity foods, quantity foods equipment, staffing and financial controls. Includes an introduction to computer use within food systems.

**Prerequisite:** Prior or concurrent enrollment in DIT 110 or consent of instructor.

**DIT 250 Dietetic Clinical Laboratory III (1-12) 5 hrs.**

Offers student assigned clinical laboratory experience in approved community agencies. Provides opportunity to reach entry-level position competence by practicing skills under the supervision of a registered dietitian.

**Prerequisite:** DIT 200 with a grade of "C" or better or consent of instructor.

**DIV Diversity**

**DIV 101 Exploring Diversity in the U.S. (2-2) 3 hrs.**

Focuses on culture and other diversity issues and topics utilizing an interactive personal development format. Students will discuss dimensions of their own culture and cultures of others within the United States. They will have the opportunity to examine discrimination and prejudice between groups and analyze the impact of these power differences on peoples' lives. The experiential nature of this course will give students the opportunity to develop skills necessary to interact effectively in a diverse society.

**ECO Economics**

**ECO 115 Consumer Economics (3-0) 3 hrs.**

Introduces the concepts of personal financial planning within the current economic environment. Emphasizes topics such as basic macroeconomic theory, obtaining credit, purchasing insurance, investment alternatives, basic real estate finance and tax planning.

## COURSE DESCRIPTIONS

### **ECO 200 Introduction to Economics (3-0) 3 hrs.**

Covers descriptive rather than a quantitative approach to the study of economics. Major topics cover economic history, the elements of macroeconomics, microeconomics and a comparative look at other economic systems. Specifically designed for students in career-vocational curricula. IAI S3 900

### **ECO 210 Money and Banking (3-0) 3 hrs.**

Stresses the practical aspects of money and banking, and emphasizes the basic monetary theory needed by the banking student to apply his knowledge to his particular job. Historical treatment has been kept to a minimum. Emphasis is placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, governmental fiscal policy, balance of payments and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios.

**Prerequisite:** ECO 200 or ECO 212 with a grade of "C" or better.

### **ECO 211 Microeconomics (3-0) 3 hrs.**

Covers economic problems faced by the individual and the firm. Examination of market structures, price and output determination. The microeconomic approach. IAI S3 902

### **ECO 212 Macroeconomics (3-0) 3 hrs.**

Covers economic problems faced by our society. Examination of resource allocation, national income and economic development, from a macroeconomic approach. IAI S3 901

Recommended **Prerequisite:** ECO 211 with a grade of "C" or better.

## **EDU Education**

### **EDU 201 Introduction to Education (3-0) 3 hrs.**

Provides an overview of the American education system. Social, historical and philosophical foundations give perspective to an examination of current issues, policies and trends in the field of education, including cultural diversity. Includes organizational structure, government responsibilities, finance and curriculum.

IAI EED 901 IAI SED 901 IAI SPE 911

### **EDU 202 Pre-Student Teaching Clinical Experience (0-2) 1 hr.**

Provides an in-depth study of classroom practices in the subject and age category that each student is training to teach. Students will observe classrooms in their area of interest and will attend a seminar once weekly to discuss their experience.

IAI EED 904 IAI SED 905 IAI SPE 914

### **EDU 211 Educational Psychology (3-0) 3 hrs.**

Applies psychology principles to education. Special emphasis on understanding human growth and development, and the process of learning upon motivation, intelligence, evaluation, measurement, creativity, culture and gender.

**Prerequisite:** PSY 101 or consent of instructor.

## **Emergency Medical Technician**

See: HSC 110 (Emergency Medical Technician Training)

## **EGR Engineering**

### **EGR 100 Introduction to Engineering (1-1) 1 hr.**

Introduces engineering techniques, methods and history. Explores career options and requirements for various engineering fields. Covers interrelationships within and between engineering, technology and science to allow differentiation between various career choices.

### **EGR 120 Engineering Graphics I (CAD) (2-5) 4 hrs.**

Introduces engineering design utilizing engineering graphics. Topics include freehand sketching, theory of orthographic projection and analysis and synthesis of problems using descriptive geometry techniques. Also includes dimensioning, tolerancing and pictorial projections. Laboratory is CAD-based. IAI EGR 941

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

### **EGR 121 Engineering Graphics II (CAD) (1-5) 3 hrs.**

Covers the analysis of common geometric entities including points, lines, planes and surfaces. Includes cutting planes, auxiliary views, intersections and developments. Analysis is supported by 3-dimensional CAD utilizing solid modeling techniques.

**Prerequisite:** EGR 120 with a grade of "C" or better or consent of instructor.

### **EGR 205 Analytical Mechanics (Statics & Dynamics) (5-0) 5 hrs.**

Covers resultants of force systems using vectors. Emphasizes analysis of these systems acting on members of trusses, frames and machines. Includes forces due to friction, centroids and moments of inertia. Covers displacement, velocity and acceleration of particles; relation between forces acting on rigid bodies and changes in motion produced; translation, rotation, planar motion; solutions using principles of force, mass and acceleration; work energy and impulse momentum solutions. IAI EGR 944

**Prerequisite:** PHY 201 with a grade of "C" or better or consent of instructor.

**EGR 212 Mechanics of Deformable Bodies (3-0) 3 hrs.**

Covers elastic and inelastic relationships between external forces (loads) acting on deformable bodies. Explores stresses and deformations produced, tension and compression members, members subjected to torsion and to bending, buckling (columns), combined stresses, repeated loads (fatigue), energy methods, impact and influence of properties of materials. IAI EGR 945

**Prerequisite:** EGR 205 with a grade of "C" or better.

**EGR 260 Introduction to Circuit Analysis (4-0) 4 hrs.**

Introduces electric circuits, electrical components, network theorems, phasor representation of signals and steady state response. Covers power, transformers and network topology. Includes computer analysis techniques. For engineering transfer students. IAI EGR 931

**Prerequisite:** PHY 202 with a grade of "C" or better.

**Corequisite:** MTH 212.

**EGR 262 Electrical Circuits Laboratory (1-2) 2 hrs.**

Introduces standard electrical instruments and measurement techniques. Includes practical applications to topics of EGR 260. Covers circuit response, elementary filter response and resonance measurements. Includes basic measurements of transistors and operational amplifiers. IAI EGR 931

**Prerequisite:** EGR 260 with a grade of "C" or better or concurrent enrollment.

**EGR 270 Introduction to Digital Systems (3-2) 4 hrs.**

Introduces binary arithmetic and codes, logic gates, Boolean functions and minimization. Covers analysis and synthesis of combinatorial gates and sequential circuits using integrated circuit components. Introduces computer organization and microprocessors. For engineering transfer students. IAI EGR 932

**Prerequisite:** PHY 202 with a grade of "C" or better.

**ELT Electronics**

**ELT 100 Electronics Career Exploration (5-10) 1 hr.**

Studies career and employment possibilities in the electronics industry. Includes observation of practices in electronics and attendance at a seminar to discuss related experiences. For Tech Prep students with no prior courses or work experience in the electronics field. (NOTE: Summer semester only.)

**Prerequisite:** Consent of coordinator.

**ELT 101 Circuits I, Resistive Circuit Analysis (3-4) 5 hrs.**

Studies resistive circuits with time-varying source voltage. Physics of electricity, definitions, symbols and notations for electrical quantities are taught. Circuit properties and their applications to significant circuit configurations are examined.

**Prerequisite:** High school algebra or consent of instructor.

**ELT 102 Circuits II, Single Time Constant Circuits (3-3) 4 hrs.**

Examines R-C and R-L single time constant circuits. Treats these circuits with sinusoidal square wave and step voltages as sources.

**Prerequisite:** ELT 101 and MTH 106 with grades of "C" or better or consent of instructor.

**ELT 103 Circuits III, Networks (3-4) 5 hrs.**

Covers resonance, factors affecting Q and bandwidth, RLC filters, power matching with pi, T and L networks. In addition, double tuned circuits, ringing and transient response of RLC circuits are discussed.

**Prerequisite:** ELT 102 with a grade of "C" or better or consent of instructor.

**ELT 105 Electro-Mechanical Drafting (1-6) 3 hrs.**

Introduces drafting fundamentals for electronic design and packaging. Introduces computer aided design of printed circuit boards. Basic fabrication processes are covered. The course focus is the design and construction of an individual project.

**ELT 110 Introductory Electronics (2-4) 4 hrs.**

Introduces laboratory instruments, circuit components, basic measuring techniques and basic circuits used as building blocks in any electronic system.

**ELT 111 Electronics I, Resistive (2-3) 3 hrs.**

Studies resistive circuits involving electronic devices. Volt-ampere characteristics and physics of diodes, transistors and other semiconductor devices. The emphasis is upon biasing and the setting of DC levels to make the device function.

**Prerequisite:** ELT 110 with a grade of "C" or better or consent of instructor.

**ELT 142 Basic Electricity (Residential/Commercial) (1-2) 2 hrs.**

Introduces students to basic electrical terminology and principles along with working knowledge of tools and techniques used in the installation, maintenance of residential/commercial electrical service and distribution. Select portions of the National Electrical Code are selected.

## COURSE DESCRIPTIONS

**ELT 200 Electronics Internship (1-15) 2 hrs.**

Applies appropriate skills to the electronics technology field. (NOTE: Summer semester only.)

**Prerequisite:** ELT 100 with a grade of "C" or better and consent of coordinator.

**ELT 203 Electronics II, Digital (3-4) 5 hrs.**

Examines the building blocks of digital circuits. These elements are then blended into topics and applications. Topics include Boolean algebra, Karnaugh mapping, counters and microprocessors.

**Prerequisite:** ELT 110 with a grade of "C" or better.

**ELT 204 Electronics III, Advanced Electronics (3-4) 5 hrs.**

Examines electronic circuits using diodes, transistors and operational amplifiers. Applies linear equivalent circuits as an analysis tool. Studies amplifiers, feedback principles and operational amplifier configurations as practical applications of the linear analysis techniques.

**Prerequisite:** ELT 111 with a grade of "C" or better or consent of instructor.

**ELT 205 Electronic Instrumentation (3-4) 4 hrs.**

Studies methods of sending and controlling physical industrial processes. Components involved are transducers, indicators, recorders and programmable controllers.

**Prerequisite:** ELT 110 with a grade of "C" or better or consent of instructor.

**ELT 206 Electronic Computers (3-4) 5 hrs.**

Studies computer architecture through the use of microprocessors, digital computer algorithms and software programming. The utilization of microprocessors is extensive.

**Prerequisite:** ELT 210 with a grade of "C" or better or consent of instructor.

**ELT 207 UHF Communications and Reception (3-4) 5 hrs.**

Emphasizes design techniques in communication circuits, the relationship of modulation systems to bandwidth requirements and frequency spectrum. A design project is part of the course work.

**Prerequisite:** ELT 103 with a grade of "C" or better or consent of instructor.

**ELT 210 Computer Programming (3-0) 3 hrs.**

Presents the use of the computer and microprocessor as special tools and introduces the student to computer architecture, languages and programming with emphasis on electronic applications.

**ELT 215 Industrial Controls and Motors (3-4) 5 hrs.**

Examines industrial pneumatic and hydraulic control circuits. Covers an introduction to fractional horsepower and programmable logic controllers (PLC). Process control applications are introduced.

**Prerequisite:** ELT 110 with a grade of "C" or better or consent of instructor.

**ELT 216 Microprocessor Software Applications (3-4) 5 hrs.**

Applies assembly language programming to practical software problems. Studies computational algorithms in depth. May develop monitor programs along with multi-programming examples. Stresses debugging and documentation.

**Prerequisite:** ELT 206 with a grade of "C" or better or consent of instructor.

**ELT 217 Microprocessor Peripheral Systems (3-4) 5 hrs.**

Examines interfacing and operation of peripheral systems commonly used with microprocessor and minicomputers. Includes video displays, teleprinters, modems, codes and smart terminals.

**Prerequisite:** ELT 206 with a grade of "C" or better or consent of instructor.

**ELT 218 Principles of Microprocessor Systems Design (3-4) 5 hrs.**

Examines central processor unit architecture, monitor program structure, system control timing, input-output control and data bus structures. Considers input-output hardware design, interrupts, hardware and software design.

**Prerequisite:** ELT 206 with a grade of "C" or better or consent of instructor.

### EMF Electronics Manufacturing Technician

**EMF 111 Electronics Math I (2-0) 2 hrs.**

Introduces topics in algebra, vectors, trigonometry, and problem solving techniques as they apply to the Electronics Manufacturing Technician program within an industrial setting.

**Prerequisite:** MTH 100 or equivalent.

**EMF 112 Electronics Math II (2-0) 2 hrs.**

Continues the use of algebra to solve linear equations. The quadratic equation is introduced along with right triangle trigonometry.

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

**EMF 113 Electronics Math III (2-0) 2 hrs.**

Continues EMF 112 with additional topics in trigonometry, logarithms and exponents. Introduces complex numbers and complex arithmetic with practical applications.

**Prerequisite:** EMF 112 with a grade of "C" or better.

## COURSE DESCRIPTIONS

### **EMF 114 Electronics Math IV (2-0) 2 hrs.**

Introduces the inverse trigonometric functions and continues the study of complex algebra. Calculus concepts such as the limit, derivative, and integral are introduced on a rudimentary level. The calculator is used to show applications of derivatives and integrals to solve technical problems.

**Prerequisite:** EMF 113 with a grade of "C" or better.

### **EMF 132 Technical Programming I (1.5-0) 1.5 hrs.**

Introduces the student to computer usage in the electronics/manufacturing environment. Basic software packages are used in the electronics manufacturing setting.

### **EMF 133 Technical Programming II (1.5-0) 1.5 hrs.**

Introduces computer programming through a structural language. Technical programming is developed through problems formulated in an electronics manufacturing climate. Documentation of programs within the industrial/technical setting is emphasized.

**Prerequisite:** EMF 132 with a grade of "C" or better.

### **EMF 134 Digital Electronics I (1.5-1) 2 hrs.**

Covers TTL and CMOS combinatorial logic circuits. Boolean Algebra and Karnaugh Mapping are tools used to analyze all logic systems. Common logic circuits such as adders, decoders, multiplexors, and parity generators are built and tested.

### **EMF 135 Digital Electronics II (1.5-1) 2 hrs.**

Introduces basic flip-flop circuits. Counters, shift registers are analyzed showing applications in practical systems. Serial and parallel movement of data is covered along with troubleshooting methods.

**Prerequisite:** EMF 134 with a grade of "C" or better.

### **EMF 136 DC Circuit Analysis I (1.5-2) 2.5 hrs.**

Serves as the foundation course for all analog circuit analysis. The fundamental qualities of electric circuits are defined and basic units of measurement are emphasized in the laboratory. Ohm's Law, Kirchoff's Laws and the basic series and parallel circuit configurations are analyzed.

**Prerequisite:** EMF 114 with a grade of "C" or better.

### **EMF 137 DC Circuit Analysis II (1.5-2) 2.5 hrs.**

Continues the study of DC circuit analysis. The fundamental theorems of circuit analysis are covered along with the development of node and loop equations.

**Prerequisite:** EMF 136 with a grade of "C" or better.

### **EMF 170 Electronics Manufacturing Internship I (1-15) 2 hrs.**

Applies appropriate skills to the electronics manufacturing and electronics technology field.

**Prerequisite:** EMF 135 with a grade of "C" or better, or consent of coordinator.

### **EMF 171 Electronics Manufacturing Internship II (5-10) 1 hr.**

Participates in appropriate technician level competencies and problem-solving skills related to the electronics manufacturing field.

**Prerequisite:** EMF 170 with a grade of "C" or better, or consent of coordinator.

### **EMF 172 Electronics Manufacturing Internship III (1-15) 2 hrs.**

Applies appropriate technician level applications and skill based seminars which enhance technician skills and competencies used in the electronics manufacturing environment.

**Prerequisite:** EMF 171 with a grade of "C" or better, or consent of coordinator.

### **EMF 230 AC Circuit Analysis I (1.5-1) 2 hrs.**

Introduces the analysis of AC circuits using principles, theorems and equations developed in EMF 136 and EMF 137. The fundamental circuit components of resistance, inductance and capacitance are studied with respect to changes in frequency. Builds on a strong foundation of complex numbers and trigonometry applied to the analysis of AC circuits. Time constants of simple circuits are analyzed.

**Prerequisite:** EMF 137 with a grade of "C" or better.

### **EMF 231 AC Circuit Analysis II (1.5-1) 2 hrs.**

Continues the study of AC circuits by developing the concepts of resonance, power and filter response. Frequency response characteristics of circuits will be stressed throughout.

**Prerequisite:** EMF 230 with a grade of "C" or better.

### **EMF 232 Linear Devices I (1.5-1) 2 hrs.**

Introduces semiconductor electronic devices. The DC theory of operation is emphasized throughout. The characteristic curves and DC biasing are developed. Simple troubleshooting techniques are defined.

**Prerequisite:** EMF 137 with a grade of "C" or better.

### **EMF 233 Linear Devices II (1.5-1) 2 hrs.**

Introduces the AC equivalent of semiconductor diode and amplifier circuits. Power amplifiers are analyzed and the FET is introduced. Several common amplifier configurations are analyzed.

**Prerequisite:** EMF 232 with a grade of "C" or better.

## COURSE DESCRIPTIONS

**EMF 234 Microprocessor I (1.5-1) 2 hrs.**  
Introduces microprocessor using the 8 bit machine. Basic computer arithmetic is covered along with memory and bus structure.

**Prerequisite:** EMF 135 with a grade of "C" or better.

**EMF 235 Microprocessor II (1.5-1) 2 hrs.**  
Continues the study of the 8 bit microprocessor. Addressing structures are covered along with simple program writing. Hardware configuration and its relation to input/output, interrupts and DMA are introduced.

**Prerequisite:** EMF 234 with a grade of "C" or better.

**EMF 236 Microprocessor III (1.5-1) 2 hrs.**  
Continues the study of microprocessors into the 16 bit machine. A 16 bit instruction set is introduced along with an assembler and debugger.

**Prerequisite:** EMF 235 with a grade of "C" or better.

**EMF 237 Microprocessor IV (1.5-1) 2 hrs.**  
Introduces C programming. The basic ideas of the C language are used to show operating system interfaces and control applications. The basics of compilers are given along with the use of disks and files.

**Prerequisite:** EMF 236 with a grade of "C" or better.

**EMF 238 Electronics Communications Systems I (1.5-1) 2 hrs.**

Introduces the concepts of communications electronic systems. Modulation and detection techniques associated with amplitude modulation and single sideband are covered. Propagation, antenna characteristics and transmission line behavior are included.

**Prerequisite:** EMF 231 and EMF 233 with grades of "C" or better.

**EMF 239 Electronics Communications Systems II (1.5-1) 2 hrs.**

Continues the study of communications electronic systems by analyzing frequency modulation and detection techniques. Digital modulation techniques such as FSK, PSK and QAM are also covered. Microwave, satellite and fiber optic systems are also introduced.

**Prerequisite:** EMF 238 with a grade of "C" or better.

**EMF 250 Linear Devices III (1.5-1) 2 hrs.**  
Studies more advanced solid state device circuits. Frequency response, operational amplifier configurations and tuned amplifiers are covered. Oscillator fundamentals and troubleshooting techniques to the component level are examples of the practical emphasis within the course.

**Prerequisite:** EMF 233 with a grade of "C" or better.

**EMF 251 Linear Devices IV (1.5-1) 2 hrs.**  
Continues the study of advanced topics in solid state systems. Schmitt trigger circuits, thyristors, photo conductor devices, and voltage regulators are a few of the circuits which are analyzed.

**Prerequisite:** EMF 250 with a grade of "C" or better.

## ENG English

**ENG 098 Composition (3-0) 3 hrs.**  
Provides instruction in developing basic writing skills essential for effective written discourse by giving students the conceptual tools necessary for developing a basic framework for writing. Prepares students for entry into ENG 100. Carries no transfer credit.

**Prerequisite:** English placement exam.

**Recommended Corequisite:** RDG 090.

**ENG 100 Composition (3-0) 3 hrs.**  
Develops skills in reading comprehension and in writing standard effective English through the study of language, grammar, sentence structure, and the paragraph and essay form. Activities include the analytical reading of paragraphs and short essays, the writing of paragraphs and essays, and practice with usage, diction, semantics, basic mechanics and sentencings. This course does not meet the General Education requirements for the A.A. and A.S. degree.

**Prerequisite:** Satisfactory score in English placement test or grade of "C" or better in ENG 098.

**ENG 101 Composition (3-0) 3 hrs.**  
Emphasizes the writing of expository prose. Introduction to the critical reading of nonfiction prose. IAI C1 900

**Prerequisite:** Satisfactory score on the writing placement test, an ACT English score of 19 or more and an ACT reading score of 20 or more, or ENG 100 with a grade of "C" or better. ESL students who have achieved a grade of "B" or better in ESL 073 and a grade of "B" or better in ESL 074 or ESL 099 will be admitted.

**ENG 102 Composition (3-0) 3 hrs.**  
Continues ENG 101. Reading literature and writing of various types of prose. Introduces methods used in writing investigative papers. IAI C1 901

**Prerequisite:** ENG 101 with a grade of "C" or better or consent of instructor or department chair.

**ENG 103 Technical and Report Writing (3-0) 3 hrs.**

Introduces the various types of writing and communication used in business and technology. Includes instructions, procedures, abstracts, proposals, visuals and reports.

**Prerequisite:** ENG 101 with a grade of "C" or better or consent of instructor or department chair.



**ENG 130 Business Writing (3-0) 3 hrs.**

Teaches formal and psychological aspects of business correspondence. Introduction to various kinds of business letters, memoranda and reports. Improvement of grammar, spelling and word usage.

**Prerequisite:** Satisfactory score on English placement test or ENG 100 with a grade of "C" or better.

**ENG 200 Professional Writing: Grammar and Style (3-0) 3 hrs.**

Investigates the elements of English grammar, usage, and style important for effective academic and public writing, such as letters, essays, reports, and proposals.

**Prerequisite:** ENG 101 with a grade of "C" or better or consent of instructor or department chair.

**ENG 201 Advanced Composition (3-0) 3 hrs.**

Teaches additional skills in critical reading and thinking, the forms of public expository and argumentative writing and the elements of an effective public writing style.

**Prerequisite:** ENG 102 with a grade of "C" or better or consent of instructor.

**ENG 220 Creative Writing (3-0) 3 hrs.**

Provides guided practice in various types of creative writing. Emphasizes skills common to creative expression, including description, plotting, narration, dialogue and verse.

**Prerequisite:** ENG 102 with a grade of "C" or better or consent of instructor.

**ESL English as a Second Language**

**ESL 010 ESL: Core Language Skills (1-0 to 6-0) 1-6 hrs.**

Focuses on grammatical structures and patterns of English for high beginning English as a Second Language students. Emphasizes communicative activities. Includes listening, speaking, reading and writing skills. Carries no transfer credit.

**Prerequisite:** Native language literacy, placement test.

**ESL 015 ESL: Listening and Speaking I (1-0) 1 hr.**

Focuses on listening and speaking skills for high beginning English as a Second Language students who read and write proficiently in their native languages. Includes pronunciation skills. Carries no transfer credit.

**Prerequisite:** Placement test.

**ESL 016 ESL: Grammar I (2-0) 2 hrs.**

Focuses on grammatical structures and patterns of English for high beginning English as a Second Language students who read and write proficiently in their native languages. Emphasizes listening, comprehension and speaking ability. Carries no transfer credit.

**Prerequisite:** Completion of foreign or American secondary school; placement test.

**ESL 018 ESL: Conversation I (2-0) 2 hrs.**

Focuses on the development of conversation skills for high-beginning English as a Second Language students who read and write proficiently in their native languages. Concentrates on areas necessary for successful communication in a variety of American settings. Carries no transfer credit.

**Prerequisite:** Placement test.

**ESL 020 ESL: Core Language Skills II (1-0 to 6-0) 1-6 hrs.**

Continues grammatical structures and patterns of English for high beginning English as a Second Language students. Emphasizes communicative activities. Includes listening, speaking, reading and writing skills. Carries no transfer credit.

**Prerequisite:** Placement tests or ESL 010 or ESL 016 with a grade of "C" or better.

**ESL 023 ESL: Reading and Writing I (2-0) 2 hrs.**

Develops reading and writing skills for high beginning English as a Second Language students who read and write proficiently in their native languages. Includes sentence patterns and paragraph structure. Carries no transfer credit.

**Prerequisite:** Completion of foreign or American secondary school; placement test.

**ESL 024 ESL: Reading and Writing II (2-0) 2 hrs.**

Continues reading and writing skills for high beginning English as a Second Language students who read and write proficiently in their native languages. Continues sentence patterns and paragraph structure. Introduces multi-paragraph compositions. Carries no transfer credit.

**Prerequisite:** ESL 023 with a grade of "C" or better.

**ESL 025 ESL: Listening and Speaking II (1-0) 1 hr.**

Continues listening and speaking skills for high beginning English as a Second Language students who read and write proficiently in their native languages. Includes pronunciation skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 010 or ESL 015 with a grade of "C" or better.

## COURSE DESCRIPTIONS

**ESL 026 ESL: Grammar II (2-0) 2 hrs.**

Continues grammatical structures and patterns of English for high beginning English as a Second Language students. Includes practice of patterns presented previously. Emphasizes listening comprehension and speaking ability. Carries no transfer credit.

**Prerequisite:** ESL 016 with a grade of "C" or better.

**ESL 028 ESL: Conversation II (2-0) 2 hrs.**

Continues the development of conversation skills for high-beginning English as a Second Language students who read and write proficiently in their native languages. Concentrates on areas necessary for successful communication in a variety of American settings. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 010 or ESL 018 with a grade of "C" or better.

**ESL 030 ESL: Core Language Skills III (1-0 to 6-0) 1-6 hrs.**

Focuses on increasingly complex grammatical structures and patterns of English for intermediate English as a Second Language students. Includes practice of patterns presented previously. Emphasizes listening comprehension and speaking ability. Carries no transfer credit.

**Prerequisite:** ESL 020 or ESL 026 with a grade of "C" or better.

**ESL 033 ESL: Reading III (2-0) 2 hrs.**

Develops reading skills for low-intermediate English as a Second Language students. Focuses on the reading of narratives. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 020 or ESL 024 with a grade of "C" or better.

**ESL 034 ESL: Reading IV (2-0) 2 hrs.**

Continues the development of reading skills for low-intermediate English as a Second Language students. Focuses on the reading of more complex narratives. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 033 with a grade of "C" or better.

**ESL 035 ESL: Listening and Speaking III (1-0) 1 hr.**

Develops listening and speaking skills for low-intermediate English as a Second Language students. Includes pronunciation skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 020 or ESL 025 with a grade of "C" or better.

**ESL 036 ESL: Grammar III (2-0) 2 hrs.**

Focuses on grammatical structures and patterns of English for low-intermediate English as a Second Language students. Emphasizes the recognition and production of grammatical structures and how these structures affect meaning in both spoken and written English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 026 with a grade of "C" or better.

**ESL 037 ESL: Reading V (2-0) 2 hrs.**

Develops reading techniques for intermediate English as a Second Language students. Focuses on the reading of a variety of materials. Promotes independent reading in English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 034 or ESL 040 and ESL 044 with grades of "C" or better.

**ESL 038 ESL: Conversation III (2-0) 2 hrs.**

Focuses on the development of conversation skills for low-intermediate English as a Second Language students who read and write proficiently in their native languages. Communication in a variety of American settings. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 020 or ESL 028 with a grade of "C" or better.

**ESL 039 ESL: Conversation IV (2-0) 2 hrs.**

Focuses on the development of conversation skills for low-intermediate English as a Second Language students who read and write proficiently in their native languages. Concentrates on areas necessary for successful communication in a variety of American settings. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 030 or ESL 038 with a grade of "C" or better.

**ESL 040 ESL: Core Language Skills IV (1-0 to 6-0) 1-6 hrs.**

Continues increasingly complex grammatical structures and patterns of English for low-intermediate English as a Second Language students. Emphasizes communicative activities. Includes listening, speaking, reading and writing skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 030 or ESL 036 with a grade of "C" or better.

**ESL 043 ESL: Writing III (2-0) 2 hrs.**

Focuses on the writing of paragraphs and short compositions for low-intermediate English as a Second Language students. Continues study of sentence patterns and introduces editing skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 024 or ESL 030 with a grade of "C" or better.

**ESL 044 ESL Writing IV (2-0) 2 hrs.**

Focuses on the writing of short compositions with simple, compound, and complex sentences for low-intermediate English as a Second Language students. Continues the development of editing skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 043 with a grade of "C" or better.

**ESL 045 ESL: Listening and and Speaking (1-0) 1 hr.**

Continues the development of listening and speaking skills for low-intermediate English as a Second Language students. Includes pronunciation skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 025 or ESL 030 or ESL 035 with a grade of "C" or better.

**ESL 046 ESL: Grammar IV (2-0) 2 hrs.**

Continues grammatical structures and patterns of English for low-intermediate English as a Second Language students. Includes practice of patterns introduced previously. Emphasizes the recognition and production of grammatical structures and how these structures affect meaning in both spoken and written English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 036 or a grade of "C" or better.

**ESL 047 ESL: Writing V (2-0) 2 hrs.**

Develops academic writing for intermediate English as a Second Language students. Emphasizes expository paragraphs and introduces essays. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 044 with a grade of "C" or better.

**ESL 048 ESL: American Culture I (2-0) 2 hrs.**

Explores contemporary American culture for high intermediate English as a Second Language students. Focuses on areas necessary for successful communication, classroom practices and work values. Emphasizes and enhances listening comprehension and speaking skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 040 or ESL 046 with a grade of "C" or better.

**ESL 049 ESL: Grammar V (2-0) 2 hrs.**

Focuses on grammatical structures and patterns of English for intermediate English as a Second Language students. Includes practice of patterns introduced previously. Emphasizes the recognition and production of grammatical structures and how these students affect meaning in both spoken and written English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 046 with a grade of "C"; or better.

**ESL 050 ESL: Core Languages Skills V (1-0 to 6-0) 1-6 hrs.**

Focuses on complex grammatical structures and patterns of English for high intermediate to advanced English as a Second Language students. Emphasizes communicative activities. Includes listening, speaking, reading and writing skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 040 or ESL 046 with a grade of "C" or better.

**ESL 053 ESL: Reading VI (2-0) 2 hrs.**

Continues reading techniques for intermediate to advanced English as a Second Language students. Focuses on the reading of a variety of materials. Promotes independent reading in English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 037 or ESL 044 with a grade of "C" or better.

**ESL 054 ESL: Reading VII (2-0) 2 hrs.**

Develops reading techniques for high-intermediate English as a Second Language students. Focuses on the reading of a variety of materials in their original forms. Promotes independent reading in English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 053 and ESL 063 with grades of "C" or better.

**ESL 055 ESL: Listening and Speaking V (1-0) 1 hr.**

Continues the development of listening and speaking skills for intermediate English as a Second Language students. Includes pronunciation skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 040 or ESL 045 with a grade of "C" or better.

**ESL 056 ESL: Grammar VI (2-0) 2 hrs.**

Continues the study of grammatical structures and patterns of English for intermediate English as a Second Language students. Includes practice of patterns introduced previously. Emphasizes the recognition and production of grammatical structures and how they affect meaning in both spoken and written English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 049 with a grade of "C" or better.

**ESL 057 ESL: Reading VIII (2-0) 2 hrs.**

Develops reading techniques for high intermediate English as a Second Language students. Focuses on the reading of a variety of materials in their original form. Promotes independent reading in English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 054 and ESL 063 with grades of "C" or better.

## COURSE DESCRIPTIONS

**ESL 058 ESL: Spelling Strategies (0-4) 2 hrs.**

Focuses on the spelling system of American English for high intermediate and advanced students of English as a Second Language who are having difficulty with American English spelling. Includes memory techniques, dictionary use, study of word parts and spelling aids in word processing programs. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 040 or ESL 044 with a grade of "C" or better.

**ESL 059 ESL: Conversation V (2-0) 2 hrs.**

Focuses on development of conversation skills for intermediate English as a Second Language students. Concentrates on areas necessary for successful communication in a variety of American settings. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 039 or ESL 040 with a grade of "C" or better.

**ESL 060 ESL: Core Language Skills VI (1-0 to 6-0) 1-6 hrs.**

Focuses on complex grammatical structures and patterns of English for advanced English as a Second Language students. Emphasizes communicative activities. Includes listening, speaking, reading and writing skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 050 or ESL 056 with a grade of "C" or better.

**ESL 063 ESL: Writing VI (2-0) 2 hrs.**

Continues academic writing for intermediate English as a Second Language students. Emphasizes expository essays. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 047 with a grade of "C" or better.

**ESL 064 ESL: Writing VII (2-0) 2 hrs.**

Develops academic writing for high intermediate English as a Second Language students. Emphasizes expository essays. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 063 with a grade of "C" or better.

**ESL 065 ESL: Listening and Speaking VI (1-0) 1 hr.**

Continues the development of listening and speaking skills for high-intermediate English as a Second Language students. Includes pronunciation skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 050 or ESL 055 with a grade of "C" or better..

**ESL 066 ESL: Grammar VII (2-0) 2 hrs.**

Focuses on grammatical structures and patterns of English for high-intermediate English as a Second Language students. Includes practice of patterns introduced previously. Emphasizes the recognition and production of grammatical structures and how they affect meaning in both spoken and written English. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 056 with a grade of "C" or better.

**ESL 067 ESL: Writing VIII (2-0)**

Continues academic writing of high-intermediate English as a Second Language students. Emphasizes expository essays. Carries no transfer credit.

**Prerequisite:** ESL 064 with a grade of "C" or better.

**ESL 068 ESL: Reading IX (2-0) 2 hrs.**

Develops reading techniques for advanced English as a Second Language students. Focuses on the reading of college textbooks and academic discussion of literature. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 057 and ESL 063 with grades of "C" or better.

**ESL 069 ESL: Writing IX (2-0) 2 hrs.**

Focuses on academic writing for advanced English as a Second Language students. Emphasizes expository essays. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 064 with a grade of "C" or better.

**ESL 073 ESL: Reading X (2-0) 2 hrs.**

Continues the development of reading techniques for advanced English as a Second Language students. Focuses on the reading of college textbooks and academic discussions of literature. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 063 and ESL 068 with grades of "C" or better.

**ESL 074 ESL: Writing IX (2-0) 2 hrs.**

Focuses on academic writing for advanced English as a Second Language students. Emphasizes expository essays. Carries no transfer credit.

**Prerequisite:** ESL069 with a grade of "C" or better.

**ESL 075 ESL: Conversation VI (2-0) 2 hrs.**

Focuses on the development of conversation skills for high intermediate English as a Second Language students. Concentrates on areas necessary for successful communication in a variety of American settings. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 050 or ESL 059 with a grade of "C" or better.

**ESL 076 ESL: Grammar VIII (2-0) 2 hrs.**

Continues grammatical structures and patterns of English for high-intermediate English as a Second Language students. Includes practice of patterns introduced previously. Emphasizes the recognition and production of grammatical structures and how they affect meaning in both spoken and written English.

Carries no transfer credit.

**Prerequisite:** Placement test or ESL 066 with a grade of "C" or better.

**ESL 077 ESL: Advanced Vocabulary I (2-0) 2 hrs.**

Focuses on the vocabulary of formal American English speech and writing for advanced English as a Second Language students. Emphasizes words and expressions associated with academic style and register. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 060 or ESL 066 with a grade of "C" or better.

**ESL 078 ESL: American Culture II (2-0) 2 hrs.**

Explores contemporary American culture for advanced English as a Second Language students. Focuses on areas necessary for successful communication in American society including basic American values and the roles of government and the family. Emphasizes and enhances listening comprehension and speaking skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 060 or ESL 066 with a grade of "C" or better.

**ESL 079 ESL: Preparation for the TOEFL (0-2) 1 hr.**

Focuses on the English listening and reading comprehension skills, grammar and vocabulary needed for the TOEFL (Test of English as a Foreign Language). Includes test-taking skills. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 060 or ESL 066 with a grade of "C" or better.

**ESL 085 ESL: Listening and Speaking VII—Pronunciation Skills (2-0) 2 hrs.**

Focuses on improvement of pronunciation skills for advanced English as a Second Language students. Emphasizes connected speech, including such features as sounds, stress, intonation, timing and juncture. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 060 or ESL 065 or ESL 066 with a grade of "C" or better.

**ESL 086 ESL: Editing Skills (2-0) 2 hrs.**

Provides intensive writing practice with a focus on editing skills for advanced English as a Second Language students. Reviews essay development, mechanics and the features of American English grammatical structure that are most difficult for ESL students. Carries no transfer credit.

**Prerequisite:** ESL 076 and ESL 074 or ESL 099 with grades of "C" or better.

**ESL 087 ESL: Advanced Vocabulary II (2-0) 2 hrs.**

Focuses on the vocabulary of informal American English speech and writing for advanced English as a Second Language students. Emphasizes the high-frequency idiomatic expressions that are most troublesome for advanced ESL students. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 060 or ESL 066 with a grade of "C" or better.

**ESL 098 ESL: Listening and Speaking VIII (2-0) 2 hrs.**

Focuses on listening and speaking skills specific to the American college classroom for advanced English as a Second Language students. Includes note taking skills, class discussion practice and formal speaking. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 060 or ESL 066 or ESL 085 with a grade of "C" or better.

**ESL 099 ESL: Writing—Research Paper (2-0) 2 hrs.**

Focuses on research skills and preparation of the American research paper for advanced English as a Second Language students. Reviews essay development. Carries no transfer credit.

**Prerequisite:** Placement test or ESL 074 with a grade of "C" or better.

**FAS Fashion Design**

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

Introduces basic industrial techniques of pattern making and draping. Variety of slopers (bodices, skirts, sleeves, etc.) developed. Accuracy and professional standards stressed. Patterns tested in muslin for fit.

**Corequisite:** FAS 103 or consent of instructor.

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

Develops further basic sloper set. Patterns tested in muslin for fit.

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

**Corequisite:** FAS 104.

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

Introduces basic principles of using master basic sloper set to develop patterns for original designs. Professional design room techniques.

**Corequisite:** FAS 101 or consent of instructor.

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

Develops patterns from basic sloper set. Actual construction of finished garments. Emphasis on styling, fit and professional finishing.

**Prerequisite:** FAS 103 with a grade of "C" or better.

**Corequisite:** FAS 102.

## COURSE DESCRIPTIONS

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

Introduces basic fashion sketching — front, back and side views. Relationship of figure and garment. Sketching of original design.

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

Focuses on advanced fashion sketching and fabric rendering. Emphasis on development of individual style. Basic layout and presentation.

**Prerequisite:** FAS 105 with a grade of "C" or better.

**FAS 107 Textiles I (1-2) 2 hrs.**

Studies basic design and color principles in development of creative fabrics. General analysis and identification of fabrics and employment of various methods such as weaving, printing and dyeing.

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

Continues FAS 107. Contemporary fabrics analyzed and studied.

**Prerequisite:** FAS 107 with a grade of "C" or better.

**Corequisite:** FAS 109.

**FAS 109 Fashion Arts and Design (2-0) 2 hrs.**

Focuses on theory and principles of design for fashion. The elements of design and color are covered. Develops the perception and awareness to judge good design and to analyze potential trends. Studies the influence of present-day cultural trends on the field of design.

**Corequisite:** FAS 108.

**FAS 110 Costume History (2-0) 2 hrs.**

Introduces the elements of design and color in historical perspective. A survey of historical periods of design focusing on costumes. Examines the influences of social, political and economic forces on these periods.

**FAS 111 Twentieth Century Costume and Trends (3-0) 3 hrs.**

Presents an overview of fashion history and current trends in the 20th century. Includes fashion design, merchandising and factors which influence fashion from the merchandiser's point of view such as arts, technology and socioeconomic aspects. Students participate in video production.

**FAS 112 Fashion Basics (3-0) 3 hrs.**

Presents fashion merchandise through evaluation of fashion products. Develops awareness of construction, as well as workmanship and design elements, such as fabric, color silhouette and taste.

**FAS 114 Fashion Modeling (0-2) 1 hr.**

Introduces the art of modeling for career or personal enrichment. Provides practice to achieve grace, assurance, poise and polish. Studies the mood of showing clothes and fashion shows.

**FAS 116 Fashion Industries Career Practicum and Seminar (1-10) 3 hrs.**

Studies an overview of career and employment possibilities in the fashion businesses and industries. Places emphasis on individual career path selections through interest testing and career counseling.

**FAS 201 Advanced Flat Pattern Design and Draping I (2-4) 4 hrs.**

Continues advanced development of basic sloper set, including coat and suit slopers, basics of grading (sizing). Patterns tested in muslin for fit and accuracy.

**Prerequisite:** FAS 101 and FAS 102 with a grade of "C" or better.

**Corequisite:** FAS 203.

**FAS 202 Advanced Flat Pattern Design and Draping II (2-4) 4 hrs.**

Continues FAS 201. Studies advanced techniques of pattern making and draping, such as trend jacket and coat. Actual construction of jacket and coat will be involved.

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

**Corequisite:** FAS 204.

**FAS 203 Advanced Diversified Apparel Design I (2-4) 4 hrs.**

Develops patterns for the translation of original designs into completed garments. Includes visits to manufacturers and speakers from industry.

**Prerequisite:** FAS 103 and FAS 104 with grades of "C" or better.

**Corequisite:** FAS 201.

**FAS 204 Advanced Diversified Apparel Design II (2-4) 4 hrs.**

Continues FAS 203. Works on collection of individual design and actual construction of coordinated garments.

**Prerequisite:** FAS 203 with a grade of "C" or better.

**Corequisite:** FAS 202.

**FAS 205 Tailoring Techniques I (0-4) 2 hrs.**

Introduces professional assembling procedures, details and finishes. Particular emphasis on coats and suits.

**FAS 206 Tailoring Techniques II (0-4) 2 hrs.**

Continues FAS 205. Tailoring of original garments.

**Prerequisite:** FAS 205 with a grade of "C" or better.

**FAS 209 Advanced Fashion Illustration I (0-2) 1 hr.**

Emphasizes work on a professional studio level. Focuses on work sketches as well as finished art. Fashion illustration as advertising, publicity, promotion and display.

**Prerequisite:** FAS 106 with a grade of "C" or better or consent of coordinator.

**FAS 210 Advanced Fashion Illustration II (0-2) 1 hr.**

Continues FAS 209. Preparation of professional portfolio.

**Prerequisite:** FAS 209 with a grade of "C" or better.

**FAS 212 Visual Fashion Merchandising (2-0) 2 hrs.**

Studies the communications of design; determining and interpreting consumer needs and motivations; exploring the methods and techniques of educating the consumer and promoting good design through advertising, publicity, display, fashion shows, special events, employee development, etc.

**Prerequisite:** FAS 110 with a grade of "C" or better.

**FAS 229 Promotion of Fashion (3-0) 3 hrs.**

Introduces various techniques and media for methods to sell fashion. Emphasis on advertising: newspapers, magazines, direct mail, catalogs, radio and television. Includes sales promotion in window displays, interior displays, shops; special events, fashion shows and publicity. Analysis of practical creative assignments developed by the students.

**FAS 230 Contemporary Living (3-0) 3 hrs.**

Focuses on the social, economic, political and psychological forces that influence fashion. The shifting patterns and population profiles will be examined. The consumer point of view of fashion in contemporary living will be observed by studying characteristics of Chicago and suburban stores. Fashions presented by these stores and those accepted by customers in their lifestyles of today will also be analyzed.

**FAS 240 Fashion Projects (3-0) 3 hrs.**

Studies the use of oral and written communication in a fashion career with special emphasis on preparing for and staging fashion shows. Also, practice in effective speaking in small groups or to individuals; effect of grooming and etiquette on communication; style and technique in getting a job; and performing effectively in the fashion industry.

**FIS Fire Science**

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

Examines the basic fundamentals of fire protection. Studies briefly the many facets of fire protection.

**FIS 101 Municipal Fire Administration I (3-0) 3 hrs.**

Organization and function for fire protection, personnel management, distribution of equipment, records and fire safety problems.

**FIS 102 Fire Management I (3-0) 3 hrs.**

Discusses the function of the fire officer, focusing on the officer's role and responsibilities. Introduces management theories, practices and the function of management including planning, organizing, staffing, directing and controlling.

**FIS 103 Fire Fighting Tactics I (3-0) 3 hrs.**

Examines the fire ground situation and the tactical deployment of manpower and equipment. Studies the leadership styles and techniques dictated by differing conditions.

**Prerequisite:** FIS 100 with a grade of "C" or better.

**FIS 105 Fire Science Career Exploration (.5-10) 1 hr.**

Studies career and employment possibilities in the fire science industry. Includes observation of practices in fire science and attendance at a seminar to discuss related experiences. For Tech Prep students with no prior courses or work experience in the fire science field. (NOTE: Summer semester only.)

**Prerequisite:** Consent of coordinator.

**FIS 121 Principles of Combustion (3-0) 3 hrs.**

Introduces and familiarizes the student with the combustion process. Presents principles necessary for the oxidation and reduction of fuels. Considers various mechanical and chemical sources of heat and fire problems of solids, liquids and gases. Introduces basic computer applications for understanding combustion.

**FIS 122 Fire Prevention Principles I (3-0) 3 hrs.**

Introduces fire prevention, inspection, and investigation practices and procedures. Considers fire and building codes, fire protection systems and devices and the development and management of a fire prevention bureau.

**FIS 123 Fire Prevention Principles II (3-0) 3 hrs.**

Introduces principles of building construction as they relate to the fire officer, fire inspector and fire investigator. Demonstrates the plan review process, introduces N.F.P.A. Life Safety Code, and considers building occupancy requirements.

**Prerequisite:** FIS 122 with a grade of "C" or better.

**FIS 132 Hazardous Materials I (3-0) 3 hrs.**

Reviews basic chemistry, storage, handling, laws, standards and fire fighting practices pertaining to hazardous materials.

**FIS 133 Hazardous Materials II (3-0) 3 hrs.**

Continues FIS 132. Second semester course in hazardous materials covering storage, handling, laws, standards and fire fighting practices with emphasis on fire fighting and control at the company officer level.

**Prerequisite:** FIS 132 with a grade of "C" or better.

**FIS 145 Fire Instructor I (3-0) 3 hrs.**

Introduces the fundamentals of developing, organizing and delivering training and instruction to fire service personnel. Emphasizes manual skills training and provides the fundamentals of fire service training necessary to meet the requirements for Fire Officer I certification.

## COURSE DESCRIPTIONS

**FIS 200 Fire Science Internship (1-15) 2 hrs.**

Applies appropriate skills to the fire science technology field. (NOTE: Summer semester only.)

**Prerequisite:** FIS 105 with a grade of "C" or better and consent of coordinator.

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

Examines and defines management topics that involve fiscal budgeting, personnel management and labor relations, measuring and evaluating productivity. Also examines resource management such as fire station locations and design, fire apparatus, communication and data collection and processing systems.

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

**FIS 202 Fire Management II (3-0) 3 hrs.**

Examines and discusses supervisory and various forms of communications that occur in the work setting. Examines work group dynamics and assists the fire officer to understand and function within the work group. Introduces health and safety within the work setting.

**Prerequisite:** FIS 102 with a grade of "C" or better.

**FIS 203 Fire Fighting Tactics II (3-0) 3 hrs.**

Examines the tactical deployment of manpower and equipment for extra alarm fires, high-rise fires and often extraordinary incidents. Studies manpower and equipment necessary for large-scale fire ground operations.

**Prerequisite:** FIS 103 with a grade of "C" or better.

**FIS 212 Fire Alarm and Suppression Systems (3-0) 3 hrs.**

Studies the function, classification and operating principles of fixed extinguishing systems, detection systems, alarm systems, signaling systems and portable extinguishing equipment installed for fire protection purposes.

**Prerequisite:** One year of practical experience in a fire protection career field or equivalent academic experience.

**FIS 220 Fire Instructor II (3-0) 3 hrs.**

Introduces advanced instructional skills necessary in a vocational setting. Familiarizes the student with behavioral objectives, cognitive and psychomotor skills and different teaching methods and their applications in training sessions. Includes lesson plans, lesson development and production of instructional aids. Stresses use of reference materials and research for lesson plan development. Familiarizes the student with training records and reports and in the development and administration of test instruments.

**FIS 222 Fire Prevention Principles III (3-0) 3 hrs.**

Considers advanced fire prevention, inspection and investigation practices and procedures. Emphasizes laws, codes and standards which dictate recognized fire prevention practices.

**Prerequisite:** FIS 123 with a grade of "C" or better.

**FIS 223 Fire Prevention Principles IV (3-0) 3 hrs.**

Emphasizes advanced fire protection, inspection, and investigation principles, procedures and techniques. Emphasizes practices which work toward a reduction in fire incidents.

**Prerequisite:** FIS 222 with a grade of "C" or better.

**FIS 224 Fire Prevention Principles V (3-0) 3 hrs.**

Concentrates on advanced training in installed extinguishing systems, alarm systems, detection devices and portable fire extinguishers. Examines certain hazards requiring installed systems, and covers specific inspection techniques.

**Prerequisite:** FIS 222 with a grade of "C" or better.

**FIS 242 Fire Hydraulics (3-0) 3 hrs.**

Reviews basic mathematics, hydraulic laws and formulas as applied to the fire service, application of formulas and metal calculation to hydraulic problems, water supply problems, underwriter's requirements for pumps.

**FIS 252 Fire Sprinkler Design and Layout I (2-3) 3 hrs.**

Familiarizes the student with the various types of automatic sprinkler systems and how to select the most appropriate system based upon the occupancy and hazard classification. The course considers hydraulic calculations, design and installation requirements, and the production, use and interpretation of sprinkler drawings.

**Prerequisite:** FIS 224 and MET 101 with grades of "C" or better or consent of instructor.

**FIS 253 Fire Sprinkler Design and Layout II (2-3) 3 hrs.**

Familiarizes the student with special fire protection systems and devices used with automatic sprinkler systems. These specialized water storage devices include fire pumps, standpipe systems, water storage tanks, and alarm signaling devices. High pile, rack storage and exposure protection systems are considered.

**Prerequisite:** Prior or concurrent enrollment in FIS 252 with a grade of "C" or better.

**FIS 262 Water Supply Analysis (3-0) 3 hrs.**

Studies municipal water supply requirements, system design and flow measurements for fire protection.



**FNA Fine Arts**

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

Covers the history of art from 20,000 B.C. to 1400 A.D. A survey of the outstanding works of art produced by Western civilizations presented inseparably with the cultural backgrounds of civilizations from the prehistoric age to Gothic Italy. IAI ART 901 IAI F2 901  
Recommended for art majors as a sequential course after ART 105.

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

Covers the history of art from 1400 to 1890. A survey of the outstanding works of art produced in the Renaissance tradition presented inseparably with the cultural backgrounds of Western Europe from the Renaissance to Art Nouveau. IAI ART 902 IAI F2 902  
Recommended **Prerequisite:** FNA 111

**FNA 113 History of Art III (3-0) 3 hrs.**

Covers the history of art from 1900 to the present. An historical critical analysis of the "isms" of modern art both stylistically and ideologically as it relates to our own century. IAI ART 903 IAI F2 902  
Recommended **Prerequisite:** FNA 112.

**FNA 114 Introduction to Film (2-2) 3 hrs.**

Examines different ways of looking at film to improve understanding and appreciation of the medium as an art form and social phenomenon as well as entertainment. Includes lecture/discussion and critical analysis of different directors, stars, film genres, historical trends, aesthetics and the technique and process of filmmaking. Approximately ten feature films will be screened each semester. IAI F2 905

**FRN French**

**FRN 101 Elementary French I (4-0) 4 hrs.**

Introduces the language skills of listening, understanding, speaking, reading and writing in their logical sequence. Designed for students with no previous experience in French.

**FRN 102 Elementary French II (4-0) 4 hrs.**

Continues FRN 101. Situational conversations in French; reading and writing stressed.

**Prerequisite:** FRN 101 with a grade of "C" or better, one year of high school French or consent of instructor.

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

Continues FRN 102. Conversation with emphasis on pronunciation, intonation, stress and rhythm. Introduction to composition, reading of short stories and grammar review.

**Prerequisite:** FRN 102 with a grade of "C" or better, two years of high school French or consent of instructor.

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

Continues FRN 201. Increases knowledge of the language and focuses on the culture of the French speaking countries. Continues grammar study. IAI H1 900

**Prerequisite:** FRN 201 with a grade of "C" or better, three years of high school French or consent of instructor.

**FRN 205 Intensive Oral Practice (3-0) 3 hrs.**

Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern French works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.

**Prerequisite:** FRN 202 with a grade of "C" or better or equivalent or consent of instructor.

**FRN 210 Introduction to Modern French Literature (3-0) 3 hrs.**

Reading of selected 20th century masterpieces. Introduction to poetry and "analyse de texte." Oral readings stressing pronunciation and diction. Speaking based on discussion works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels.

IAI H3 917

**Prerequisite:** FRN 202 or equivalent with a grade of "C" or better or consent of instructor.

**FSM Hospitality Management**

**FSM 100 Hospitality Career Exploration (-5-10) 1 hr.**

Studies an overview of career and employment possibilities in the hospitality industry, its organizational structure, and integration of the modern industry components. Career opportunities and progress are reviewed. Each student will observe practices in this industry and attend a seminar to discuss the experience. This course is intended for students with no prior courses or work experience in the hospitality field.

**Prerequisite:** Consent of coordinator.

**FSM 107 Basic Quantity Bread and Pastry Arts (2-5) 4 hrs.**

Introduces basic quantity baking of breads and pastries. Students will learn the fundamentals of baking science, terminology, ingredients, weights and measures, formula conversion, and storage. Sanitation and hygienic work habits conforming to health regulations are emphasized.

**Prerequisite:** Consent of coordinator or instructor.

## COURSE DESCRIPTIONS

### **FSM 108 Advanced Quantity Bread and Pastry Arts (2-5) 4 hrs.**

Continues instruction in the finer arts of breads and pastry preparation, including emphasis on pastry arts work, pastries and breads as used in exclusive establishments and ornamental skills for culinary exhibits.

**Prerequisite:** FSM 107 with a grade of "C" or better.

### **FSM 109 Introduction to Food Prep/Production (2-5) 4 hrs.**

Introduces basic training in the elements of quantity culinary production arts. The student will learn kitchen equipment operation and the principles of the culinary arts. Basic food production will occur with demonstrations, food labs, and lectures used to present the material.

**Prerequisite:** Consent of coordinator or instructor.

### **FSM 110 Advanced Quantity Culinary Arts (2-5) 4 hrs.**

Continues FSM 109 with special emphasis in the dining experiences. Students will prepare meals for the College dining room, banquets, catered functions and special culinary arts events. Students will discuss theory as well as procedures in the "back of the house."

**Prerequisite:** FSM 109 with a grade of "C" or better.

### **FSM 111 Introduction to the Hospitality Industry (3-0) 3 hrs.**

Orients students to the hospitality industry, its organizational structure and integration of the modern industry components. Operational considerations are discussed. Career opportunities are explored.

### **FSM 113 Dining Room Operations (1-5) 3 hrs.**

Introduces theory and practice of quantity food serving including practical experience in dining rooms and catering services. Involves set-up, tableside preparation and presentation of food and beverage. Examines various roles of dining room personnel.

### **FSM 114 Food Standards and Sanitation (2-0) 2 hrs.**

Introduces the function of food ingredients, evaluation of finished products including convenience food products and uses, food service sanitation standards and procedures.

### **FSM 115 Menu Planning (3-0) 3 hrs.**

Studies practical applications of nutrition as related to food service operations; menu planning theory and methods for all types of food preparations and special events; and menu planning as a determination of food cost.

### **FSM 120 Front Office Operations (3-0) 3 hrs.**

Establishes a systematic approach to front office operations detailing the flow of business through the hotel from reservations to checkout. Front office management is placed within the context of the overall operation of the hotel. Methods of handling guest folios, reservation systems, property management systems, and cash controls are discussed.

### **FSM 162 Classical Cuisines (2-5) 4 hrs.**

Introduces comprehensive integration of previous culinary production course work or work experience and provides food production for the department's special events, culinary competitions, and the College dining room. Demonstrations, food labs, and lectures are used to present the material.

**Prerequisite:** FSM 109 and FSM 110 with grades of "C" or better.

### **FSM 163 Garde Manger (1-3) 2 hrs.**

Provides students with skills and knowledge in the preparation of cold hors d'oeuvres, sandwiches, salads, garnishes, pates, terrines, mousses, vegetable carving, chaud froid sauce, tallow and ice carving.

**Prerequisite:** FSM 109 with a grade of "C" or better.

### **FSM 172 Classical Baking (1-3) 2 hrs.**

Concentrates on methods and procedures for producing high quality specialty tortes and buffet items for bakeries and fine dining clubs, hotels and restaurants. Pulled sugar, pastillage, nougat, marzipan, chocolate, ice cream, candies and desserts are included. Emphasis is on individual skill development through practice.

**Prerequisite:** FSM 108 with a grade of "C" or better.

### **FSM 173 Cake Decoration (1-3) 2 hrs.**

Presents methods and procedures for producing high quality wedding and specialty cakes for bakeries and fine dining clubs, hotels and restaurants. Emphasis is on individual skill development through practice.

### **FSM 210 Hospitality Facility Maintenance (3-0) 3 hrs.**

Focuses on the organization, duties and administration of a restaurant and lodging facility maintenance department. Discusses purchasing, furniture, carpeting, linens and supplies. Identifies and evaluates care and maintenance techniques of the areas serviced by a facility maintenance department.

### **FSM 211 Purchasing and Storage (3-0) 3 hrs.**

Standards and identification of quality meats, dairy products, produce, groceries, frozen foods and supplies. Methods of purchasing, purveyor relations and proper storage techniques and purchase standards for convenience foods.

### **FSM 212 Hospitality Supervision (3-0) 3 hrs.**

Studies the theory and techniques of supervision as related to the hospitality industry.

### **FSM 213 Seminar and Internship (1-15) 3 hrs.**

Furnishes participation in a supervised cooperative work experience program in a College approved hospitality operation. Enrollment is restricted to sophomores in the Hospitality Management program.

**Prerequisite:** FSM 212 with a grade of "C" or better.

**FSM 214 Hospitality Operations Analysis (3-0) 3 hrs.**

Provides practical application of operational analysis used by food, lodging and travel-related fields. Use of ledgers, automated information systems and basic financial statements are discussed.

**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.

**FSM 216 Introduction to Wines, Spirits and Beverage Management (3-0) 3 hrs.**

Studies alcoholic beverage classifications, alcoholic beverage laws, wine regions, purchasing and control, promotion and service. Beverage management principles and theories are presented which support and reinforce the practical aspects.

**Prerequisite:** Minimum age of 21.

**FSM 220 Hospitality Promotions (3-0) 3 hrs.**

Provides Hospitality Management majors with a solid background in hospitality promotions. Focuses on promoting highly perishable, people-intensive intangibles in a highly competitive environment.

**FSM 230 Hospitality Law and Risk Management (4-0) 4 hrs.**

Surveys our legal system as applied to the hospitality industry. Examines contracts, torts and various labor laws pertinent to the industry. Analyzes insurance costs, including fire, accident, worker's compensation and employee liability and their effect on various types of facilities.

**GEG Geography**

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

Analyzes the geography of the nations divided into regions of the world emphasizing their physical environments and their economic, political and social organization. IAI S4 900N

**GEG 103 The Developing World (3-0) 3 hrs.**

Surveys the technologically less developed regions of the World, including East Asia, South Asia, Middle and South America, Southwest Asia and North Africa, and Subsaharan Africa. Emphasis is placed on the spatial arrangement of resources, population, human institutions, economic activities, political patterns, religion, and cultural and physical landscapes. Each cultural realm is analyzed in respect to the larger international community with special attention to current events and issues. IAI S4 902N

**GEG 104 The Developed World (3-0) 3 hrs.**

Surveys the technologically more developed regions of the world, including Europe, the United States and Canada, the former Soviet Union, Japan and Australia and New Zealand. Emphasis is placed on the spatial arrangement of resources, population, human institutions, economic activities, political patterns, religion, and cultural and physical landscapes. Each cultural realm is analyzed in respect to the larger international community with special attention given to current events and issues. IAI S4 901

**GEG 108 Cultural Geography (3-0) 3 hrs.**

Provides a comprehensive overview of the relationship of land to life, emphasizing man's dependence on, and his manipulation of land for his survival. The subject of agriculture and other types of food production throughout the world will be of central importance. IAI S4 900N

**GEG 121 Physical Geography (3-3) 4 hrs.**

Examines the spatial distribution of elements of the physical environment including land forms, climates, weather, vegetation and soils. Consideration is given to the causes of these distributions and to their effects on human populations. A laboratory component will apply the scientific method of observation, hypothesis formation and experimentation to Earth's four physical spheres: the atmosphere, the hydrosphere, the lithosphere and the biosphere. IAI P1 909L

**GEG 210 Economic Geography (3-0) 3 hrs.**

Studies the spatial distribution and interaction of economic activities. Emphasis is on land use patterns, population movement, the principles governing the location of agricultural, manufacturing and commercial centers and the impact of economic activity on the environment. IAI S4 903N

**GEO Geology**

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

Materials, structure and sculpture of the earth's surface. One-day field trip required. IAI P1 907L

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

Geological history of the earth including principles employed to reconstruct this history. One-day field trip required.

**Prerequisite:** GEO 101 with a grade of "C" or better, high school earth science or consent of instructor.

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

Physical description of minerals and rocks. Introduction to crystallography, economic minerals, natural resources. Field trip required.

**Prerequisite:** GEO 101 and CHM 121 with grades of "C" or better or consent of instructor.

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### **GEO 202 Paleontology (3-2) 4 hrs.**

Fossil record of life, principles of evolution and ecology. One-day field trip required.

**Prerequisite:** GEO 102, BIO 101, BIO 140 with grades of "C" or better or consent of instructor.

### **GER German**

#### **GER 101 Elementary German I (4-0) 4 hrs.**

Introduces the language skills of listening, understanding, speaking, reading and writing in their logical sequence. Designed for students with no previous experience in German.

#### **GER 102 Elementary German II (4-0) 4 hrs.**

Continues GER 101. Situational conversations in German; reading and writing stressed.

**Prerequisite:** GER 101 with a grade of "C" or better, one year of high school German or consent of instructor.

#### **GER 201 Intermediate German (4-0) 4 hrs.**

Continues GER 102. Conversation with emphasis on pronunciation, intonation, stress and rhythm. Introduction to composition, reading of short stories and grammar review.

**Prerequisite:** GER 102 with a grade of "C" or better, two years of high school German or consent of instructor.

#### **GER 202 Intermediate German (4-0) 4 hrs.**

Continues GER 201. Provides a crucial bridge between the basic grammar and language structure that is taught in the first three semesters and the more in-depth study of history, geography, literature and culture that is taught in the advanced German courses. Integrates students' basic German language skills and applies them to everyday living situations. Begins the study of German literature, focusing on the modern history and culture of the German-speaking people. IAI H1 900

**Prerequisite:** GER 201 with a grade of "C" or better, three years of high school German or consent of instructor.

#### **GER 205 Intensive Oral Practice (3-0) 3 hrs.**

Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern German works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.

**Prerequisite:** GER 202 with a grade of "C" or better, or equivalent or consent of instructor.

### **GER 210 Introduction to Modern German Literature (3-0) 3 hrs.**

Readings of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and diction. Speaking based on discussion of works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels. IAI H3 917

**Prerequisite:** GER 202 with a grade of "C" or better, or equivalent or consent of instructor.

### **HPI Cardiac Technology**

#### **HPI 100 Introduction to the Cardiac Technology Program (1-0) 1 hr.**

Defines areas of specialization within the Cardiac Technology program. Identifies major organizations in the cardiac technology field and examines their potential benefits to the technologist. Explains the role of the technologist in various health and fitness settings. Exposes the student to laboratory procedures and cardiac instrumentation. Provides students the opportunity to visit a host of health centers to get a better appreciation of the day-to-day responsibilities of the cardiac technologist.

#### **HPI 101 Fundamentals of Exercise Testing (2-2) 3 hrs.**

Provides a fundamental understanding of the physiological parameters measured to assess physical fitness, the importance of each measurement and the significance of abnormal findings. In addition, considerable laboratory experience is offered in the operation of sophisticated diagnostic physiological instrumentation.

#### **HPI 103 Prevention and Treatment of Cardiac Emergencies (2-2) 3 hrs.**

Trains and certifies students in basic cardiopulmonary resuscitation. Provides practice in the recognition of cardiac arrhythmias, familiarizes students with the primary cardiac medications, defines the exercise technician's role in emergency procedures and in the use of emergency equipment, and identifies the legal responsibilities and guidelines under which the exercise technician must function.

**Prerequisite:** HPI 105 and HPI 116 with grades of "C" or better.

#### **HPI 105 Electrocardiography (3-2) 4 hrs.**

Provides instruction and practice in the performance of both resting and exercise diagnostic electrocardiograms, develops skills in basic arrhythmia detection and ST segment analysis and examines the role of the cardiac exercise specialist in cardiovascular preventive/rehabilitative exercise programs.

**Prerequisite:** HPI 101 and BIO 160 with grades of "C" or better.

**HPI 106 Cardiovascular Physiology and Pathology (3-0) 3 hrs.**

Provides an in-depth understanding of the anatomy and physiology of the cardiovascular system, discusses the risk factors associated with the development and progression of coronary artery disease, examines the effects of coronary artery disease on heart pump function and evaluates the roles of exercise and pharmacotherapeutics in enhancing cardiovascular efficiency.

**Prerequisite:** BIO 160 and HPI 116 grades of "C" or better.

**HPI 107 Cardiac Technology Internship (0-20) 4 hrs.**

Provides students with practical experience in performing cardiac diagnostic procedures (exercise stress tests, echocardiograms, holter scans) in a clinical setting, develops skill in devising exercise prescriptions for patients with cardiovascular disease or limitations, and involves students in all phases of cardiac rehabilitation.

**Prerequisite:** All HPI courses with grades of "C" or better and/or consent of Cardiac Technology program director.

**HPI 109 Diagnostics I (2-2) 3 hrs.**

Introduces the fundamentals of the application of ultrasound to obtain anatomical and hemo-dynamic data of the heart and great vessels in adult subjects. Emphasis will be placed on the normal and normal variant M-Mode, two-dimensional and Doppler data acquisition.

**Prerequisite:** BIO 160, HPI 105 and HPI 113 with grades of "C" or better.

**HPI 110 Diagnostics II (2-2) 3 hrs.**

Introduces the application of ultrasound to obtain anatomical and hemodynamic data in adult patients with anomalies of the heart and great vessels.

**Prerequisite:** HPI 109 and HPI 106 with grades of "C" or better.

**HPI 113 Ultrasound Physics (2-0) 2 hrs.**

Introduces the basic principles of ultrasound physics and the application to M-Mode, two-dimensional and Doppler echocardiographic instrumentation.

**Prerequisite:** General physics (high school level) or consent of instructor.

**HPI 115 Clinical Laboratory Skills (1-4) 3 hrs.**

Provides the student with skill in blending information and skills taught in a series of classes into complete clinical studies. Exposes students to the state-of-the-art diagnostic imaging instrumentation that they will encounter during their internship program. Discusses important issues related to professionalism, medical ethics, infection control and advanced diagnostic procedures.

**Prerequisite:** BIO 160, HPI 100, HPI 103, HPI 106, HPI 109, HPI 117 with grades of "C" or better.

**HPI 116 Cardiac Anatomy and Physiology (4-0) 4 hrs.**

Provides an extensive review of the anatomy of the heart. Examines the cardiovascular, muscular and respiratory systems. Discuss the major principles of cardiac hemodynamics from the perspective of the cardiac technologist.

**Prerequisite:** BIO 160 with a grade of "C" or better.

**HPI 117 Laboratory Techniques I (1-2) 2 hrs.**

Prepares the student to perform a basic cardiac echocardiograph examination on an adult patient. Instructs the student in making fine adjustments to the image controls and fine manipulations of the transducer in order to acquire and record diagnostic information for the physician. Discusses the issue of professionalism as it relates to a cardiac technologist.

**Prerequisite:** HPI 105, HPI 113, and HPI 116 with grades of "C" or better.

**HPI 118 Laboratory Techniques II (1-2) 2 hrs.**

Prepares the student to perform a full cardiac echocardiograph examination with Doppler on an adult patient. Introduces the concepts of two dimensional imaging, M-Mode display, pulsed and continuous wave Doppler and color flow.

**Prerequisite:** HPI 106, HPI 109, and HPI 117 with grades of "C" or better.

**HSC Human Services**

**HSC 100 Computer Usage In Health Services (0-2) 1 hr.**

Offers a generalized brief orientation to computer utilization with specific software applications pertaining to careers in the health care field.

**HSC 105 Introduction to the Health Care Field (2-0) 2 hrs.**

Surveys many careers and career skills within the health care team. Emphasizes the health care professional's responsibilities to the community, health care trends and professionalism.

**HSC 110 Emergency Medical Technician Training (4-4) 6 hrs.**

Offers study and practice of the principles and fundamental basic skills necessary to render emergency basic life support care to patients of all ages, including recognition of the nature and seriousness of illness and injury. Health and safety precautions of the caregiver are identified and demonstrated in simulated situations and written testing throughout the course. Leads to licensure as an EMT-B.

(NOTE: This course has special admission requirements. Contact the Admissions Office for details.)

## COURSE DESCRIPTIONS

### **HSC 112 Medical Terminology (2-2) 3 hrs.**

Emphasizes the basic structure of medical words, including prefixes, suffixes, roots, combining forms and plurals. Offers pronunciation, spelling, and definition of medical terms. Emphasis on rendering a professional vocabulary required for work in the health care field, including computer-assisted instruction.

### **HSC 151 Math Applications in Health Care (1-0) 1 hr.**

Develops skill necessary to calculate medication dosages and solutions. A basic math ability, including decimals, fractions and percentages, is necessary to be successful in this course. Use of electronic calculators emphasized with health care-related applications.

### **HSC 213 Health Care Law and Ethics (3-0) 3 hrs.**

Acquaints the student with the legal and ethical responsibilities of the physician, patient and allied health personnel in the health care team. Emphasis given to professional attitudes and behavior.

**Prerequisite:** HSC 112 and a minimum of 10 hours of HSC and/or MOA course work with grades of "C" or better.

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

Focuses on personal health of the individual, including nutrition and health and safety issues, with emphasis on meeting health needs for children in group settings. A healthy lifestyle, preventive health and community health are examined. IAI ECE 902

## **HST History**

### **HST 105 Great Ideas of World Civilizations (3-0) 3 hrs.**

Introduces students to a selection of formative historical and contemporary texts in a variety of disciplines, including philosophy, the social sciences, literature, gender/multi-cultural studies, and the history of science. (Also listed as HUM 105. Credit will be given for either HST 105 or HUM 105, but not both). IAI H9 900

### **HST 111 The American Experience to 1877 (3-0) 3 hrs.**

Surveys the American experience through the pre-revolutionary period, the expansion westward and the Civil War. Special stress is placed upon the social, economic, cultural, political and constitutional development of the United States. IAI S2 900

### **HST 112 The American Experience Since 1877 (3-0) 3 hrs.**

Surveys the end of Reconstruction to the present, with primary stress on political and economic development. Also includes social, intellectual and cultural phases, expanded role of government in national affairs and the participation of the United States in international relations. IAI S2 901

### **HST 121 History of Latin America (3-0) 3 hrs.**

Surveys the political and constitutional history of the principal Latin American nations. The course will cover movements leading to independence and social and economic events which are pertinent to relationships with the United States. IAI S2 910N

### **HST 141 History of Western Civilization to 1650 (4-0) 4 hrs.**

Stresses political, social, cultural, economic and technological developments from prehistoric times and concludes with the last manifestation of essentially medieval ideology; i.e., the Protestant Reformation. IAI H2 901

### **HST 142 History of Western Civilization Since 1650 (4-0) 4 hrs.**

Continues HST 141. Commences with the emergence of modern times, i.e., the development of royal absolutism and the beginnings of the modern nation state and concludes with the 20th century and the modern world. IAI H2 902

### **HST 151 History of England Norman Conquest to 1600 (3-0) 3 hrs.**

Surveys the social, cultural, economic, political and religious history of England from the Norman Conquest through the age of Elizabeth I.

### **HST 152 History of England 1600 to Present (3-0) 3 hrs.**

Surveys the social, cultural, imperial, economic and political history of England from the Stuart Dynasty through the present era.

### **HST 153 British Culture and Society (3-0) 3 hrs.**

Surveys the culture and society of England from the Norman Conquest to the present.

### **HST 210 Women: The American Experience (3-0) 3 hrs.**

Studies history of the status, roles and contributions of women in America, and a survey of the attitudes and movements that have affected the lives of women in America.

### **HST 212 Recent American History 1945-1980 (3-0) 3 hrs.**

Provides students with a comprehensive analysis of the critical period 1945-1980 in American history. Incorporates politics and culture of the Cold War, the revival of liberalism, the Civil Rights movement, the rise of the New Left in the '60's, the social and political history of the Vietnam War, the counterculture, Watergate, the personalization of political activism in the '70's, the women's movement, and the resurgence of conservatism. Emphasizes social history and cultural trends as well as political and economic history.

**HST 214 African-American History (3-0) 3 hrs.**

Studies African-Americans from African slave trade through slavery, reconstruction, years of neglect and civil rights revolution in the United States and their contributions to American culture.

**HST 243 The Far East in the Modern World (3-0) 3 hrs.**

Studies history of East Asia since 1800. The traditional cultures of China and Japan, the Western impact and the Asian response will be covered. IAI S2 909N

**HUM Humanities**

**HUM 101 Introduction to Western Culture I (3-0) 3 hrs.**

Surveys the humanities: architecture, art, history, literature, music, philosophy and theatre of Western culture from the beginnings to the Renaissance. IAI HF 902

**HUM 102 Introduction to Western Culture II (3-0) 3 hrs.**

Surveys the humanities: architecture, art, dance, film, history, literature, music, philosophy and theatre of Western culture from the Renaissance to the present. IAI HF 903

**HUM 103 Asia and African Humanities (3-0) 3 hrs.**

Examines the arts and worldviews of Asian and African cultures from ancient times to the present. Studies examples of the visual arts, music, dance and literature from selected civilizations in South Asia, East Asia, Southeast Asia, and Africa. IAI HF 904N.

**HUM 105 Great Ideas of World Civilizations (3-0) 3 hrs.**

Introduces students to a selection of formative historical and contemporary texts in a variety of disciplines, including philosophy, the social sciences, literature, gender/multicultural studies and the history of science. (Also listed as HST 105, Credit will be given for either HUM 105 or HST 105, but not both.) IAI H9 900.

**HUM 110 Women and Creativity (3-0) 3 hrs.**

Explores the nature of female creativeness, focusing on women in the traditionally male arenas of art and literature and on areas in which the female creative impulse manifests itself under other names: the shaping of social attitudes, domestic arts and religious experiences. IAI HF 907D

**HUM 115 International and Regional Studies In Humanities 1-4 hrs.**

Students travel with faculty to international or regional locations which may vary from year to year to study the humanities. May emphasize the literature, language, philosophy or humane arts of the locale visited. Presentation by onsite individualized study, lectures, field trips. Classes held on campus prior to and following the off-campus learning experience. Travel expenses are paid for by the student.

**One Credit:** Students must attend all classes and field trips, submit a daily log covering one week of travel and write a personal essay of at least five typewritten pages.

**Two Credits:** Students must attend all classes and field trips, submit a log covering one-two weeks of travel and write a research paper of at least eight typewritten pages, plus bibliography and footnotes.

**Three Credits:** Students must attend all classes and field trips, submit a log covering three weeks of travel and write a research paper of at least 10 typewritten pages, plus bibliography and footnotes.

**Four Credits:** Students must attend all classes and field trips, submit a log covering four weeks of travel and write a research paper of at least 12 typewritten pages, plus bibliography and footnotes.

**HUM 120 Classical Mythology (3-0) 3 hrs.**

Studies the myths of Greece and Rome. Focuses on the stories of gods and heroes in classical literature and art. Considers the influence of classical mythology on later Western culture. IAI H9 901

**IDS Independent Study**

**IDS 290 Independent Study 1-4 hrs.**

Designed to permit the student to pursue a course of study not typically available under traditional course structure. The student will contract with the appropriate faculty member for the objectives to be accomplished in the course. May be repeated up to a maximum of four credit hours.

**Prerequisite:** Sophomore standing, "C" average or consent of instructor.

**IND Interior Design**

**IND 101 Basic Interior Design I (2-2) 3 hrs.**

Studies interior design room arrangement and furniture selection. Investigates the elements and principles of design as they relate to interiors. Studies aesthetic aspects of interior design. Develops interior projects using space planning, furniture selection, the development of furniture elevations, and presentation techniques.

Recommended **Corequisite:** IND 105.

## COURSE DESCRIPTIONS

### **IND 102 Basic Interior Design II (2-2) 3 hrs.**

Continues the study of interior space planning and furniture selection as it relates to a functional and aesthetic interior. Investigates the use of fabric, finishes, color, and texture to complement the interior. Explores aesthetic application of color in interior design.

**Prerequisite:** IND 101, IND 105 and IND 106 with grades of "C" or better.

Recommended **Corequisite:** IND 103.

### **IND 103 Furniture History (3-0) 3 hrs.**

Surveys furniture, design motifs and structures from antiquity to the present. Studies authentic designs and their relationship to contemporary applications. Examines the basis for determining the taste level and quality of reproductions and adaptations to the market today.

### **IND 105 Interior Design Theory (1-1) 1 hr.**

Introduces theories pertaining to design elements and principles, concepts of home, human environment, proxemics and behavior. Provides an overview of the profession of interior design and job options available. Explores current legislative issues and trends in the field of interior design.

Recommended **Corequisite:** IND 101.

### **IND 106 Materials and Sources (3-0) 3 hrs.**

Studies the construction and finishing of materials other than those of a structural nature, including limitations, quality control, application, uses, installation methods, and quantity calculations. Examines sources available to the designer.

### **IND 107 Interior Perspective and Rendering (1-2) 2 hrs.**

Studies drawing and sketching methods of furniture and interior spaces. Develops drawing techniques for interior perspective views of buildings. Explores the use of various medias to present the three-dimensional delineation of interior design. Examines balance and proportions of interior items within a three-dimensional space. Uses drawing techniques and color to define light and shadow, textures, and material characteristics.

**Prerequisite:** ART 121 and IND 101 with grades of "C" or better, or consent of coordinator.

### **IND 108 Color for Interior Design/CAD (2-2) 3 hrs.**

Introduces color theories, analysis and visualization techniques for interior design. Emphasizes visualization through studio methods and computer aided design. Develops awareness of spatial planes and relationships of color for interiors. Introduces lighting and its effect on interior colors.

**Prerequisite:** ART 121, IND 101 and IND 105 with grades of "C" or better, or consent of coordinator.

### **IND 109 Design and Color Elements for Interiors (2-2) 3 hrs.**

Provides basic background in the decoration of interiors for the home marketing field. Investigates the elements and principles of design as they relate to mixing interior furnishings. Develops awareness of spatial planes and the use of color, patterns and scale. Introduces the effects of various lighting sources on colors, textures and patterns.

### **IND 114 Codes for Interior Designers (1-1) 1 hr.**

Examines how interior building codes, governmental standards and federal regulations affect and are applied to interior design. References BOCA, CABO and various accessibility requirements including the Americans with Disabilities Act.

**Prerequisite:** IND 101 with a grade of "C" or better, or consent of coordinator.

### **IND 115 Kitchen & Bath Design and Interior Construction (2-2) 3 hrs.**

Examines the technical aspects of designing kitchens and baths. Applies building codes and accessible design principles. Practices fundamental drafting conventions including lettering, line work, dimensioning and symbol usage. Develops drawings for the kitchen and bath including floor plans, electrical and lighting plans, elevations and cabinet sections.

**Prerequisite:** IND 101 and IND 106 with grades of "C" or better.

Recommended **Corequisite or Prerequisite:** IND 114.

### **IND 203 3-D Design for Interiors (2-2) 3 hrs.**

Studies advanced problems in three-dimensional interior design which concentrate on the development of relationships of interior furnishings, walls, floors and ceilings into a unified design. Applies principles and elements of design theory within a three-dimensional volume of space.

**Prerequisite:** IND 102, IND 107, IND 108, IND 114 and IND 115 with grades of "C" or better, or consent of coordinator.

### **IND 205 Interior Design Historic Styles (2-2) 3 hrs.**

Reviews furniture history. Students recreate historic interior designs. Explores creation of interior design through the mixing and stylizing of furniture and finishes.

**Prerequisite:** IND 102, IND 103, IND 106 and IND 108 with grades of "C" or better.

### **IND 206 Lighting for Interior Design (2-1) 2 hrs.**

Examines artificial and natural lighting in interior design. Considers environmental comfort, effects on colors and information required for selection of lamps and fixtures. Acquaints students with the basic calculation methods as they relate to the lighting design process.

**Prerequisite:** IND 102, IND 114 and IND 115 with grades of "C" or better, or consent of coordinator.



**IND 207 Interior Design Internship (1-10) 3 hrs.**

Provides an opportunity for selected students who meet the prerequisite requirements to work with professionals in approved residential and contract design firms, retail stores, wholesale stores and showrooms specializing in interior design and related products. Students are exposed to various aspects of the interior design field and present a report on their experiences.

**Prerequisite:** Consent of coordinator, plus Interior Design GPA of 3.5, Harper GPA of 3.0. IND 205, IND 206 and IND 213 with grades of "B" or better. Meets or exceeds the Harper testing placement requirement for ENG 101.

**IND 208 Advanced Residential Interiors (2-2) 3 hrs.**

Applies interior design skills to residential interior projects, including floor plans, elevations or perspectives, budgets, cabinet drawings, lighting plans, mixing and stylizing of furnishing and finishes.

**Prerequisite:** IND 103, IND 205, IND 206 and IND 213 with grades of "C" or better.

**IND 209 Contract Interior Design (2-2) 3 hrs.**

Applies interior design skills to contract interior projects, including floor plans, elevations or perspectives, cabinet drawings, lighting plans, selection of contract furnishings and finishes. Applies disabled access to a contract design project. Projects may include office spaces, restaurants and other public buildings.

**Prerequisite:** IND 203, IND 205, IND 206 and IND 213 with grades of "C" or better, or consent of coordinator.

**IND 211 Professional Practices for Interior Design (3-0) 3 hrs.**

Examines the business principles required for a successful interior design practice, including establishing an interior design practice, carrying through a job and charging for it, writing client contracts, interviewing and job opportunities.

**Prerequisite:** IND 205 with a grade of "C" or better, or consent of coordinator.

**IND 213 Interior Detailing and Construction Drawing (2-2) 3 hrs.**

Studies the methods and materials of interior construction and the graphic methods of communicating this information. Practices fundamentals drafting conventions and develops drawing skills necessary for the production of working drawings such as floor plans, elevations, sections, finish schedules, reflected ceiling plans, ceiling systems and details. Discusses methods of electrical, plumbing and HVAC distribution.

**Prerequisite:** IND 102, IND 114 and IND 115 with grades of "C" or better.

**IND 215 Topics in Interior Design (1.5-0 to 3-0) .5-3 hrs.**

Studies selected problems or topics in interior design. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated two times to a maximum of three credit hours.

**ITP Sign Language Interpreting**

See: BFC (Financial Services)

**ITP Sign Language Interpreting**

**ITP 101 Introduction to Interpreting (3-0) 3 hrs.**

Provides an overview of the field of interpreting and discusses the historical development of the profession. Students are introduced to terminology, theoretical models of interpreting and current practices in the field. The Registry of Interpreters for the Deaf Code of Ethics is examined in light of personal and professional standards. The roles and responsibilities of the interpreter are also discussed.

**Prerequisite:** SGN 202 with a grade of "C" or better, or consent of coordinator.

**Corequisite:** SGN 205 or consent of coordinator.

**ITP 110 Consecutive Interpreting: English to ASL (3-0) 3 hrs.**

Focuses on the development of consecutive expressive interpreting skills with rehearsed and spontaneous texts. Students interpret from English into American Sign Language with time allotted between delivery of the source language message and the interpretation. Text analysis and development of pre-interpreting skills (cloze, short-term memory, chunking, shadowing, paraphrasing and dual task training) are emphasized prior to the consecutive interpreting task.

**Prerequisite:** ITP 101 and SGN 205 with grades of "B" or better, or consent of coordinator.

**ITP 111 Consecutive Interpreting: ASL to English (3-0) 3 hrs.**

Focuses on the development of consecutive interpreting skills with rehearsed and spontaneous texts. Students interpret from American Sign Language into English with time allotted between delivery of the source language message and the interpretation. Message comprehension and composition skills are emphasized. Text Analysis and pre-interpreting skills (prediction, visualization, short-term memory, and paraphrasing) are introduced prior to the consecutive interpreting task.

**Prerequisite:** ITP 101 and SGN 205 with grades of "B" or better, or consent of coordinator.

## COURSE DESCRIPTIONS

**ITP 120 Simultaneous Interpreting: English to ASL (3-0) 3 hr.**

Introduces the student to simultaneous interpreting and moves the student from consecutive interpreting to simultaneous interpreting with minimal time provided between delivery of source language text and interpretation into the target language. Development of simultaneous skills with both rehearsed and spontaneous text is emphasized. Students continue to develop skills in source and target language text analysis.

**Prerequisite:** ITP 110 with a grade of "C" or better, or consent of coordinator.

**ITP 121 Simultaneous Interpreting: ASL to English I (3-0) 3 hrs.**

Introduces the student to simultaneous ASL to English interpreting and moves the student from consecutive interpreting to simultaneous interpreting with minimal time provided between delivery of source language text and interpretation into the target language. Students work on prediction strategies, message comprehension, composition and demeanor. Students are introduced to partnering techniques and register variation.

**Prerequisite:** ITP 111 with a grade of "C" or better, or consent of coordinator.

**ITP 200 Transliteration and Education Interpreting (3-0) 3 hrs.**

Focuses on the development of transliteration skills in simultaneous monologic and dialogic texts. Students work with both rehearsed and spontaneous spoken to signed English and signed to spoken English texts. Students develop skills in assignment preparation, transliteration performance and analysis, as well as practice of specific transliteration principles. Special emphasis will be put on the use of transliteration in educational settings.

**Prerequisite:** ITP 110 and ITP 111 with grades of "C" or better, or consent of coordinator.

**ITP 201 Topics In Interpreting (1-0 to 4-0) 1-4 hrs.**

Presents selected topics in interpreting. The exact content and instructional methodology will vary from semester to semester depending upon the material and topics to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be taken from one to four credit hours.

**Prerequisite:** Consent of coordinator.

**ITP 211 Simultaneous Interpreting: ASL to English II (3-0) 3 hrs.**

Focuses on the development of simultaneous interpreting skills in increasingly complex rehearsed and unrehearsed texts. Preparation, team interpreting, process management, and analysis of message of equivalency is stressed. Text material includes both teacher-directed and student directed selections.

**Prerequisite:** ITP 121 with a grade of "C" or better, or consent of coordinator.

**ITP 215 Interpreting: Dialogic Discourse (3-2) 4 hrs.**

Provides instruction and practice in the development of dialogic interpreting and transliterating skills in live, unrehearsed situations covering a variety of settings. Students also gain experience in process management, application of professional ethics and behavior, and articulation of role and responsibilities. Students analyze their work using a variety of strategies, including back-translation, to determine success of message equivalency. Students learn setting-specific logistics and protocol.

**Prerequisite:** ITP 120, ITP 121, and ITP 200 with grades of "C" or better, or consent of coordinator.

**ITP 216 Interpreting: Monologic Discourse (3-0) 3 hrs.**

Focuses on the development of interpreting and transliterating skills in unrehearsed monologic interpreting presentations. This course addresses assignment preparation, public speaking techniques, process management, peer critiquing skills, and analysis of message equivalency. Techniques for interpreting using consultative and formal registers will be covered and practiced.

**Prerequisite:** ITP 215 and ITP 200 with grades of "C" or better, or consent of coordinator.

**Corequisite:** ITP 220.

**ITP 220 Sign Language(3-10) Interpreting Practicum 5 hrs.**

Provides opportunities for students to apply their knowledge and skills in a variety of interpreting settings which may include business, education, performing arts, religious and community service. Classroom sessions allow for discussion of ethical issues and business practices. Students will also begin their preparation for state and national credentialing examinations.

**Prerequisite:** ITP 211 and ITP 215 with grades of "C" or better, or consent of coordinator.

**Corequisite:** ITP 216.

**JNM Journalism**

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

Introduces basics of writing for the media focusing on print journalism. Develops basic reporting and writing skills using traditional and internet research. Emphasizes accuracy, conciseness, grammar, and spelling skills. Explores variety of writing opportunities in the media. Uses Macintosh computers with current word processing programs.

**JNM 131 News Reporting and Writing (3-0) 3 hrs.**

Presents theory and techniques for gathering and writing news in political, police, social and civic coverage. Develops advanced reportorial and writing skills. Uses industry standard computer hardware and software. IAI MC 919

**Prerequisite:** JNM 130 with a grade of "C" or better.

**JNM 133 Feature Writing (3-0) 3 hrs.**

Focuses on writing and selling non-fiction articles. Develops the techniques to analyze markets, develop story ideas, prepare the query and submit the article. Stresses the importance of interviewing and researching, descriptive language and writing with clarity. Uses Macintosh computers with current word processing programs.

**JNM 136 Broadcast Writing (3-0) 3 hrs.**

Develops skills needed to write for the broadcast media including television, radio and film. Focuses on the oral style. Emphasizes gathering of information, interviewing, writing and editing scripts and writing for continuity for video or film. Examines the legal, ethical and social implications of broadcast writing and programming. IAI MC 917

**JNM 137 Media Writing (3-0) 3 hrs.**

Provides an overview of the various formats and structures used in writing for the media. Includes writing for newspapers, radio and television stations, advertising and public relations agencies, business and industrial communications and new media technology. Focuses on information gathering, the elements of good writing, and matching message and audience.

**JNM 230 Graphic Design Communications (3-0) 3 hrs.**

Introduces students to contemporary design, photo manipulation, web page design, animation, audio techniques, and page layout necessary for producing a variety of journalistic publications.

**JNM 232 Advertising, Copywriting and Design (3-0) 3 hrs.**

Explores the theory and practice of the advertising industry. Introduces students to the business and creative aspects of advertising. Students prepare original advertising campaigns from market and product research to evaluation. Familiarizes the student with desktop publishing on Macintosh computers using various software programs. Computer design experience is strongly recommended. IAI MC 912

**JNM 233 Public Relations Writing and Design (3-0) 3 hrs.**

Explores the theory and practice of public relations—its functions, roles and applications. Introduces students to the business and creative aspects of public relations. Students will prepare original public relations campaigns from research to evaluation. Familiarizes the student with desktop publishing on Macintosh computers using various software programs. Computer design experience or JNM 230 is strongly recommended. IAI MC 913

**Prerequisite:** JNM 130 or JNM 137 with a grade of "C" or better.

**JNM 234 Mass Communications (3-0) 3 hrs.**

Examines the different forms of mass communication vehicles and their uses and functions. Analyzes the impact and effects of the media on society including individuals and groups of both genders and all races. Focuses on current issues in the media including violence, racism and sexism. IAI MC 911

**JNM 235 Magazine Editing and Design (3-0) 3 hrs.**

Introduces advanced writing, rewriting, and editing practices. Teaches students how to produce various publications using computer applications. Focuses on preparation and production of magazines, flyers, brochures, newsletters, and annual reports. Incorporates writing, copy editing, photography and illustrations, typography, page design and printing. Students produce a publication as a class project. Computer design experience or JNM 230 is strongly recommended.

**Prerequisite:** JNM 130 or JNM 133 with a grade of "C" or better.

**JNM 240 Topics In Journalism (1-0 to 6-0) 1-6 hrs.**

Studies selected problems or topics in Journalism. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information with preregistration materials will be available each time the course is offered. This course may be repeated up to a maximum of six credit hours.

## COURSE DESCRIPTIONS

### JPN Japanese

#### **JPN 101 Elementary Japanese I (4-0) 4 hrs.**

Introduces the language skills of pronunciation and useful expressions, listening, speech patterns, syllabary reading and writing, basic vocabulary and grammar. Cultural and sociolinguistic orientation.

#### **JPN 102 Elementary Japanese II (4-0) 4 hrs.**

Continues JPN 101. Skill developments in simple, everyday conversation and contemporary and idiomatic expressions; continued mastery of beginning grammar, reading and writing, and more vocabulary. Orientation in verbal and non-verbal skills and simple composition.

**Prerequisite:** JPN 101 with a grade of "C" or better or consent of instructor.

#### **JPN 201 Intermediate Japanese I (4-0) 4 hrs.**

Continues JPN 102. Emphasis on more complex conversation and advanced grammatical components; continued reading and writing. Emphasis on advanced composition.

**Prerequisite:** JPN 102 with a grade of "C" or better or consent of instructor.

#### **JPN 202 Intermediate Japanese II (4-0) 4 hrs.**

Continues JPN 201. Accuracy and ease in more complex conversation; advanced study of reading and writing. Study of more complex syntax and composition. IAI H1 900

**Prerequisite:** JPN 201 with a grade of "C" or better or consent of instructor.

### LIT Literature

#### **LIT 105 Poetry (3-0) 3 hrs.**

Facilitates the understanding, appreciation and enjoyment of poetry. Presents poetry of American, European and other literary philosophies and movements. Challenges students to develop skills in responding personally to poetry and in developing literary analyses. Reveals the link between the whole poem and particular literary qualities such as imagery, figurative language, allusion, connotation and the music of poetry—sound and rhythm. Offers a forum for exchanging ideas about poetry in guided conversation and writing. IAI H3 903

#### **LIT 110 Drama (3-0) 3 hrs.**

Presents a survey of drama from various countries and eras. The course will include representative selections from such modes as tragedy, comedy, melodrama, romance, satire and social commentary as well as absurdist drama. The selections would include such authors as Ibsen, Miller, Moliere and Shakespeare. (See SPE 111 for theatrical study of drama.) IAI H3 902

#### **LIT 112 Literature and Film (3-0) 3 hrs.**

Introduces methods of reading, interpreting and analyzing literary works as well as examining methods used in translating those works to the medium of film. Presents the short story, novel and the drama in conjunction with their cinematic counterparts. Relates the development of film to such schools as German expressionism, film verite, etc. Focuses on analysis of each form both on its own and in relation to the others through reading, viewing and writing. IAI F2 905

#### **LIT 115 Fiction (3-0) 3 hrs.**

Presents short stories and novels of high interest level. The selections typify authors and styles representative of major American and European literary movements and philosophies. Challenges the student to develop skills in literary analysis. Students will study characterization, narration, dialogue, plot and various other techniques of fiction. Individual sections may concentrate on particular periods, authors or topics. IAI H3 901

#### **LIT 206 World Literature to 1800 (3-0) 3 hrs.**

Presents selected works of universal significance contributed by people and civilizations from ancient times to 1800. IAI H3 906

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

Continues LIT 206. Selected works of universal significance contributed by people and civilizations from 1800 to the present. IAI H3 907

#### **LIT 208 Non-Western Literature (3-0) 3 hrs.**

Studies selected works from non-western civilizations, such as Africa, China, India, Japan and the Middle East. Fiction, poetry and drama will be included. IAI H3 908N

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

Introduces Shakespeare's acting company, theater and audience. Discusses his techniques in building scenes, developing characters, handling dialogue. Readings and interpretations will consist of representative comedies, tragedies, histories and problem plays. IAI H3 905

#### **LIT 216 Science Fiction (3-0) 3 hrs.**

Surveys science fiction short stories and novels. Considers science fiction as popular literature and assesses its unique contribution to the history of ideas.

#### **LIT 217 Detective and Mystery Fiction (3-0) 3 hrs.**

Presents detective and mystery fiction from its beginning to the present. Includes long and short works representing the various types of mystery fiction. Examines the literature's contributions to, and influences upon, contemporary popular fiction.

## COURSE DESCRIPTIONS

**LT 219 Children's Literature (3-0) 3 hrs.**

Introduces the various types of children's literature. Includes the history of children's literature, as well as the classic and current authors and illustrators. Covers such areas as picture and concept books, myths, poetry, fantasy and realism.

**LT 221 American Literature— Colonial Days to Civil War (3-0) 3 hrs.**

Presents American literature as an expression of American life through early social and political documents, novels, short stories and poems. IAI H3 914

**LT 222 American Literature— the Civil War to Present (3-0) 3 hrs.**

Explores American prose, drama and poetry, Civil War to present, including minority literature, regional literature, literary journalism, criticism, and social and historical novels in their historical, social and cultural context to reflect current controversies and social changes. IAI H3 915

**LT 223 Minority Literature in America (3-0) 3 hrs.**

Investigates what it means to be a minority in the United States. Examines the ways in which minority writers, through fiction, nonfiction, poetry and drama, question the quality of American life and the authenticity of American democracy, thus helping students appreciate more fully the range of American cultures and subcultures. May include such writers as Olaudah Equiano, Frederick Douglass, Amiri Baraka, Rudolfo Anaya, Leslie Marmorek Silko, Toni Morrison, Rita Dove, Leslea Newman, Li-Young Lee, Vassar Miller, Vivienne Finch. IAI H3 910D

**LT 224 Women in Literature (3-0) 3 hrs.**

Examines the evolving portrayal of women—the many images, impressions and stereotypes—in literature. Includes literature written about women by women. Selections reflect a diversity of cultures, eras, authors and genres. The student will read selections from such authors as Bronte, Chekhov, Chopin, Hardy, Morrison and Woolf. IAI H3 911D

**LT 231 English Literature to 1800 (3-0) 3 hrs.**

Surveys English writers from beginning English literature to 1800. Reading and interpretation of writers such as Boswell, Chaucer, Congreve, Donne, Dryden, Johnson, Jonson, Malory, Milton, Pope and Swift. IAI H3 912

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

Surveys English writers from Romantic Period to World War I. Reading and interpretation of such writers as Austen, Browning, Byron, Conrad, Dickens, Hardy, Keats, Shaw, Tennyson and Wordsworth. IAI H3 913

**LT 241 20th Century British and American Literature (3-0) 3 hrs.**

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

### LNG Linguistics

**LNG 105 Introduction to Language and Linguistics (3-0) 3 hrs.**

Explores language - its origins, properties, use, structure, and meaning. Studies sound systems, word-information systems, syntactic systems, and derivations of meaning from spoken and written forms. Includes first and second language acquisition and properties of visual languages.

**LNG 205 Language and Culture (3-0) 3 hrs.**

Explores the relationship between language and culture. Includes the language socialization of children, gender differences in language, standard varieties and dialects of language and the effect of language on thought. Examines the nature of language in power relationships.

### MAT Materials/Logistics Management

**MAT 101 Materials/Logistics Management (3-0) 3 hrs.**

Provides an introduction and overview of the field of materials/logistics management. Topics covered include objectives, benefits, relationships with other functions, organization, planning, inventory control, production control, purchasing, receiving and stores, material handling, physical distribution, implementation and pitfalls, measurement and control, finance and just-in-time.

**MAT 120 Production Control Concepts (3-0) 3 hrs.**

Describes the development, scope and objectives of production control. Specific attention will be given to scheduling, control, critical path, machine loading, materials requirements planning and other techniques, functions, and activities which are implicit in this aspect of material management operations.

**Prerequisite:** MAT 101 or consent of coordinator.

**MAT 121 Principles of Physical Distribution (3-0) 3 hrs.**

Movements of goods from production to delivery to distribution of channel intermediaries. Attention is focused upon distribution channels, traffic management, warehousing, inventories, organization, control and communication. Heavy emphasis is given to distribution system design and distribution system analysis.

**Prerequisite:** MAT 101 or consent of coordinator.

## COURSE DESCRIPTIONS

### **MAT 122 Inventory Control (3-0) 3 hrs.**

Provides an overview of the dynamics of managing inventory in the constantly changing industrial and commercial environment. Topics include forecasting sales and inventory requirements, computer applications to inventory control problems, building inventory models, simulation and the relationships of inventory control to marketing management and production control.

**Prerequisite:** MAT 101 or consent of coordinator.

### **MAT 123 Traffic and Transportation (3-0) 3 hrs.**

Provides an overview of transportation systems and the impact on cost and service that each system provides. Examines costs in various modes and routings. Reviews operational aspects of the transportation function.

**Prerequisite:** MAT 101 or consent of coordinator.

### **MAT 124 Material Handling and Packaging (3-0) 3 hrs.**

Presents material handling and packaging as tools for use in a total system of material management. Material handling concepts include palletization, containerization, conveyor systems, fully automated warehousing and integrated production lines. Packaging is treated as a function with ramifications far beyond mere protection of a product.

**Prerequisite:** MAT 101 or consent of coordinator.

### **MAT 125 Purchasing (3-0) 3 hrs.**

Covers the nature and importance of the procurement function in modern business organizations. Principles, tools, methods and techniques employed for the acquisition of materials, supplies and equipment.

**Prerequisite:** MAT 101 or MKT 245.

### **MAT 226 Material Requirements Planning (MRP) (3-0) 3 hrs.**

Covers computer based Material Requirements Planning (MRP) systems, important to modern material management. Focuses on using MRP systems to reduce inventories, set priorities, initiate orders, purchase requirements and develop master production schedules.

**Prerequisite:** MAT 122 or consent of coordinator.

### **MAT 227 Just-In-Time (JIT) (3-0) 3 hrs.**

Provides a comprehensive study of the JIT philosophy/technique for improving manufacturing practices. Results in improved material flow systems, low inventories, improved manufacturing activities, increased capital turnover and maximized profits.

### **MAT 230 International Materials/Logistics Management (3-0) 3 hrs.**

Provides a comprehensive study of the materials/logistics management function related to the international environment: business/cultural customs, legal considerations, purchasing strategies, financial aspects, international distribution and counter-trade.

**Prerequisite:** MAT 101 or consent of instructor.

### **MAT 259 Advanced Purchasing (3-0) 3 hrs.**

Continues MAT 125. Emphasis to be given to managerial aspects of purchasing, contract negotiation and administration and speculative purchasing.

**Prerequisite:** MAT 125.

### **MAT 281 Topics in Materials/Logistics Management (1-0 to 3-0) 1-3 hrs.**

Studies selected problems or topics in materials/logistics management. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated to a maximum of 3 credit hours. Students who have 12 semester hours in MAT course work or who have the consent of the coordinator are eligible to enroll.

## **MET Mechanical Engineering Technology**

### **MET 100 Mechanical Design Career Exploration (.5-10) 1 hr.**

Studies career and employment possibilities in the mechanical design industry. Includes observation of practices in mechanical design and attendance at a seminar to discuss related experiences. For Tech Prep students with no prior courses or work experience in the mechanical design field. (NOTE: Summer semester only.)

**Prerequisite:** Consent of coordinator.

### **MET 101 Applied Mechanical Drafting (1-4) 3 hrs.**

Introduces lettering, orthographic projection, dimensioning techniques and drawing interpretation based upon national standards. Emphasizes blueprint reading, shop schematics, developments and intersections. Individual sections of this course may be identified for special interest applications such as refrigeration/air conditioning, fire code compliance, welding or automated machining.

### **MET 106 Mechanical Blueprint Reading (.5-1) 1 hr.**

Develops skill in reading blueprints and interpreting engineering drawings. Emphasizes projection techniques commonly found on industrial prints such as orthographic, auxiliary, isometric, and section views. Covers precision dimensioning fundamentals in part assemblies and sub-assemblies. (Formerly AUT 146)

### **MET 200 Mechanical Drafting and CAD Internship (1-15) 2 hrs.**

Applies appropriate skills to the mechanical drafting and CAD technology field. (NOTE: Summer semester only.)

**Prerequisite:** MET 100 with a grade of "C" or better or consent of coordinator.

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

**MET 202 Advanced Technical Drafting (1-5) 3 hrs.**

Orthographic considerations of mechanical and tooling systems, limit and tolerance dimensioning, sketching, product illustration and assembly drafting presentations.  
**Prerequisite:** EGR 120 with a grade of "C" or better.

**MET 207 Machine Design (2-4) 4 hrs.**

Covers design principles applied to machine elements with respect to size, shape, material, geometry, environment and economy. Covers clutches, brakes, belts, chains, fasteners, gear shafts and gears. Emphasis is on principles and calculations necessary to determine fits, stresses, loads, deformations and finishes.

**Prerequisite:** MET 201 and MET 240 with grades of "C" or better.

**MET 235 Computer Graphics (1-2) 2 hrs.**

Surveys concepts of computer-aided design and drafting systems. Applies principles of engineering graphics to create two-dimensional drawings using professional application packages. Emphasizes use of CAD to create working drawings. Course is intended to integrate students having non-Harper course prerequisites into MET design curriculum. May not be applied toward credit for A.A.S. degree in Mechanical Engineering Technology or Manufacturing Technology. This course is for students with prior mechanical drafting experience.

**MET 236 Solid Modeling I (1-5) 3 hrs.**

Provides a detailed study of solid modeling in the design of engineered products. Concentrates on the design process from concept through the preparation of working drawings. Focuses on basic and intermediate construction techniques, editing and modification procedures, and data management concerns associated with integrated product development. Laboratory component emphasizes good design practices while utilizing commercial software.

**Prerequisite:** EGR 121 with a grade of "C" or better, or consent of instructor.

**MET 237 Solid Modeling II (1-5) 3 hrs.**

Continues MET 236 focusing on advanced modeling techniques including assembly modeling and surfacing. Emphasizes the building of simple and complex assemblies, managing, configurations, and team-oriented design procedures. Surfacing module covers construction techniques and integration of advanced surfaces into part design. Includes an introduction to computer-aided tolerance analysis.

**Prerequisite:** MET 236 with a grade of "C" or better, or consent of instructor.

**MET 240 Statics and Strength of Materials (5-0) 5 hrs.**

Introduces the concepts of force systems, equilibrium of force systems, analysis of forces acting on members of trusses, frames, etc., and forces due to friction. Includes elastic relationships between external forces acting on deformable bodies; stresses and deformations produced; tension and compression members; members subjected to torsion and bending; buckling; combined stresses; and influence of properties of materials.

**Prerequisite:** MTH 106, PHY 101 or PHY 121 with grades of "C" or better.

**MET 245 Applied Digital Control (3-4) 5 hrs.**

Studies the principles and techniques of controls applied to mechanical systems, electrical motors and electro-mechanical systems. Consists of topics in motors and controls, hydraulic and pneumatic components, open-closed loop systems, programmable microprocessor controllers, and robotic control devices (limit switches, relays, solenoids, end-of-arm sensors). Includes control logic and Boolean algebra.

**Prerequisite:** MTH 106 with a grade of "C" or better.

**MET 281 Topics in Mechanical Engineering Technology (1-0 to 3-0) 1-3 hrs.**

Studies selected problems or topics in mechanical engineering technology. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated to a maximum of three credit hours. Students who have 12 semester hours in MET course work or who have the consent of the coordinator are eligible to enroll.

**MFG Manufacturing**

**MFG 100 Manufacturing Career Exploration (.5-10) 1 hr.**

Studies career and employment possibilities in the manufacturing industry. Includes observation of practices in manufacturing and attendance at a seminar to discuss related experiences. For Tech Prep students with no prior courses or work experience in the manufacturing field. (NOTE: Summer semester only.)

**Prerequisite:** Consent of coordinator.

**MFG 101 Introduction to CNC/CAM (2-2) 3 hrs.**

Introduces computer numerical control (CNC) and computer-aided manufacturing (CAM). Applications covered include conversational programming and EIA/ISO programming. Laboratory work will emphasize machine set-up, tooling requirements, machine operation, program verification, and troubleshooting. Discusses the relationship of CAM to modern manufacturing. IAI MTM 915

## COURSE DESCRIPTIONS

### **MFG 105 Machining Processes I (1-5) 3 hrs.**

Covers fundamentals of machine shop theory and practice. Provides familiarization with tools, equipment, and practices of tool, die and precision metal working industries. Includes theory and operation of lathes, mills, and surface grinders. Students are provided classroom and laboratory learning experiences while making a working tool.  
IAI MTM 921

### **MFG 108 Manufacturing Processes and Materials (3-0) 3 hrs.**

Introduces materials, principles, utilization, expectations and evaluation of principal manufacturing processes. Emphasizes manufacture of metals, alloys, iron and steel types, classification systems and elements of metrology. Covers machinability, cutting, fluids, power requirements, production and facilities planning. IAI MTM 913

**Prerequisite:** MTH 106 or concurrent enrollment with a grade of "C" or better or consent of instructor.

### **MFG 110 Basic Welding (1-5) 3 hrs.**

Covers fundamentals of welding theory and practices. Includes equipment, set-up procedures and practice of oxyacetylene and electric arc welding techniques. Includes practice welding of various horizontal joints; butt; fillet; lap and tent. IAI MTM 936

**Prerequisite:** MET 101 or AUT 146 with a grade of "C" or better or consent of instructor.

### **MFG 115 Computer-Aided Manufacturing I (2-2) 3 hrs.**

Introduces computer-assisted part programming as it applies to computer numerical control and computer-aided manufacturing. Covers the graphical programming environment using commercial CAM software. Includes part geometry definition, job operating files, post processing, code editing, and program verification. Laboratory component includes validation of programs through actual machine setup and operation. IAI MTM 933

**Prerequisite:** MET 101 or MET 105, MFG 101 and MTH 104 with grades of "C" or better.

### **MFG 120 Machining Processes II (1-5) 3 hrs.**

Covers advanced machine shop theory with emphasis on safe practices and applications. Includes lathes, grinders, (I.D., O.D., and surface), milling machines and tool grinders. Studies production machining, feed and speed application, and quality control techniques applied to precision machining. Students are introduced to gage blocks, height gages, magnetic sine plate, and modern indexable tooling.

**Prerequisite:** MET 101 or MET 105, MFG 105 and MTH 104 with grades of "C" or better.

### **MFG 125 CNC Manual Programming I (2-2) 3 hrs.**

Introduces manual programming (EIA/ISO format) as it applies to computer numerical control. Includes positioning and coordinate systems used in CNC programming, programming procedures, offsets and compensation, point-to-point and continuous path programming, canned cycles, and interpolation. Additional topics cover program verification, machine operation, detection and diagnosis of errors, and correction methods.

**Prerequisite:** MET 105, MFG 101, and MTH 104 with grades of "C" or better.

### **MFG 126 CNC Conversational Programming (2-2) 3 hrs.**

Introduces conversational programming (Mazatrol format) as it applies to computer numerical control. Includes positioning and coordinate systems used in CNC programming, programming procedures, offsets and compensation, point-to-point and continuous path programming, canned cycles, and interpolation. Additional topics cover program verification, machine operation, detection and diagnosis of errors, and correction methods.

**Prerequisite:** MET 101 or MET 105, and MFG 101 with grades of "C" or better.

### **MFG 200 Manufacturing Internship (1-15) 2 hrs.**

Applies appropriate skills to the manufacturing technology field. (NOTE: Summer semester only.)

**Prerequisite:** MFG 100 with a grade of "C" or better and consent of coordinator.

### **MFG 205 Machining Processes III (1-5) 3 hrs.**

Continues refinement of concepts and skills introduced in MFG 120. Provides further experience in the four principal machining groups: drilling, grinding, milling, and turning. Advanced work includes complex problems using standard machine tools, sine and compound sine plate, rotary table, dividing head, boring head, work holding for complex setups, tooling selection and toolmaker's vise. Safety, precision, and quality control are emphasized.

**Prerequisite:** MFG 120 and QUA 260 with grades of "C" or better, or consent of instructor.

### **MFG 206 Metallurgy and Heat Treatment (2-3) 3 hrs.**

Covers selected principles and concepts of physical metallurgy. Principles are applied to heat treatment of metals.  
IAI MTM 912

**Prerequisite:** MFG 108 with a grade of "C" or better or consent of instructor.

### **MFG 210 Advanced Welding (1-5) 3 hrs.**

Covers advanced welding theory and practice. Includes equipment, setup procedures and unusual welding positions and joints. Uses oxyacetylene, electric arc, MIG and TIG techniques.

**Prerequisite:** MFG 110 with a grade of "C" or better or consent of instructor.



**MFG 211 Process Planning and Tool Design (3-3) 4 hrs.**

Studies topics in production and tooling systems design. Includes graphic presentation of tooling details, jigs and fixtures, and geometric tolerancing. Emphasizes organization of the manufacturing sequence and process planning with resultant documentation.

**Prerequisite:** MET 202 and MFG 108 with grades of "C" or better or consent of instructor.

**MFG 215 Computer-Aided Manufacturing II (2-2) 3 hrs.**

Covers advanced topics in computer-assisted part programming and computer-aided manufacturing. Includes programming of elements generated from surface and solids, verification techniques, exchange of data, multi-axis programming, and programming of additional types of CNC machine tools. Laboratory problems are more complex than those introduced in MFG 115. Topics in generative programming will be introduced to assist in complex problem solution.

**Prerequisite:** MFG 115 with a grade of "C" or better.

**MFG 216 Computer-Aided Manufacturing III (1-4) 3 hrs.**

Covers advanced problems in computer-aided manufacturing using a variety of systems and application packages. Introduces such topics as multi-axis contouring, tool planning and presetting, scheduling, communications and advanced individual exercises. This is a capstone course with a project assignment to supplement other laboratory work. The project will demonstrate system-based thinking using troubleshooting techniques and critical thinking skills.

**Prerequisite:** MFG 215 with a grade of "C" or better, or consent of instructor.

**MFG 225 CNC Manual Programming II (2-2) 3 hrs.**

Covers advanced manual programming (EIA/ISO format) techniques. Includes program optimization, documentation, block skip techniques, advanced use of preparatory functions (G-codes) and other programming words, tool offsets, specialized machining operations, and parametric programming techniques.

**Prerequisite:** MFG 125 with a grade of "C" or better.

**MFG 228 Automated Manufacturing and Robotics (2-3) 3 hrs.**

Covers advanced concepts of manufacturing systems with automation techniques, robotics applications and flexible manufacturing systems. Introduces automation controls, robotic cell design, automatic storage/automatic retrieval and automated quality control. Includes the interdependent relationship of industrial robots, microprocessors and advanced numerical control.

**Prerequisite:** MFG 108 with a grade of "C" or better.

**Corequisite:** MET 245 or ELT 215.

**MFG 240 Machining Applications (1-5) 3 hrs.**

Provides a capstone experience and demonstrates proficiency in traditional machine tool operations. Requires the planning and production of precision-machined parts for assemblies with emphasis on accuracy and precision. The capstone project is to be an assembly consisting of multiple components requiring process planning, selection of tooling and setup, fabrication, inspection to assure conformance to specification and final assembly. Students gain experience in problem solving and creative/critical thinking skills.

**Prerequisite:** MFG 205 and QUA 260 with grades of "C" or better or consent of instructor.

**MFG 281 Topics in Manufacturing Technology (1-0 to 3-0) 1-3 hrs.**

Studies selected problems or topics in manufacturing technology. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated to a maximum of three credit hours. Students who have 12 semester hours in MFG course work or who have the consent of the coordinator are eligible to enroll.

**MGT Management**

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

Introduces the nature of business and the environment in which it operates. Forms of business ownership, introduction to operative and facilitating facets of business operation, management, marketing, accounting, statistics, business law, finance, investments, insurance and labor-management relations. IAI BUS 911

**MGT 115 Introduction to International Business (3-0) 3 hrs.**

Provides introductory concepts, principles and practice of the international business environment. The issues include the nature of international business; international organizations and monetary systems; the various foreign forces such as labor, legal, political, and cultural; and the impact on the U.S. economy and business.

**MGT 150 Business Math (3-0) 3 hrs.**

Introduces arithmetic as a tool of business. Topics include fractions, decimals and percentages, computations of interest, bank discounts, depreciation, commissions, compound interest, payrolls and taxes and graph and chart design. Students must score satisfactorily on a mathematics placement test prior to registering for this course.

## COURSE DESCRIPTIONS

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

Organization and operation of the small-scale retail, trading, service or manufacturing business. Location, financing, marketing, labor, accounting, and in the case of manufacturing, production, plus related problems of stock control, taxes and insurance.

**MGT 160 Principles of Supervision (3-0) 3 hrs.**

Introduces the responsibilities of the first or second echelon supervisor in either the industrial or administrative environment. Leadership qualities, human relations skills, motivation, communications, training techniques and problems of the work group are discussed.

**MGT 165 International Management (3-0) 3 hrs.**

Analyzes the problems and practices in international business management activities. The issues include American management techniques in foreign settings, comparative management among different countries and the complexity introduced by the course focuses on international organizational functioning to help the student gain a diversity of views.

**Prerequisite:** MGT 111.

**MGT 168 OSHA Standards and Compliance Procedures (3-0) 3 hrs.**

Develops skills and competencies needed in instituting proper occupational safety and health environment in commercial and manufacturing business establishments for compliance with federal OSHA standards.

**MGT 170 Principles of Individual Financial Planning (3-0) 3 hrs.**

Introduces the student to the fundamentals of equity and fixed income investing. The course will also explore other investment management subjects such as mutual funds, international investing and retirement planning as well as tax-advantaged investments. Basic derivatives such as futures and options will also be discussed. Credit will be given for either MGT 170 or BFC 200, but not both.

**MGT 204 Training and Development (3-0) 3 hrs.**

Introduces the student to the principles of training practices with emphasis on the concerns of human learning: acquisition, retention and transfer of skills. Includes supervisory and management skills, designing performance goals, MBO (Management by Objectives) forming lesson plans, mechanics of training, experiential instruction, role playing, case studies and technologies available.

**MGT 205 Leadership Foundations (1-0) 1 hr.**

Introduces the concept of leadership and the impact a leader has on an organization. Emphasis is on the values of leadership traits, motives of recognized leaders and their styles and ethical behavior.

**MGT 206 Leadership Skills (1-0) 1 hr.**

Explores skill areas necessary for the successful leader in any organization. Emphasis is on problem-solving, motivation, conflict and negotiations, organizational vision and cultural diversity.

**MGT 207 Leadership Trends (1-0) 1 hr.**

Examines the impact of the future on leadership development today. Connects the need to understand one's self with internal and external influences on an organization in order to better prepare the leader for the 21st century.

**MGT 211 Internship in Small Business (1-15) 3 hrs.**

Provides cooperative work experience working in a small business. Credit is given for participation in a supervised work experience. The work must take place in a College-approved work station.

**Prerequisite:** MGT 154.

**MGT 218 Introduction to Finance (3-0) 3 hrs.**

Methods of financing business enterprises and their relationships to personal and company investment policies.

**Prerequisite:** ACC 101 and MGT 111.

**MGT 225 Applied General Statistics (4-0) 4 hrs.**

Introduces both descriptive and inductive statistics. Collection of data; frequency distributions and measures of data; frequency distributions and measures of location (mean, median, mode); measures of variation; probability, theoretical distributions including sampling distributions, estimation, tests of hypotheses; correlation, regression analysis and index numbers; and time series. Computer applications are included. (Credit will not be granted for both MGT 225 and MTH 165) IAI BUS 901 IAI M1 902

**Prerequisite:** MTH 103 or MTH 134 with a grade of 'C' or better.

**MGT 230 Topics in Business (5-0 to 3-0).5-3 hrs.**

Studies selected problems or topics in business. The exact contents and instructional method will vary from semester to semester. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated two times to a maximum of three credit hours.

**MGT 254 Small Business Formation (3-0) 3 hrs.**

Examines the problems in starting, expanding, and diversifying a small business. Includes forms of ownership; evaluation of risk in various types of businesses; performance measurement and market research; site location and layout; growth and trend analysis. It is recommended that MGT 154 be taken prior to enrollment.

**MGT 265 Human Resources Management (3-0) 3 hrs.**

Addresses personnel problems and labor relations. Employment techniques, wages and hours, job evaluation, training, rating, collective bargaining, pensions, and fringe benefits will be examined.

**Prerequisite:** MGT 111.

**MGT 266 Wage Analysis and Administration (3-0) 3 hrs.**

Studies the compensation process: wage, salaries, wage theory and legal considerations. Examines various fringe benefits, profit sharing, job analysis and its evaluations.

**Prerequisite:** MGT 265.

**MGT 270 Principles of Management (3-0) 3 hrs.**

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

**Prerequisite:** MGT 111.

**MGT 274 Operations Management (3-0) 3 hrs.**

Introduces the student to operations management stressing operational problems. The characteristics of industrial enterprise, the problems of materials procurement, plant organization and layout, labor relations and personnel policies, efficiency techniques, automation and production development are considered. Related problems of inventory control, quality control, production control and budgetary control are included.

**Prerequisite:** MGT 111.

**MGT 275 Labor-Management Relations (3-0) 3 hrs.**

Deals with the processes and the framework that influence both the day-to-day and the long-run relationships between management and labor. The history of the union movement, collective bargaining, arbitration procedures, labor legislation, union organization and the characteristics of the labor market are discussed.

**Prerequisite:** MGT 265.

**MGT 276 Collective Bargaining (3-0) 3 hrs.**

Studies the collective bargaining method preparations and patterns; strategies and tactics of negotiations; and the use of mediators and arbitrators.

**Prerequisite:** MGT 265.

**MGT 280 Human Relations in Business (3-0) 3 hrs.**

Emphasizes a managerial and interpersonal relations process approach to problem solving, communication and group dynamics. Specific treatment is given to managing change, appraisal and reward, solving communication problems, status needs of the work force, understanding individuals, group dynamics and reducing conflict.

**Prerequisite:** MGT 111.

**MGT 291 Problems in Management and Supervision (3-0) 3 hrs.**

Provides the student with a logical integration of management principles with representative supervisory problems found in business firms. Emphasis is given to decision making. Case problems, simulation and directed reading.

**Prerequisite:** MGT 160 and MGT 270 or consent of the instructor.

**MKT Marketing**

**MKT 100 Marketing Career Exploration (1-0) 1 hr.**

Studies an overview of career and employment possibilities in the marketing industry. Careers in sales, advertising and sales promotion, marketing, retailing and other specialized areas of marketing will be reviewed. Emphasis on individual career path selection through interest testing and career exploration. This course is intended for students with limited prior marketing courses or marketing work experience.

**Prerequisite:** Consent of coordinator.

**MKT 106 Retail Merchandising (3-0) 3 hrs.**

Focuses upon the merchandising activities related to hardlines, apparel and other softline merchandise. Examines the role and qualifications of the buyer and the influence of consumer preference. Includes budgeting by dollars and assortment, pricing strategy, managing assortments, the selection and promotion of merchandise, and the coordinator of merchandising functions and processes.

**MKT 110 Retail Store Layout and Imaging (2-0) 2 hrs.**

Examines the importance and relationship of store layout, image projection, interior merchandise presentation and site location to store success. This course is designed to allow the learner to understand the relationship of image and product positioning to sales and profit. Emphasis is placed on layout, space allocation, interior merchandise presentation and store operations.

**MKT 120 Customer Service (1-0) 1 hr.**

Studies the importance of customer service satisfaction and the functions of various customer relation systems. This course is designed to promote an understanding of customer service in general and how it specifically contributes to the success of the marketplace and individual businesses. Emphasis is placed on the importance of striving for excellence in service to win and hold customers and to gain a competitive advantage.

**MKT 140 Principles of Professional Selling (3-0) 3 hrs.**

Focuses upon the principal factors of successful selling of goods or ideas. Examines buying motives, sales psychology, customer approach and sales techniques.

## COURSE DESCRIPTIONS

### **MKT 141 Sales Management (3-0) 3 hrs.**

Focuses on the responsibilities of the sales executive in planning and evaluating sales activities as well as supervision of a sales force. Attention is given to the administrative activities of sales managers at all levels with emphasis directed to the management of sales forces of manufacturers, service marketers and wholesaling middlemen.

**Prerequisite:** MKT 140 or consent of coordinator.

### **MKT 190 Export Documentation (3-0) 3 hrs.**

Provides an understanding of the procedures and necessary documentation for exporting both goods and services. Course content will cover shipping documentation as well as insurance, banking and finance and governmental forms required for export marketing.

**Prerequisite:** MKT 260 or consent of coordinator.

### **MKT 217 Advertising (3-0) 3 hrs.**

Purposes of advertising, how advertisements are prepared and delivered in media, and how effectiveness of advertising is measured and evaluated in relation to the selling and marketing process. IAI MC 912

**Prerequisite:** MKT 245 or consent of instructor.

### **MKT 240 Advanced Sales Strategies (3-0) 3 hrs.**

Develops and refines sales techniques established in previous course work and/or on-the-job sales experience. Opportunities will be available to apply specific selling skills to various sales situations and product categories through presentations and term projects.

**Prerequisite:** MKT 140 or consent of instructor.

### **MKT 245 Principles of Marketing (3-0) 3 hrs.**

Focuses on marketing activities that will cover product planning, pricing strategies and promotional efforts including advertising, selling and sales promotions and distribution channel effectiveness.

### **MKT 246 Business to Business Marketing (3-0) 3 hrs.**

Provides a comprehensive understanding of industrial marketing by analyzing concepts and techniques in each of the major functional areas of industrial marketing. Topics to be investigated would include market development, product planning, price competition, promotional strategies, customer relations and marketing logistics.

**Prerequisite:** MKT 245 or consent of coordinator.

### **MKT 247 Consumer Buying Behavior (3-0) 3 hrs.**

Reviews and analyzes areas of consumer and organizational buying behavior that guide marketing management decisions. The focus of this course will be directed toward the application of concepts on buying behavior to specific functional areas of marketing management in both the industrial and consumer markets.

### **MKT 248 Direct Marketing (3-0) 3 hrs.**

Explores the principles involved in the introduction of goods and services directly to the customer through various media sources without the use of a retail facility. Emphasis is placed on determining the correct target market, creating a measurable database, measuring the rate of response, selection and planning of media, and strategic implementation of a planned campaign. Development of direct mail pieces, telemarketing tools and broadcast and print media will be covered.

**Prerequisite:** MKT 245 or consent of coordinator.

### **MKT 250 Retailing (3-0) 3 hrs.**

Surveys types of retail institutions, including consideration of store location and organizational procedures, buying and merchandising practices, promotional and personnel policies.

### **MKT 251 Retail Merchandise Management (3-0) 3 hrs.**

Emphasizes the nature and importance of retail merchandise management in relation to the success of the retail firm. The student will demonstrate knowledge and decision making skills of retail management by using case study and problem solving activities to interpret and analyze information faced by merchandise department managers, buyers and independent retailers. The focus will be on strategic merchandise planning; advanced purchasing and pricing strategies; inventory valuation and analysis of profit and productivity performance.

**Prerequisite:** MKT 106 or MKT 250.

### **MKT 255 Marketing Research (3-0) 3 hrs.**

Provides students with a basic overview of marketing research. Includes an understanding of how and why marketing research is conducted and how it interacts with marketing decision making.

**Prerequisite:** MKT 245 or consent of coordinator.

### **MKT 260 International Marketing (3-0) 3 hrs.**

Allows students to gain a broad understanding of the field of international marketing. It also provides insight into how international marketing is conducted, the requisites for effective performance and a knowledge of the special problems involved in language, finance and customs. Most importantly, it assists students in understanding international marketing problems and how marketing procedures apply to international business.

### **MKT 280 Marketing Problems (3-0) 3 hrs.**

Focuses on the application of marketing skills and knowledge to marketing problems, case studies, projects or decision-making simulation.

**Prerequisite:** MKT 245 and nine hours of marketing courses, or consent of coordinator.

**MKT 281 Internship in Marketing (1-15) 3 hrs.**

Provides work experience in a marketing related field. Credit is given for participation in a supervised work experience wherein an organized training plan will be followed at a College approved training station. One lecture hour per week for a seminar devoted to issues dealing with preparation for success in a marketing career.

**Prerequisite:** Consent of coordinator.

**MKT 285 Topics in Marketing (5-0 to 3-0) .5-3 hrs.**

Studies selected problems or topics in marketing. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated two times to a maximum of three credit hours.

**MKT 290 Principles of Exporting and Importing (3-0) 3 hrs.**

Provides a conceptual overview of the world market environment with emphasis on both global exporting and importing. Introduces students to marketing strategies and procedures to capitalize on domestic and overseas world trade potential.

**Prerequisite:** Prior or concurrent enrollment in MKT 260.

**MKT 292 International Marketing Research (3-0) 3 hrs.**

Provides the student with the concepts and procedures for successfully completing international marketing research studies. Specific marketing research subject areas studied will include marketing problem definition, international information source definition, utilizing governmental data, survey design, collection and analysis techniques.

**Prerequisite:** MKT 290 and MKT 260.

**MKT 293 International Marketing Channel Strategy (3-0) 3 hrs.**

Provides a comprehensive understanding of the strategies for exporting both goods and services through alternative marketing channels of distribution. Will address both cost and profit considerations in utilizing multi-level marketing channel intermediaries.

**Prerequisite:** MKT 290.

**MOA Medical Office Administration**

**MOA 145 Health Care Records Management (1-2) 2 hrs.**

Introduces the types of patient-care records prepared and maintained by health care personnel. Includes elements of records, record keeping, correction techniques, equipment, and use of health care references, with transcriber and computer applications.

**Prerequisite:** HSC 100 and HSC 112 with grades of "C" or better. Prior or concurrent enrollment in HSC 105.

**MOA 195 Health Insurance and Coding (1-2) 2 hrs.**

Compares the major classes of health insurance contracts and describes their benefits and limitations. Provides practice in systematizing and processing insurance claim forms. Offers CPT and ICD-9 coding procedures and practice for optimal reimbursement.

**Prerequisite:** HSC 100 and HSC 112 with grades of "C" or better. Prior or concurrent enrollment in HSC 105.

**MOA 205 Clinical Principles (4-4) 6 hrs.**

Offers the principles, theories, and terminology of basic and advanced clinical techniques utilized in the physician's examining rooms. Includes the principles of diagnostic testing and medications, as well as the principles of specialty examinations, surgical procedures, clinical laboratory testing and maintenance of proper safety guidelines. Prepares health care personnel for health care work without patient contact. Computer laboratory competencies specific to the student's chosen career will be assigned.

**Prerequisite:** HSC 100, HSC 112 and HSC 151 with grades of "C" or better. Prior or concurrent enrollment in HSC 105 and MOA 145. Prior or concurrent enrollment in MOA 195 or NUR 120.

**MOA 215 Clinical Procedures (4-8) 8 hrs.**

Offers basic and advanced clinical techniques in the physician's examining room. Includes diagnostic and laboratory testing techniques, principles of medications, and assisting the physician in specialty examinations and minor surgical procedures. Demonstration of clinical skills in outpatient care is emphasized, with maintenance of proper patient and technician protection guidelines. Includes a clinical rotation in a health care facility. (NOTE: CPR Basic Rescuer Certification and the program's health requirements must be completed prior to placement in clinical rotation.)

**Prerequisite:** HSC 100, HSC 112 and HSC 151 with grades of "C" or better. Prior or concurrent enrollment in HSC 105 and MOA 145.

## COURSE DESCRIPTIONS

**MOA 235 Health Care Office Procedures (2-4) 4 hrs.**

Offers development of skills in the office procedures used in a health care facility. Emphasizes patient relations in health care and office simulations with extensive use of business calculator, transcriber and computer. Keyboarding speed of a minimum of 40 words per minute is recommended.

**Prerequisite:** HSC 100, HSC 112 with grades of "C" or better. Prior or concurrent enrollment in HSC 105, HSC 151 and MOA 145. Prior or concurrent enrollment in MOA 195 or NUR 120.

**MOA 240 Introduction to Medical Transcription (2-2) 3 hrs.**

Develops speed and accuracy in transcribing a variety of basic medical reports, using a transcriber and computer. Enhances student's knowledge of health care reports and specialized terminology.

**Prerequisite:** MOA 145, MOA 235 and MOA 205 or MOA 215, with grades of "C" or better. Prior or concurrent enrollment in NUR 120.

**MOA 242 Medical Transcription for the MT (2-2) 3 hrs.**

Offers speed and accuracy development in transcribing various health care reports and familiarizes student with the report formats. Extensive use of transcriber and computer. Progresses to advanced, specialized hospital dictation. Keyboarding speed of a minimum of 60 words per minute is recommended.

**Prerequisite:** MOA 145, MOA 205, MOA 235 and NUR 120 with grades of "C" or better.

**MOA 244 Advanced Insurance Procedures (2-2) 3 hrs.**

Develops speed and accuracy in coding for maximum reimbursement and billing practices, using computer and specialized software. Enhances student's knowledge of health insurance coding procedures, utilizing typical reports and specialized terminology.

**Prerequisite:** MOA 145, MOA 195, MOA 205 and MOA 235 with grades of "C" or better. Prior or concurrent enrollment in NUR 120.

**MOA 245 Health Care Office Management (3-0) 3 hrs.**

Introduces the qualities of a health care office supervisor necessary to effectively manage the physician's office. Includes human relations skills, personnel recruitment, coordinating and supervising office personnel, office facilities, the office policy manual, records management, patient education, time management and software applications utilized in health care.

**Corequisite:** MOA 250 or MOA 260 or MOA 270 or MOA 280 or MOA 290.

**MOA 250 Health Insurance Billing Specialist Seminar and Externship (1-10) 3 hrs.**

Provides supervised practice in a health care facility to enhance the student's technical skills in coding CPT and ICD, and related activities in billing and collections. One-hour seminar each week devoted to health care issues. (NOTE: The program's health requirements must be completed prior to placement in externship.)

**Prerequisite:** MOA 145, MOA 195, MOA 205 and MOA 236 with grades of "C" or better. Prior or concurrent enrollment in HSC 213 and MOA 244.

**Corequisite:** MOA 245.

**MOA 260 Medical Transcriptionist Seminar and Externship (1-10) 3 hrs.**

Provides supervised experience in a hospital, clinic or group practice to enhance the student's technical skills in medical transcription. One-hour seminar each week devoted to health care issues. (NOTE: The program's health requirements must be completed prior to placement in externship.)

**Prerequisite:** MOA 145, MOA 205, and MOA 235 with grades of "C" or better. Prior or concurrent enrollment in HSC 213 and MOA 242.

**Corequisite:** MOA 245.

**MOA 270 Health Care Secretary Seminar and Externship (1-10) 3 hrs.**

Provides supervised experience in a health care facility to enhance the student's administrative technical skills. One-hour seminar each week devoted to health care issues. (NOTE: CPR Basic Rescuer certification and the program's health requirements must be completed prior to placement in externship.)

**Prerequisite:** MOA 145, MOA 205 and MOA 235 with grades of "C" or better, and prior or concurrent enrollment in HSC 213, MOA 240.

**Corequisite:** MOA 245.

**MOA 280 Medical Office Assistant Seminar and Externship (1-10) 3 hrs.**

Provides supervised administrative and clinical experience in a health care facility to enhance the student's technical skills. One-hour seminar each week devoted to health care issues. (NOTE: CPR Basic Rescuer certification and the program's health requirements must be completed prior to placement in externship.)

**Prerequisite:** MOA 215 and MOA 235 with grades of "C" or better and prior or concurrent enrollment in HSC 213 and MOA 240.

**Corequisite:** MOA 245.

## COURSE DESCRIPTIONS

### **MOA 290 Health Care Office Manager Seminar and Externship (1-10) 3 hrs.**

Provides supervised experience in a health care facility to enhance the student's office managerial skills. One-hour seminar each week devoted to health care issues.

(NOTE: CPR Basic Rescuer certification and the program's health requirements must be completed prior to placement in externship.)

**Prerequisite:** MOA 145, MOA 195 and MOA235 with grades of "C" or better. Prior or concurrent enrollment in HSC 213 and a minimum of six (6) hours of MOA-prefix electives and six (6) hours of business-related electives.  
**Corequisite:** MOA 245.

### MTH Mathematics

#### **MTH 051 Arithmetic of Whole Numbers (1-0) 1 hr.**

Covers reading and writing whole numbers and whole number operations. In addition to the four basic processes of addition, subtraction, multiplication, and division, estimation is introduced as an aid to better computation. Course material will be individualized. Carries no transfer credit.

**Prerequisite:** Math placement test.

#### **MTH 052 Arithmetic of Fractions and Decimals (1-0) 1 hr.**

Covers the operations associated with addition, subtraction, multiplication, and division of common fractions, mixed numbers and decimals. Includes work with word problem applications. Course material will be individualized. Carries no transfer credit.

**Prerequisite:** MTH 051 with a grade of "C" or better, or math placement test.

#### **MTH 053 Arithmetic of Ratio, Proportion Percent and Measurement (1-0) 1 hr.**

Covers operations of ratio and proportion, percent, English measurement, metric measurement and geometric measurement. Course material will be individualized. Carries no transfer credit.

**Prerequisite:** MTH 052 with a grade of "C" or better, or math placement test.

#### **MTH 055 Basic College Mathematics (3-0) 3 hrs.**

Covers the arithmetic of whole numbers, fractions, decimals, ratio, proportion, percent and measurement. Includes work in estimation and word problem applications. The class includes MTH 051, MTH 052, MTH 053 and is offered as a lecture course. Carries no transfer credit. A calculator is allowed.

**Prerequisite:** Math placement test.

#### **MTH 060 Elementary Algebra (3-0) 3 hrs.**

Introduces operations with signed numbers, linear equations, inequalities, word problems, exponents, operations with polynomials, factoring, quadratic equations, rational expressions, linear equations in two variables, graphing linear equations and inequalities and systems of linear equations. Equivalent to the first year of high school algebra, this course includes MTH 061, MTH 062 and MTH 063, and is offered as a lecture course. Carries no transfer credit.

**Prerequisite:** MTH 053 or MTH 055 with a grade of "C" or better, or math placement test.

#### **MTH 061 Elementary Algebra I (1-0) 1 hr.**

Introduces basic algebraic vocabulary, operations with signed numbers, linear equations, word problems, ratios and proportions. Course is individualized and is offered in the Math Lab. Carries no transfer credit.

**Prerequisite:** MTH 053 or MTH 055 with a grade of "C" or better, or math placement test.

#### **MTH 062 Elementary Algebra II (1-0) 1 hr.**

Continues MTH 061 and covers linear inequalities, rectangular coordinates, linear equations in two variables, graphing equations, word problems, exponents and scientific notation, adding, subtracting and multiplying polynomials. Course is individualized and offered in the Math Lab. Calculator may be used. Carries no transfer credit.

**Prerequisite:** MTH 061 with a grade of "C" or better.

#### **MTH 063 Elementary Algebra III (1-0) 1 hr.**

Continues MTH 062 and covers multiplying, dividing and factoring polynomials, quadratic equations and word problems involving quadratic equations, multiplication, division, addition and subtraction of rational expressions. A calculator may be used. Course is individualized and offered in the Math Lab. Carries no transfer credit.

**Prerequisite:** MTH 062 with a grade of "C" or better.

#### **MTH 070 Plane Geometry (3-0) 3 hrs.**

Introduces concepts of Euclidean plane geometry, including lines, angles, polygons and circles. Carries no transfer credit (Formerly MTH 096)

**Prerequisite:** MTH 060 or MTH 063 with grade of "C" or better, or math placement test.

#### **MTH 080 Intermediate Algebra (4-0) 4 hrs.**

Introduces roots of quadratic equations, complex numbers, rational exponents, radicals, logarithms and inequalities. (Formerly MTH 102.)

(NOTE: Credit cannot be given for both MTH 080 and MTH 086. Also, credit cannot be given for both MTH 080 and MTH 087. Credits earned in this course cannot be applied toward an Associate in Arts or an Associate in Science degree.)

**Prerequisite:** MTH 060 or MTH 063 with a grade of "C" or better, or math placement test.

## COURSE DESCRIPTIONS

### **MTH 086 Intermediate Algebra I (1-2) 2 hrs.**

Introduces first degree equations and inequalities, inequalities concepts of relations and functions, polynomials, rational expressions, and linear equations and inequalities in two variables. (This material reflects the content covered in the first half of the current MTH 080 course.) (NOTE: Credit cannot be given for both MTH 086 and MTH 080. Credits earned in this course cannot be applied toward an Associate in Arts or an Associate in Science degree.)

**Prerequisite:** MTH 060 or MTH 063 with a grade of "C" or better, or math placement test.

### **MTH 087 Intermediate Algebra II (1-2) 2 hrs.**

Continues MTH 086. Introduces quadratic equations, integer and rational exponents, radicals complex numbers, exponential and logarithmic functions. (This material reflects the content covered in the second half of the current MTH 080 course.)

(NOTE: Credit cannot be given for both MTH 087 and MTH 080. Credits earned in this course cannot be applied toward an Associate in Arts or an Associate in Science degree.)

**Prerequisite:** MTH 086 with a grade of "C" or better.

### **MTH 100 Basic Applied Mathematics (3-0) 3 hrs.**

Introduces topics in arithmetic, algebra, trigonometry and problem solving with calculators. Intended for students in career-vocational programs.

(NOTE: Cannot be used for Group II or V General Studies requirement for A.A. or A.S. degree.)

### **MTH 101 Quantitative Literacy (4-0) 4 hrs.**

Focuses on the analysis and solution of problems. Includes representing and analyzing data using statistical measures, using logical reasoning in a real-world context, estimating, approximating, and judging the reasonableness of answers, and the use of appropriate approaches and tools, such as calculators and computers, in formulating and solving real-world problems. IAI M1 901

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 080 or MTH 087 with a grade of "C" or better or placement test. An ACT Math score of 23 or more will satisfy all the previous prerequisites mentioned for this course.

### **MTH 103 College Algebra (4-0) 4 hrs.**

Studies equations and inequalities, polynomial, rational, exponential and logarithmic functions, inverse functions, systems of equations, determinants and matrices, sequences and series and theory of equations.

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 080 or MTH 087 with a grade of "C" or better or placement test. An ACT Math score of 23 or more will satisfy all the previous prerequisites mentioned for this course.

### **MTH 104 Plane Trigonometry (3-0) 3 hrs.**

Develops trigonometric functions and relations, solutions of triangles, complex numbers, identities, equations and applications. IAI MTM 901

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 080 or MTH 087 with a grade of "C" or better or placement test. An ACT Math score of 23 or more will satisfy all the previous prerequisites mentioned for this course.

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

Introduces topics in algebra, vectors, trigonometry and problem solving by computer using FORTRAN or BASIC language. For students in electronics technology or mechanical engineering technology. Students should have at least two years of high school mathematics or consent of instructor.

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

Continues MTH 106 with additional topics in trigonometry, analytic geometry, logarithms, differential and integral calculus.

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

### **MTH 120 General Education Mathematics (3-0) 3 hrs.**

Develops competency in mathematical reasoning and real-life problem solving. Three or four topics of the following are studied in depth: mathematical modeling, geometry, set theory and logic, counting techniques and probability. Calculators are used to develop mathematical concepts and to investigate mathematical models.

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 080 or MTH 087 with a grade of "C" or better or placement test. An ACT Math score of 23 or more will satisfy all the previous prerequisites mentioned for this course.

### **MTH 124 Finite Mathematics (3-0) 3 hrs.**

Develops the mathematics of simple models in behavioral, social and management sciences. Studies applications of set theory, vectors and matrices, linear programming, probability rules, and Markov chains with computer assistance. IAI M 906

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 103 with a grade of "C" or better or placement test. An ACT Math score of 28 or more will satisfy all previous prerequisites mentioned for this course.



**MTH 130 Mathematics for Elementary Teaching I (3-2) 4 hrs.**

Focuses on mathematical reasoning and problem solving and is designed to meet the requirements of the state certification of elementary teachers when taken in conjunction with MTH 131. The course examines the underlying conceptual framework for the topics of sets, functions, whole numbers, number theory, integers, rational numbers, irrational numbers and the real number system. Students are expected to be active participants in the learning process. They will apply mathematical reasoning in a variety of problem solving situations using estimation, models, tables, graphs and symbolic representations. The use of appropriate techniques and tools, such as calculators and computers, are a focus of investigations and discussion throughout the course. A weekly lab component is required.

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 080 or MTH 087 with a grade of "C" or better or placement test. An ACT Math score of 23 or more will satisfy all the previous prerequisites mentioned for this course.

**MTH 131 Mathematics for Elementary Teaching II (3-2) 4 hrs.**

Completes the two course sequence that begins with MTH 130 and focuses on mathematical reasoning and the solving of real-life problems, rather than on routine skills. The following topics will be studied in depth: geometry, counting techniques and probability, logic and statistics. Students are expected to be active participants in the learning process. Calculators and computers will be used throughout the course. A weekly lab component is required. IAI M1 903

**Prerequisite:** MTH 130 with a grade of "C" or better.

**MTH 134 Calculus for Social Scientists (4-0) 4 hrs.**

Develops an intuitive approach to concepts of differential and integral calculus. Applies these concepts to problems in social, behavioral and management sciences. Not for physical science or mathematics majors. IAI M1 900

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 103 with a grade of "C" or better or placement test. An ACT Math score of 28 or more will satisfy all the previous prerequisites mentioned for this course.

**MTH 165 Elementary Statistics (4-0) 4 hrs.**

Focuses on mathematical reasoning and the solving of real-life problems in statistics, rather than on routine skills. Includes analysis of data using sample statistics, basic probability theory, probability distributions (normal and binomial), sampling distributions of means and proportions, statistical inference (estimation, hypothesis testing, t-test and chi-square test and errors), correlation and regression, F-test and analysis of variance. Computer labs using statistical software packages are incorporated throughout course. (Credit will not be granted for both MGT 225 and MTH 165) IAI M1 902

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 080 or MTH 087 with a grade of "C" or better or placement test. An ACT Math score of 23 or more will satisfy all the previous prerequisites mentioned for this course.

**MTH 200 Calculus with Analytic Geometry I (5-0) 5 hrs.**

Studies vectors, limits, the derivative and the definite integral with applications to geometry, science and engineering. IAI M1 900 IAI EGR 901

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 103 and MTH 104 with grades of "C" or better or placement test. An ACT Math score of 28 or more and MTH 104 with a grade of "C" or better will satisfy all the previous prerequisites mentioned for this course.

**MTH 201 Calculus with Analytic Geometry II (5-0) 5 hrs.**

Continues MTH 200. Studies differentiation of transcendental functions, techniques of integration, series, conics, polar coordinates and parametric equations with applications to science and engineering. IAI EGR 902 IAI M1 900

**Prerequisite:** MTH 200 with a grade of "C" or better.

**MTH 202 Calculus with Analytic Geometry III (4-0) 4 hrs.**

Continues MTH 201. Studies vector functions, multivariable functions, differentials, multiple integration and vector calculus with applications to science and engineering. IAI EGR 903 IAI M1 900

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

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

Introduces vector spaces, linear dependence, bases and transformations using systems of linear equations, matrices and determinants. Studies geometric, physical and business applications.

**Prerequisite:** MTH 134 or MTH 200, or concurrent enrollment, or consent of instructor.

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

Continues MTH 107. Introduces differential equations and Laplace transforms. For students in Electronics Technology.

**Prerequisite:** MTH 107 with a grade of "C" or better or consent of instructor.

## COURSE DESCRIPTIONS

### **MTH 212 Differential Equations (3-0) 3 hrs.**

Continues MTH 202. Emphasizes solutions of first order differential equations, linear differential equations, special second order equations and series solutions. Studies selections from these topics: Laplace transforms, Fourier series, numerical methods and applications of matrix algebra.

IAI EGR 904

**Prerequisite:** MTH 202 with a grade of "C" or better.

### **MTH 220 Discrete Mathematics (3-0) 3 hrs.**

Introduces analysis of finite collections and mathematical foundations of sequential machines, computer system design, data structures and algorithms. Includes sets and logic, subscripts, arrays, number systems, counting, recursion, graph theory, trees, networks and Boolean algebra.

IAI M1 905 IAI C5C 915

**Prerequisite:** MTH 070 (or equivalent) with a grade of "C" or better or Geometry placement test and MTH 103 with a grade of "C" or better or placement test. An ACT Math score of 28 or more will satisfy all the previous prerequisites mentioned for this course.

### **MTH 265 Mathematical Statistics (3-0) 3 hrs.**

Includes the study of probability spaces, random variables and distributions, laws of large numbers and central limit theorem, joint probability distributions, sampling distributions, theory of estimation, simple linear regression and introduction to SPSS.

**Prerequisite:** MTH 202 with a grade of "C" or better.

## MUS Music

### **MUS 100 Introduction to Music Careers (1-0) 1 hr.**

Explores issues relating to the successful pursuit of a career in music. Recommended for anyone pursuing a professional music career.

### **MUS 101 Fundamentals of Music Theory (3-0) 3 hrs.**

Provides the background to interpret and understand the language of music through the study of notation, rhythm, scales, intervals, triads, cadences, basic forms and musical terms. Students are prepared for the study of harmony and for practical musical activity. Suitable for pre-teachers and non-music majors.

### **MUS 102 Introduction to Electronic/Computer Music (3-1) 3 hrs.**

Introduces basic computer applications in music. Explores electronic music technology, MIDI instruments, sequencing, music notation and educational software.

### **MUS 103 Music Appreciation (3-0) 3 hrs.**

Introduces standard concert repertory through intensive guided listening. Representative works by major composers from each period are chosen to illustrate the principal styles, forms and techniques of vocal and instrument music. IAI F1 900

### **MUS 104 Introduction to American Music (3-0) 3 hrs.**

Develops a stylistic frame of reference for judging popular music. Surveys characteristic elements of jazz, rhythm and blues, popular music and their relation to western classical music. For non-music majors. IAI F1 904

### **MUS 111 Theory of Music I (3-1) 3 hrs.**

Begins an intensive study of the structure of music of the Common Practice period. Examines, through analysis and composition, the musical practice of the late 17th and early 18th centuries. IAI MUS 901

**Corequisite:** MUS 115.

### **MUS 112 Theory of Music II (3-1) 3 hrs.**

Continues the study of the structure of music of the Common Practice period. Examines, through analysis and composition, the musical practice of the middle to late 18th and early 19th centuries, paying particular attention to harmonic language and its effect upon musical form. IAI MUS 902

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

**Corequisite:** MUS 116.

### **MUS 115 Aural Skills I (0-2) 1 hr.**

Develops skills in melodic, harmonic and rhythmic dictation and sight singing. IAI MUS 901

**Corequisite:** MUS 111.

### **MUS 116 Aural Skills II (0-2) 1 hr.**

Develops skills in melodic, harmonic and rhythmic dictation and sight singing. IAI MUS 902

**Corequisite:** MUS 112.

### **MUS 120 Introduction to Music Literature (3-0) 3 hrs.**

Surveys the styles, periods, literature and personalities in each of the commonly accepted music periods, with primary emphasis on hearing music of each style.

IAI F1 901 IAI MUS 905

### **MUS 130 Choir (0-3) 1 hr.**

Provides mixed voice choral experience for singers of average or above average ability. Stresses fundamentals of good choral diction and tone through choral works of various styles and types. May be repeated up to a maximum of 4 credit hours. IAI MUS 908

**Prerequisite:** Consent of instructor.

### **MUS 136 Community Chorus (0-3) 1 hr.**

Provides a variety of choral experience including larger choral works such as oratorios and cantatas, and selections from grand opera, comic opera and musical comedy. May be repeated up to a maximum of 4 credit hours.

**MUS 140 Band (0-3) 1 hr.**

Provides students proficient in playing band instruments the opportunity to perform music of various styles and types. Stresses sight reading and musicianship. Develops skills, musical understanding and enjoyment. May be repeated up to a maximum of 4 credit hours. IAI MUS 908

**Prerequisite:** Consent of instructor.

**MUS 145 Ensembles (0-3) 1 hr.**

Provides students with proficiency on an instrument or in voice the opportunity to perform in various vocal and instrumental chamber music ensembles. Stresses sight reading and musicianship. Develops skills, musical understanding and enjoyment. May be repeated up to a maximum of 4 credit hours. IAI MUS 908

**Prerequisite:** Consent of instructor.

**MUS 150 Orchestra (0-3) 1 hr.**

Provides students proficient in playing orchestral instruments the opportunity to perform music of various styles and types. Stresses sight reading and musicianship. Develops skills, musical understanding and enjoyment. May be repeated up to a maximum of 4 credit hours. IAI MUS 908

**Prerequisite:** Consent of instructor.

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

Develops a rudimentary knowledge of the keyboard and playing skills sufficient to cope with simple, practical situations. Emphasis is on tonal notation, harmonization, transposition, sight reading, improvisation, ensemble playing and basic piano literature. IAI MUS 901

**MUS 166 Class Piano II (1-2) 2 hrs.**

Continues MUS 165. IAI MUS 902

**Prerequisite:** MUS 165 with a grade of "C" or better or proficiency examination.

**MUS 167 Class Guitar (1-2) 2 hrs.**

Provides instruction for students who wish to play the guitar. Designed for the student with little or no traditional music background, the course relates basic music theory concepts to guitar styles. Develops basic performance skills.

**MUS 169 Class Voice (1-2) 2 hrs.**

Introduces correct use of the singing voice. Emphasizes proper breathing and tone production, accurate intonation and diction and the fundamentals of music reading.

**MUS 180-199 Minor Applied Music Subject (1-6) 2 hrs.**

Provides instruction for those majoring in music education, musicology and for those desiring to improve their skills on a particular instrument. One half-hour lesson per week. Minimum of six hours of practice per week. Jury examination required. May be repeated up to a maximum of eight credit hours. IAI MUS 909

Flute and Piccolo, 180; Oboe and English Horn, 181; Clarinet, 182; Bassoon and Contra Bassoon, 183; Saxophone, 184; French Horn, 185; Trumpet, 186; Trombone, 187; Baritone, 188; Tuba, 189; Percussion, 190; Violin, 191; Viola, 192; Cello, 193; String Bass, 194; Harp, 195; Piano, 196; Organ, 197; Voice, 198; and Classical Guitar, 199.

**MUS 211 Theory of Music III (3-1) 3 hrs.**

Completes the study of the structure of music of the Common Practice period and begins the study of subsequent periods. Examines, through analysis and composition, the musical practice of the 19th and early 20th centuries. IAI MUS 903

**Prerequisite:** MUS 112 with a grade of "C" or better.

**Corequisite:** MUS 215.

**MUS 212 Theory of Music IV (3-1) 3 hrs.**

Completes the study of the structure of classical and avant garde music in the 20th century. Explores the structure of tonal music from a linear perspective. IAI MUS 904

**Prerequisite:** MUS 211 with a grade of "C" or better.

**Corequisite:** MUS 216.

**MUS 215 Aural Skills III (0-2) 1 hr.**

Develops skills in melodic, harmonic and rhythmic dictation and sight singing. IAI MUS 903

**Corequisite:** MUS 211.

**MUS 216 Aural Skills IV (0-2) 1 hr.**

Develops skills in melodic, harmonic and rhythmic dictation and sight singing. IAI MUS 904

**Corequisite:** MUS 212.

**MUS 223 Instrumental Literature (3-0) 3 hrs.**

Surveys the music literature available for performance by musical instruments, excluding keyboard instruments and voice.

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

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

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

Continues MUS 166. Greater emphasis on keyboard harmony, ensemble playing and jazz improvisation. IAI MUS 903

**Prerequisite:** MUS 166 with a grade of "C" or better or proficiency examination.

## COURSE DESCRIPTIONS

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

Continues MUS 265. IAI MUS 904

**Prerequisite:** MUS 265 with a grade of "C" or better or proficiency examination.

### **MUS 271 Piano Pedagogy I (3-0) 3 hrs.**

Surveys the basic teaching philosophies, methods, materials and skills needed to teach the beginning piano student. Observation of individual and group instruction.

**Prerequisite:** MUS 265 with a grade of "C" or better or consent of instructor.

### **MUS 272 Piano Pedagogy II (2-2) 3 hrs.**

Continues development of skills begun in MUS 271. Emphasis will be placed on methods and materials for teaching the intermediate piano student. Lab includes supervised student teaching to aid in individual development.

**Prerequisite:** MUS 271 with a grade of "C" or better.

### **MUS 280-299 Minor Applied Music Subject (2-12) 4 hrs.**

Provides instruction for those desiring to become professional performers. One hour lesson per week. Minimum of 12 hours of practice per week. Jury examination required. May be repeated up to a maximum of 16 credit hours.

IAI MUS 909

**Prerequisite:** Successful audition.

Flute and Piccolo, 280; Oboe and English Horn, 281; Clarinet, 282; Bassoon and Contra Bassoon, 283; Saxophone, 284; French Horn, 285; Trumpet, 286; Trombone, 287; Baritone, 288; Tuba, 289; Percussion, 290; Violin, 291; Viola, 292; Cello, 293; String Bass, 294; Harp, 295; Piano, 296; Organ, 297; Voice, 298; and Classical Guitar, 299.

## **NUR Nursing**

### **NUR 101 Nursing Fundamentals (4-15) 9 hrs.**

Introduces the student to the nursing process and the roles as member of the discipline of nursing and provider of care. Emphasizes assessment and intervention in caring for adult clients. Provides theory and practice in assisting clients to meet basic needs.

**Prerequisite:** Admission into the Nursing program.

**Corequisite:** BIO 160, NUR 120 and PSY 101.

### **NUR 102 Nursing Care of Clients with Commonly Occurring Health Needs (4-15) 9 hrs.**

Focuses on utilization of the full nursing process in providing care for adults, children, childbearing women and infants. Introduces a framework for ethical decision making to expand the role as member of the discipline. Continues emphasis on basic needs and examines common problems causing health interferences.

**Prerequisite:** BIO 160, NUR 101, NUR 120 and PSY 101 with grades of "C" or better.

**Corequisite:** BIO 161, PSY 228, computer elective.

### **NUR 104 Nursing Field Experience (0-12) 4 hrs.**

Utilizes the nursing process to provide care for clients with commonly occurring problems causing health interferences. Provides opportunity for supervised experience as a member of the nursing care team in the acute care setting, assuming the role and responsibilities of the practical nurse.

**Prerequisite:** BIO 161, NUR 102, PSY 228, and computer elective with grades of "C" or better.

### **NUR 120 Pharmacology (2-0) 2 hrs.**

Examines the mechanism of action of the major medication groups as it relates to the physiology and pathology of disease. Identifies examples in each major pharmacological category in order to understand pharmacological activity within each group. Addresses areas of drug action, clinical application and adverse events for each medication discussed.

### **NUR 201 Advanced Nursing I (6-12) 10 hrs.**

Expands utilization of the nursing process, including teaching and discharge planning, with clients in acute and community settings. Introduces the role of the nurse as manager of care. Provides opportunity to care for clients of all ages with more complex interferences, including chronic illness and complications of child-bearing. Examines related legal and ethical issues.

**Prerequisite:** BIO 161, NUR 102, PSY 228 and computer elective with grades of "C" or better.

**Corequisite:** BIO 130 and ENG 101.

### **NUR 202 Advanced Nursing II (5-15) 10 hrs.**

Focuses on the nurse as the manager of care. Provides opportunity to utilize the nursing process in caring for groups of clients with multisystem interferences in the psychiatric, acute, and long term care settings. Emphasizes responsibilities of members of the discipline of nursing.

**Prerequisites:** BIO 130, ENG 101, NUR 201 with grades of "C" or better.

**Corequisite:** ENG 102 and SOC 101.

**NUR 210 Physical Assessment (.5-1.5) 1 hr.**

Provides theory and demonstration of skills required for basic, systematic physical assessment. Includes content and practical experience in interviewing and obtaining a health history and the skills of inspection, palpation, percussion and auscultation as they are utilized in the routine client assessments performed by the registered nurse. Focuses on the assessment of normal findings and the description of deviations from normal. Requires the synthesis of previously learned knowledge of anatomy, physiology, communication and assessment.

**Prerequisites:** BIO 102, NUR 102, PSY 228 and computer elective with grades of "C" or better, or consent of instructor.

**OFC Administrative Technology**

**OFC 102 Survey of Law Office Practice (3-0) 3 hrs.**

Surveys office procedures and vocabulary used in various types of law. Familiarizes the student with the court process and ethical considerations in the legal field.

**OFC 104 Introduction to Office Careers (1-0) 1 hr.**

Provides insight into the role of the professional secretary in today's office. Explores job opportunities and interviewing techniques.

**OFC 105 Human Relations for Office Careers (1-0) 1 hr.**

Emphasizes human relations. Focuses on telephone skills, public relations responsibilities, incoming and outgoing communications in a business office. Develops awareness of the importance all types of communications play in daily business transactions.

**OFC 106 Time Management for Office Careers (1-0) 1 hr.**

Presents current methods of office organization. Focuses on office efficiency involving the organization of time and work, with emphasis on setting priorities and managing stress.

**OFC 107 Internet Applications (1-0) 1 hr.**

Introduces the student to the internet and its use in an office setting. Reviews the following applications/topics: e-mail, usenet, FTP, telnet, internet relay chat, world wide web and developing a home page through HTML, application software.

**OFC 110 Keyboarding I (0-2) 1 hr.**

Provides students with basic keyboarding skill on the personal computer for personal use or for vocational use other than secretarial. Includes only speed and accuracy instruction on alphabetic and top line numeric/symbol keys.

**OFC 111 Keyboarding II (3-1) 3 hrs.**

Provides basic touch keyboarding skill and applications for personal and professional use on the personal computer. Keying by the touch system and learning basic applications for personal and professional use will be emphasized.

**OFC 112 Keyboarding III (1-2) 2 hrs.**

Teaches use of personal computer and a popular software package to key basic office/personal exercises. Helps students to develop speed and accuracy through software designed for high speed production work. Aids students interested in learning the basics of computer word processing or entering OFC 113 or OFC 133.

**Prerequisite:** Keyboarding speed of 25 words per minute.

**OFC 113 Keyboarding IV (2-2) 3 hrs.**

Develops speed and production for professional office workers on personal computers. Using a popular word processing software package, office production applications will be emphasized.

**Prerequisite:** Keyboarding speed of 40 words per minute and prior or concurrent enrollment in OFC 133 with a grade of "C" or better.

**OFC 125 Shorthand (4-2) 5 hrs.**

Introduces theory leading to development of skill in reading, fluency in writing shorthand, vocabulary development, mechanics of English and transcription techniques.

**Prerequisite:** Keyboarding speed of 50 words per minute, or prior or concurrent enrollment in OFC 113 with a grade of "C" or better.

**OFC 130 Survey of Word Processing Software Applications (.5-1) 1 hr.**

Explores the efficient use of word processing software applications utilized by anyone with a personal computer. Combines hands-on practice on an IBM personal computer with demonstrations, discussions and lecture on how software packages may be used more efficiently.

**OFC 133 Word Processing Software I (2-0) 2 hrs.**

Introduces the features and operation of the IBM personal computer with the most popular word processing software programs to prepare business correspondence and reports with extensive editing. May be repeated up to a maximum of six credit hours utilizing different software programs for each unit of credit. Software programs introduced are different from those taught in OFC 134.

**Prerequisite:** Keyboarding speed of 30 words per minute.

**OFC 134 Word Processing Software II (2-0) 2 hrs.**

Introduces the features of the currently most popular word processing software programs to prepare business correspondence and reports. May be repeated up to a maximum of six credit hours utilizing a different software program for each unit of credit. Software programs introduced are different from those taught in OFC 133.

**Prerequisite:** Keyboarding speed of 30 words per minute.

## COURSE DESCRIPTIONS

**OFC 201 Advanced Features in Word Processing (2-0) 2 hrs.**

Provides the student with the knowledge to create envelopes and label forms, merge documents, create and edit macros, sort and select, generate outlines, format tables, generate a table of contents, indexes and lists. May be repeated up to a maximum of six credit hours utilizing different software programs for each two hours of credit.

**Prerequisite:** OFC 133 or OFC 134 with a grade of "C" or better or consent of instructor or program coordinator.

**OFC 202 Desktop Publishing Using Word Processing (2-0) 2 hrs.**

Provides the student with the knowledge to incorporate graphics within a document, use special characters, create styles, generate charts and graphs, create parallel and newspaper columns, change fonts, place lines and borders within a document. May be repeated up to a maximum of six credit hours utilizing different software programs for each two hours of credit.

**Prerequisite:** OFC 133 or OFC 134 with a grade of "C" or better or consent of instructor or program coordinator.

**OFC 203 Proofreading and Editing (2-0) 2 hrs.**

Emphasizes the importance of proofreading and editing skills within the workplace. The course provides a thorough review of grammar rules including punctuation, number expression, capitalization, correct business word usage. Additionally, the course provides exposure to a non-traditional approach to proofreading, based on machine-assisted proofreading drills.

**OFC 204 Macros for Word Processing (2-0) 2 hrs.**

Enables students to utilize word processing macro features from the very basic commands to advanced commands. They will be able to create their own macros as well as complete macros assigned in the class.

**Prerequisite:** OFC 201 with a grade of "C" or better or consent of instructor.

**OFC 205 Using Tables in Word Processing (2-0) 2 hrs.**

Enables students to utilize word processing features to increase their speed and ability to create and edit tables.

**Prerequisite:** OFC 201 with a grade of "C" or better or consent of instructor.

**OFC 206 Using Merges in Word Processing (2-0) 2 hrs.**

Provides students with additional word processing skills using merges with a popular software. Each student will receive 30 hours of hands-on training. Emphasis will be on the features most commonly used in the office.

**Prerequisite:** OFC 201 with a grade of "C" or better or consent of instructor.

**OFC 220 Automated Office Practices (2-4) 4 hrs.**

Simulates an electronic office utilizing the personal computer for word processing, spreadsheet and database software packages to produce materials found in executive, professional and technical offices. Emphasis includes office management, records control, telecommunications, networking and human relations.

**Prerequisite:** OFC 113 with a grade of "C" or better or consent of instructor.

**OFC 225 Topics in Office Careers (1-0 to 6-0) 1-6 hrs.**

Studies selected problems or topics in office careers. The exact content and instructional method will vary depending on the material to be studied. A syllabus or course outline containing additional information will be available with pre-registration materials each time that the course is offered. This course may be repeated two times to a maximum of six credit hours.

**OFC 227 Business Presentations (1-0) 1 hr.**

Builds the skills for effective and dramatic business presentations. Includes targeting the audience, organizing and developing the presentation and effectively utilizing audiovisual aids with an emphasis on new technology.

**OFC 228 Records Control for the Office (1-0) 1 hr.**

Introduces alphabetic, subject, numeric and geographic methods of storage. Includes micro-computer applications with current indexing, coding and filing rules.

**OFC 229 Meeting and Conference Planning (1-0) 1 hr.**

Outlines the role the office employee plays in preparing meetings, conferences and travel arrangements. Highlights agenda and itinerary preparation, reservations, site selection, transportation arrangements and follow-up evaluation.

**OFC 230 Executive Machine Transcription (1-2) 2 hrs.**

Provides training and extensive skill building in machine transcription including the operation of machine transcribers and application of correct grammar, punctuation, spelling and format in transcripts.

**Prerequisite:** OFC 113 with a grade of "C" or better or a minimum keyboarding speed of 40 words per minute.

**OFC 233 Document Processing in the Law Office (3-0) 3 hrs.**

Surveys computer hardware and software uses within the law office. Provides an opportunity for the student to view selected legal timekeeping, billing and docket control software applications of word processing, desktop publishing software and other office software used in the law office.

## COURSE DESCRIPTIONS

### **OFC 234 Legal Office Procedures (3-0) 3 hrs.**

Presents the organization and operation of a law office with emphasis on management, records control and procedures used in the preparation of legal documents.

**Prerequisite:** Keyboarding speed of 40 words per minute.

### **OFC 235 Legal Transcription (2-2) 3 hrs.**

Introduces legal terminology frequently dictated in a law office. Develops speed and accuracy in transcribing legal correspondence, documents and forms using a transcription machine and automated office equipment.

**Prerequisite:** OFC 133 with a grade of "C" or better or equivalent and keyboarding speed of 40 words per minute.

### **OFC 237 Secretarial Seminar and Internship I (1-15) 3 hrs.**

Preparation for, and cooperative work experience in, office careers. Part of the credit for this course will be given for participation in supervised cooperative work experience wherein an organized training plan will be followed in a College approved training station. One lecture hour per week for a seminar devoted to issues in a secretarial career.

**Prerequisite:** Consent of instructor and admission to either the Executive Assistant or Law Office Administrative Assistant program.

### **OFC 238 Secretarial Seminar and Internship II (1-15) 3 hrs.**

Continues OFC 237.

**Prerequisite:** Consent of instructor.

### **OFC 247 Professional Development (2-0) 2 hrs.**

Provides an awareness of the "people" skills essential for job success. Emphasis is on business ethics, business and social etiquette, influencing behavior of others, listening and non-verbal skills, office politics and power, problem solving, teamwork, employer/employee rights and professional image and growth.

### **OFC 250 Records Management Basics (3-0) 3 hrs.**

Introduces the student with little or no experience in the field of records management. Includes the creation, protection, storage and disposition of business records. The course will address how information technology such as computer and word processing systems, micro image systems and optical disks, are impacting the records management field. This course is designed for those students interested in the records management field, but with limited or no practical experience. (Formerly MGT 120.)

### **OFC 251 Records and Information Management I (3-0) 3 hrs.**

Provides an overview of the scientific and systematic management techniques needed to control information in an organization. All of the elements of records/information management are covered from creation through maintenance and protection to final disposition. (Formerly MGT 167.)

### **OFC 252 Records and Information Management II (3-0) 3 hrs.**

Provides an in-depth study of records management principles and techniques used during the establishment and maintenance of a records management program. The techniques outlined in this course will apply to both public and private sector organizations. (Formerly MGT 172.)

**Prerequisite:** OFC 251 with a grade of "C" or better, or consent of instructor.

### **OFC 253 Forms Control (3-0) 3 hrs.**

Studies the concept and use of forms in business. Emphasis will be placed on the procedures to follow in order to implement forms usage, and development within an organization; forms construction, printing technology and paper types. The course will also cover how records management retention policies and laws affect the forms function. (Formerly MGT 173.)

**Prerequisite:** OFC 252 with a grade of "C" or better, or consent of instructor.

### **OFC 254 Records Management Technology (3-0) 3 hrs.**

Studies alternative record technologies including automated records retrieval systems, micro graphics and electronic document imaging. (Formerly MGT 174.)

**Prerequisite:** OFC 253 with a grade of "C" or better, or consent of instructor.

### **OFC 260 Behavioral Science In Business (CPS) (1-0) 1 hr.**

Offers an understanding of human relations, group dynamics and effective communications as they contribute to the success of the role and function of the secretary in dealing with people in the office environment. Emphasizes the relationship between the secretary or administrative assistant, the supervisor and people the secretary comes in contact with in the business setting. This course prepares the student for a portion of Part III of the Certified Professional Secretary Exam. Students enrolled in this course should have one year of full-time secretarial experience or consent of coordinator.

### **OFC 261 Business Law (CPS) (1-0) 1 hr.**

Emphasizes knowledge of business law as it applies in the secretary's employment and the implications of governmental controls as they impact upon business and office operations. This course prepares the student for a portion of Part I of the Certified Professional Secretary Exam. Students enrolled in this course should have one year of full-time secretarial experience or consent of coordinator.

## COURSE DESCRIPTIONS

**OFC 262 Economics and Management (CPS) (1-0) 1 hr.**

Furnishes an understanding of the basic concepts of economics and management underlying the U.S. business system as they relate to the secretary's role in business. This course prepares the student for a portion of Part I of the Certified Professional Secretary Exam. Students enrolled in this course should have one year of full-time secretarial experience or consent of coordinator.

**OFC 263 Accounting (CPS) (1-0) 1 hr.**

Stresses fundamental accounting principles that a secretary must possess in order to assist the supervisor in the preparation, summarization and interpretation of financial data. Emphasizes the secretary's application of basic math to business situations. This course prepares the student for Part I and Part III of the Certified Professional Secretary Exam. Students enrolled in this course should have one year of full-time secretarial experience or consent of coordinator.

**OFC 264 Office Administration and Communication (CPS) (1-0) 1 hr.**

Emphasizes office administration and communication skills including executive travel, office management, records management and reprographics as well as written business communication, editing, abstracting and preparing communications in final format. This course prepares the student for a portion of Part II of the Certified Professional Secretary Exam. Students enrolled in this course should have one year of full-time secretarial experience or consent of coordinator.

**OFC 265 Office Technology (CPS) (1-0) 1 hr.**

Emphasizes the secretary's responsibilities created by computer information systems, communications media, advances in office management, technological applications, records management technology and office systems. This course prepares the student for a portion of Part II of the Certified Professional Secretary Exam. Students enrolled in this course should have one year of full-time secretarial experience or consent of coordinator.

### ORN Orientation

**ORN 101 Orientation 101 (1-0) 1 hr.**

Focuses on helping new students clarify reasons for being in college and providing initial exposure to the strategies necessary to adapt to the college environment. Topics include examination of the value of a college education; introduction to college procedures, policies, programs and services; career and educational goal setting; educational advising and an introduction to healthy lifestyles and relationships.

### PED Physical Education\*

**PED 100 Nutrition and Exercise for the Adult (1-2) 2 hrs.**

Provides an individual assessment of physical fitness level and dietary habits of each student. Exercise programming and diet recommendations are outlined and encouraged through topical lectures and active participation in exercise.

**PED 104 Basic Weight Training (0-2) 1 hr.**

Provides the basic knowledge of the proper use of weight training equipment. Students will learn about the specific muscle groups used during training and the different methods of developing muscular strength and endurance. Students will also be able to apply the principles they have learned and ultimately develop their own individualized program. May be repeated up to a maximum of 2 credit hours.

**PED 105 Basketball (0-1) .50 hr.**

Provides instruction in the basic skills, rules, scoring and terminology. Students will have the opportunity to practice their skills in game situations. May be repeated up to a maximum of 1 credit hour.

**PED 106 Weight Training — Olympic and Power (0-2) 1 hr.**

Provides weight training instruction with an emphasis on olympic and power lifts. Students will have the opportunity to develop advanced weight training skills as well as practice olympic and power techniques. May be repeated up to a maximum of 2 credit hours.

**PED 109 Volleyball (0-1) .50 hr.**

Provides instruction in basic skills, rules, scoring and terminology. May be repeated up to a maximum of 1 credit hour.

**PED 110 Intermediate Weight Training (0-2) 1 hr.**

Provides the advanced student with a more challenging strength training program. Students will review the muscles used in a personal strength training program, the safety issues regarding appropriate lifts and use of the equipment, contraindicated movements, stretching and spotting techniques, warm-up and cool down techniques. In addition, students will also learn about the use and misuse of ergogenic aids, steroids and nutritional supplements. Students will have the opportunity to develop and participate in their own individualized muscle strength and endurance training program.

\* Some, but not all, physical education courses can be taken more than one time for credit. Course descriptions indicate which courses are approved for repeating.



**PED 120 Team Sports (0-2) 1 hr.**

Provides instruction in one or two of the following team sports: competitive volleyball, floor hockey, football, soccer and softball. Material covered includes fundamental skills, offensive and defensive tactics of play, game strategy, rules and terminology. May be repeated up to a maximum of 2 credit hours.

**PED 130 Individual Sports (0-2) 1 hr.**

Provides instruction in a variety of individual sports. Fundamental skills, terminology, proper equipment and safety are emphasized. Students will have the opportunity to practice the skills they have learned in a competition situation. Horse-back riding, snow skiing, cross country skiing, in-line skating, canoeing, fly casting, spin casting, cycling and mountain biking are some of the sports offered. May be repeated up to a maximum of 2 credit hours.

**PED 131 Lifeguarding (0-2) 1 hr.**

Provides instruction in the skills, methods and techniques necessary for students to qualify as a non-surf lifeguard. Students receive CPR/FPR, first aid and lifeguard training certification upon successful completion of this course.

**Prerequisite:** Minimum of 15 years old; swim 500 yards continuously using each of the following strokes for at least 50 yards each: front crawl, breaststroke and side stroke; surface dive to minimum depth of 7 feet and bring a 10-pound diving brick to the surface; tread water for 2 minutes with arms folded across chest and hands under armpits.

**PED 136 Wrestling (0-2) 1 hr.**

Provides instruction in basic collegiate wrestling techniques. Emphasis is on offensive and defensive moves, strategy and physical conditioning. Students will have the opportunity to practice the skills that they learned in a competitive situation.

**PED 139 Aquasize (0-1) .50 hr.**

Provides an in-water exercise program which emphasizes the development of cardiopulmonary endurance, flexibility, muscle strength, muscle endurance and general movement efficiency. Music is used to help motivate the students. The fitness guidelines followed in this course are designed for the apparently healthy individual and are not designed for individuals with known cardiovascular, pulmonary or metabolic diseases. Students are encouraged to see a physician before embarking on any exercise program. Students need not be able to swim to participate. May be repeated up to a maximum of 1 credit hour.

**PED 140 Sculpturing Muscle Strength and Tone (0-1) .50 hr.**

Provides students the opportunity to sculpture the entire body through muscle strength and endurance exercises to music. Flexibility and proper stretching exercises are emphasized. This course utilizes a variety of exercise equipment to accomplish personal exercise goals.

**PED 149 Prescribed Exercises (0-2) 1 hr.**

Provides specialized therapeutic programs of prescribed exercises and sports activities to meet individual needs. May be repeated up to a maximum of 2 credit hours.

**PED 150 Bowling (0-2) 1 hr.**

Provides students with a progressive sequence in learning both basic and advanced skills. History, techniques, scoring and etiquette will also be covered. This course may be repeated up to a maximum of two credit hours.

**PED 152 Golf (0-1) .50 hr.**

Introduces to students the fundamentals of golf which include the grip, stance and swing using irons and woods. Terminology, etiquette, scoring and safety standards are also emphasized. May be repeated up to a maximum of 1 credit hour.

**PED 153 Swimming-Beginning (0-2) 1 hr.**

Provides students with an entry level swimming class with emphasis on learning the basic skills of swimming and aquatic safety. May be repeated up to a maximum of two credit hours.

**PED 154 Swimming-Intermediate and Advanced (0-2) 1 hr.**

Provides instruction in intermediate and advanced swimming skills with emphasis on learning all the swimming strokes, springboard diving skills, competitive swimming techniques, safety techniques and aquatic fitness. May be repeated up to a maximum of two credit hours.

**Prerequisite:** Ability to swim 50 yards.

**PED 158 Tennis (0-1) .50 hr.**

Provides theory and practice, rules and scoring, development of serve, forehand drive, backhand drive, lob, volley and footwork. Singles and doubles play and interclass competition. May be repeated up to a maximum of 1 credit hour.

**PED 159 Competitive Tennis (0-1) .50 hr.**

Provides rules, scoring, theory and practice of the skills of competitive tennis. Emphasizes game strategy in singles and doubles play. May be repeated up to a maximum of 1 credit hour.

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

Opportunity to explore movement potential, increase technical proficiency and broaden rhythm background; skills in technique and composition stressed. May be repeated up to a maximum of 2 credit hours.

**PED 162 Introduction to Ballet (0-2) 1 hr.**

Provides instruction for students with little or no previous training in ballet. May be repeated up to a maximum of 2 credit hours.

## COURSE DESCRIPTIONS

**PED 163 Basic Aerobics (0-1) .50 hr.**

Provides a wide variety of aerobic fitness programs structured to tone and trim the body. Vigorous exercise routines may be choreographed to music. Emphasis is on developing cardiovascular endurance, flexibility, muscular strength and endurance and movement efficiency. The fitness guidelines followed in this course are designed for the apparently healthy individual and are not designed for individuals with known heart, pulmonary or metabolic disease. May be repeated up to a maximum of 1 credit hour.

**PED 166 Advanced Aerobics (0-1) .50 hr.**

Provides a wide variety of advanced fitness programs structured to challenge the experienced student. Vigorous exercise routines may be choreographed to music. Emphasis is on developing a higher level of cardiovascular pulmonary endurance, flexibility, muscular strength and endurance and movement efficiency. The fitness guidelines followed in this course are designed for apparently healthy individuals and are not designed for individuals with known heart, pulmonary or metabolic disease.

**PED 167 Jazz Dance I (0-2) 1 hr.**

Provides students with the elements of ballet, modern dance and Afro-Haitian to combine them into a dance form that is idiomatic, syncopated and fast paced. May be repeated up to a maximum of 2 credit hours.

**PED 168 Racquetball (0-1) .50 hr.**

Offers the theory and practice of the game of racquetball. Students will learn rules, terminology, etiquette and game strategies. Emphasis will be on developing basic and advanced racquetball skills. May be repeated up to a maximum of 1 credit hour.

**PED 169 Competitive Racquetball (0-1) .50 hr.**

Provides rules, scoring, theory and practice of the skills of competitive racquetball. Emphasis on the strategy of singles and doubles play. May be repeated up to a maximum of 1 credit hour.

**PED 178 Judo and Self-Defense/ Beginning (0-2) 1 hr.**

Provides a basic understanding and practical application of judo and self-defense techniques. Includes proper training methods, physical conditioning, techniques and rules and regulations for contests.

**PED 179 Judo and Self-Defense/ Advanced (0-2) 1 hr.**

Orientation and instruction in all aspects of judo and self-defense. Provides greater emphasis on Randori and preparation for competition.

**Prerequisite:** PED 178 with a grade of "C" or better or consent of instructor.

**PED 181 Jujitsu I (0-2) 1 hr.**

Introduces Jujitsu (Miyama Ryu) the art of the Japanese Samurai from which judo, aikido and karate were derived. Based on mechanical principles, jujitsu is designed for self-defense. This non-competitive art is suited for women and men, regardless of size and physical condition, stressing technique and attitude. Benefits are improved fitness, coordination, awareness and defense skills training.

**PED 183 Jujitsu II (0-2) 1 hr.**

Continues PED 181. Building upon the skills obtained in PED 181, a broader range of more advanced techniques and applications are covered.

**Prerequisite:** PED 181 with a grade of "C" or better or consent of instructor.

**PED 195 Physical Fitness I (0-2) 1 hr.**

Provides a structured aerobic and strength training program designed for individuals free of heart, pulmonary and metabolic disorders. The course offers the student computer assisted fitness evaluations, guidance in developing an individualized exercise prescription and professional supervision. This course follows the exercise testing and training guidelines published by the American College of Sports Medicine.

**Prerequisite:** Prior to beginning the program, a physician supervised exercise stress test is required for men over 40, women over 50, and all individuals regardless of age who have multiple cardiovascular risk factors. The stress test will be waived provided a written physician's clearance can be obtained.

**PED 196 Physical Fitness II (0-2) 1 hr.**

Continues PED 195. Introduces other wellness components as well, such as nutrition and stress management.

**Prerequisite:** PED 195 with a grade of "C" or better.

### Physical Education Courses — Theory — for Major and Minor Students

**PED 200 Introduction to Physical Education (2-0) 2 hrs.**

Provides orientation and history of physical education in the United States. Presents aims and objectives and new approaches to physical education as an academic discipline.

**PED 201 Standard First Aid (3-0) 3 hrs.**

Provides the American Red Cross Responding to Emergencies course integrating adult cardiopulmonary resuscitation (CPR) and rescue breathing with other first aid topics. This course is designed to prepare students to respond appropriately and confidently. Two certificates, Adult CPR and Responding to Emergencies certification, are issued after successful completion of the skills and written tests.

## COURSE DESCRIPTIONS

### **PED 203 Health (3-0) 3 hrs.**

Provides an in-depth look at the physical, psychological, emotional, social, spiritual and environmental factors which contribute to the overall quality of a person's life. An investigation of how our lifestyle compares with other people in the world and the role and impact of the World Health Organization is emphasized. Mental health, nutrition, fitness, communicable and non-communicable diseases, killer diseases, drugs, human sexuality, family living (marriage, divorce, parenting), middle and old age issues and death and dying are some of the topics covered. Physical and psychological assessments are included in this class.

### **PED 205 Drugs in Our Culture (2-0) 2 hrs.**

Presents materials that examine the physiological, psychological and sociological aspects of drug use and abuse. The intent of the course is to provide a potpourri of the facts, attitudes and opinions necessary to understand what drugs do, how they do it, who uses them and why. Also, treatment modalities as well as legal and ethical issues in drug abuse will be discussed.

### **PED 206 Athletic Training Techniques (2-2) 3 hrs.**

Presents an introduction to the duties and responsibilities of an athletic trainer including: fundamental principles and techniques, injury prevention, recognition, emergency care, supportive taping and wrapping techniques, budgeting, ordering supplies and the general operation of a training room facility.

### **PED 207 Human Sexuality (2-0) 2 hrs.**

Introduces students to the families, sociological, biological and emotional implications of human sexuality. Emphasis is on exploring attitudes regarding sexual issues, clarifications of personal beliefs and development of healthy sexual behavior.

### **PED 208 Bioscientific Foundations of Human Movement (2-2) 3 hrs.**

Provides analysis of basic human movement skills as they relate to exercise and physical fitness. Emphasis is on human anatomy, cardiorespiratory development, muscular strength and endurance. Guidelines for training and physical fitness are provided through laboratory experiences.

### **PED 209 Principles of Teaching Exercise to Music (1-2) 2 hrs.**

Provides the academic and practical knowledge to prepare students for certification to teach a variety of aerobic and toning classes (aerobic dance, firm and fit, step). Students will have the opportunity to learn how to instruct classes as well as practice-teach in a classroom setting.

### **PED 210 Sports Officiating (2-0) 2 hrs.**

Provides comprehensive instruction on rules and officiating techniques in interscholastic sports. Students will also have the necessary preparation for the Illinois High School Athletic Association certification exam as well as other certifying agencies. Officiating opportunities are provided in college intramural and intercollegiate athletic programs. Some sports covered, but not limited to, are baseball, basketball and volleyball.

### **PED 211 Physical Education in Elementary School (3-0) 3 hrs.**

Provides instruction on the growth and development of elementary school children and the planning and organizing of elementary physical education programs.

### **PED 212 Physical Fitness Assessment Procedures (1-2) 2 hrs.**

Provides students with a study of the basic scientific components of physical fitness and the measurement of different indices of physical fitness common to corporate, clinical and lab settings.

### **PED 213 Wellness for Life (2-2) 3 hrs.**

Provides students with the knowledge of how to become fit and well and the information and tools which will assist them in formulating a personal fitness/wellness program. The course will cover physical fitness, nutrition, weight management, addictive behaviors, diseases which are lifestyle related and stress management. Students are actively involved in their learning process through the use of computers and lab sessions and will be required to attend weekly workout sessions in the fitness center.

### **PED 220 Track and Field Techniques (2-0) 2 hrs.**

Provides an opportunity for students to learn the history of track and field as well as basic skill techniques, rules, training, conditioning, coaching techniques, meet administration and responsibilities of officials. Students are able to apply their skills by planning, participating and officiating their own track and field meet.

### **PED 222 Football Techniques (2-0) 2 hrs.**

Provides the fundamental skills and organization techniques of the game of football. Strategy, rules, terminology, practice drills, conditioning, safety standards and officiating techniques are emphasized.

### **PED 224 Basketball Techniques (2-0) 2 hrs.**

Provides students with the knowledge and fundamental skills of basketball. Offensive and defensive playing techniques, game strategy, coaching and applications of the basic rules are also covered. Students will have the opportunity to use these skills and techniques in game situations.

### **PED 226 Baseball Techniques (2-0) 2 hrs.**

Provides the analysis, instruction and demonstration of fundamental skills, strategy, practice drills, conditioning, safety standards and officiating techniques in teaching and coaching baseball.

## COURSE DESCRIPTIONS

### **PED 228 Aquatics (2-0) 2 hrs.**

Provides students with instruction in the planning, development, organization and management of aquatic programs. This course discusses the history of aquatics and covers fundamental skills and techniques. Students will have the opportunity to practice their swimming and water safety skills and techniques.

**Prerequisite:** Ability to swim 50 yards.

### **PED 230 Water Safety Instructor (1-2) 2 hrs.**

Provides instruction in both instructor candidate training and water safety instruction.

**Prerequisite:** Student must be 17 years of age or older on the first day of class; student must possess a current basic level certificate in the Red Cross specialty area in which the student wishes to pursue an instructor rating; demonstration of community water safety skills knowledge; swim 50 yards of the following strokes with swimmer level skill accuracy: front crawl, back crawl, elementary back stroke, side stroke and breast stroke; swim 10 yards of butterfly; standing front dive from deck; possess an Instructor Candidate Training (ICT) certification.

### **PED 246 Tap Dance (0-2) 1 hr.**

Provides instruction in basic techniques of tap dance. Emphasizes the development of tap dance routines.

### **PED 270 Community Health (2-0) 2 hrs.**

Presents basic principles of community living and examines scientific methods applied to environmental health in urban and rural communities. Focuses on the functions of community health organizations and the way they relate to individual health needs.

## **PHI Philosophy**

### **PHI 105 Introduction to Philosophy (3-0) 3 hrs.**

Principles and problems of philosophy as seen in different schools of thought. Topics: validity of human knowledge; nature of reality; mind and body; free will and determination; moral and aesthetic values; and religious belief. IAI H4 900

### **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. IAI H4 906

### **PHI 115 Ethics (3-0) 3 hrs.**

Consideration of problems of value and conduct, including the question of the "good life" or happiness; and contemporary moral issues such as war, violence, drugs, racism, crime and punishment. IAI H4 904

### **PHI 120 Social and Political Philosophy (3-0) 3 hrs.**

Focuses on the ideas of justice, liberty, equality, law and order, rights and privileges. This includes discussion of such issues as democracy, communism, nuclear war, capital punishment, sexual equality, hunger and drugs.

### **PHI 150 Business Ethics (3-0) 3 hrs.**

Introduces philosophical ethical theory and its application to business decisions. Considers theories of economic justice, social responsibility, hiring practices and rights of employees and employers.

### **PHI 160 Non-Western Philosophy (3-0) 3 hrs.**

Introduces selected philosophical concepts and value systems of several non-Western cultures. Gives attention to the Bhagavad Gita, Vedanta and other Hindu texts, Confucius, the Tao Te Ching and other Chinese classics and key texts from at least two other traditions. IAI H4 903N

### **PHI 170 Environmental Ethics (3-0) 3 hrs.**

Introduces philosophical ethical theory and its application to environmental issues. Explores the roots of Western ideas about nature (Biblical, Greek, early Modern), the American environmental discussion and current positions including development, conservation, preservation and restoration. Considers issues including human-centered vs. life-centered views, whether species or habitats have value, appreciation vs. cost/benefit approaches, and bioregionalism.

### **PHI 180 Biomedical Ethics (3-0) 3 hrs.**

Considers the ethics of the professional-patient relationship (confidentiality, informed consent, paternalism, truth-telling), the ethics of life and death (abortion, euthanasia, suicide), and the ethics of medicine on a social scale (the right to health care, the distribution of medical resources).

### **PHI 190 Feminist Philosophy (3-0) 3 hrs.**

Introduces philosophical thinking and its application to issues concerning women. Explores a variety of theories by and about women. Considers a number of issues including images of women, biological vs. social conditioning, the relation of gender to class and race, women's spirituality, education, family, work, violence and pornography. Men are welcome to take the course.

### **PHI 205 Religions of the World (3-0) 3 hrs.**

Introduces the teachings, practices, social structures and histories of the religions of India (mainly Buddhism and Hinduism), and China and Japan (mainly Confucianism, Shinto and Taoism), and of the Middle East (mainly Christianity, Islam and Judaism). IAI H5 904N

### **PHI 210 Death and Dying (3-0) 3 hrs.**

Presents an interdisciplinary approach to the meaning of death. Focuses on biological, psychological, legal, philosophical and religious aspects of the phenomena of death and dying.

**PHI 220 Philosophy of Religion (3-0) 3 hrs.**

Examines the nature and presuppositions of Western religions, especially the reasons which can be given for and against the existence of God. Selected further topics: the problem of evil, life after death, the nature of religious experience, language, knowledge, and authority, religion and science, major philosophical theories on the nature of religion. IAI H4 905

**PHI 231 History of Philosophy — Ancient and Medieval (3-0) 3 hrs.**

Surveys the major figures and schools in Western philosophical tradition from the pre-Socratic Greeks through the 14th century. Emphasis on interpreting philosophical reflection in light of the social, political, religious and cultural context from which it arises. IAI H4 901

**Prerequisite:** A course in philosophy or consent of instructor.

**PHI 232 History of Philosophy — Modern (3-0) 3 hrs.**

Surveys the major figures and schools in Western philosophical tradition from the 15th to the 20th century. Emphasizes interpreting philosophical reflection in light of the social, political, religious and cultural context from which it arises. IAI H4 902

**PHS Physical Science**

**PHS 101 Physical Science Survey (3-0) 3 hrs.**

Designed to give the non-science major an understanding and appreciation of the universe, earth, energy and matter. IAI P9 900

**PHS 105 Energy and Society (3-2) 4 hrs.**

Introduces non-science majors to topics from various sciences as they relate to energy resources and energy consumption. Connects the theory of energy to its practical applications. Examines the connection between science and economics, politics and other social issues, using energy as a focus. (Meets laboratory science requirements for non-science majors.) IAI P1 901L

**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. IAI P1 900L

**PHS 112 Physical Science II (3-2) 4 hrs.**

Examines topics from basic chemistry, materials of the earth, earth forms and history, weather, the sun, stars and the universe. Course for non-science majors fulfilling laboratory science requirements. IAI P9 900L

**PHT Pharmacy Technician**

**PHT 101 Introduction to Pharmacy Technology (1-0) 1 hr.**

Introduces the student to the field of pharmacy technology. Includes an overview of the program, definition of the pharmacy technician's role and a review of opportunities open to the certified pharmacy technician.

**PHT 102 Pharmacy Law (1-0) 1 hr.**

Presents an overview of legal aspects of pharmacy practice, including a review of the Federal Controlled Substances Act and Illinois statutes, rules and regulations.

**PHT 110 Pharmacology I (3-0) 3 hrs.**

Presents a general overview of the available strengths, generic/trade names, routes of administration and general classification of commonly used medications. Different mechanisms of action of major drug categories are discussed.

**PHT 111 Pharmacy Operations I (2-3) 3 hrs.**

Presents fundamentals of drug distribution in hospital and retail pharmacies through lecture and lab instruction in abbreviations, symbols and equivalent used in prescription writing, bulk compounding, repackaging, repackaging, the drug supply chain, purchasing and inventory control and available drug delivery systems.

**PHT 112 Pharmacy Operations II (2-9) 5 hrs.**

Provides continuing information on basic as well as complex community pharmacy and hospital pharmacy operations. Emphasis on communication skills and the application of didactic knowledge gained to the clinical setting under the supervision of registered pharmacists.

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

**PHT 120 Pharmacology II (3-0) 3 hrs.**

Presents a general overview of the available strengths, generic/trade names, routes of administration and general classification of commonly used medications. Different mechanisms of action of major drug categories are discussed.

**PHT 140 Sterile Products and Aseptic Techniques (2-3) 3 hrs.**

Introduces major routes and types of parenteral drug administration. Presents equipment, supplies and technical skills used in preparing various intravenous solutions and other medications.

**Prerequisite:** PHT 112 and PHT 120 with grades of "C" or better or concurrent enrollment.

## COURSE DESCRIPTIONS

### PHY Physics

#### **PHY 101 Technical Physics I — Mechanics, Heat and Sound (3-2) 4 hrs.**

Covers statics, dynamics, energy, calorimetry, gas laws, waves and sound. Primarily for students in career programs. Other students see PHY 121 or PHY 201.

**Prerequisite:** MTH 106 with a grade of "C" or better or concurrent enrollment.

#### **PHY 102 Technical Physics II — Electricity and Magnetism, Light (3-2) 4 hrs.**

Introduces theory of electricity and magnetism including fields, induction, capacitance, direct and alternating current theory, circuits and elements of electronics. Also covers theory of light including reflection, interference, resonance, lenses, diffraction, polarization and Doppler effect. Primarily for students in career programs.

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

**Corequisite:** MTH 107.

#### **PHY 115 Applied Physics for Electronics I (2-2) 3 hrs.**

Provides a broad coverage of the physical principles in mechanics needed to understand basic technology associated with electronics.

**Prerequisite:** EMF 114 with a grade of "C" or better.

#### **PHY 116 Applied Physics for Electronics II (2-2) 3 hrs.**

Provides a broad coverage of the physical principles in the areas of matter, heat and thermodynamics, electricity and magnetism, optics and modern physics needed to understand basic technology associated with electronics.

**Prerequisite:** PHY 115 with a grade of "C" or better.

#### **PHY 121 Introductory Physics I (4-3) 5 hrs.**

Covers mechanics, heat and sound. For students in arts, sciences and architecture. Other students see PHY 201. IAI P1 900L IAI BIO 903

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

#### **PHY 122 Introductory Physics II (4-3) 5 hrs.**

Continues PHY 121. Electricity, magnetism and light. IAI BIO 904 IAI MTM 902

**Prerequisite:** PHY 121 with a grade of "C" or better or consent of instructor.

#### **PHY 201 General Physics I — Mechanics (3-2) 4 hrs.**

Introduces foundations of kinematics, statics, dynamics and hydraulics. For students in engineering, mathematics, physics and chemistry. IAI BIO 903

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

#### **PHY 202 General Physics II — Heat Electricity and Magnetism (3-2) 4 hrs.**

Continues PHY 201. Covers foundations of heat, thermodynamics, electricity and magnetism.

IAI BIO 904 IAI EGR 912

**Prerequisite:** MTH 202 with a grade of "C" or better or concurrent enrollment and PHY 201 with a grade of "C" or better.

#### **PHY 203 General Physics III — Wave Motion, Sound, Light and Modern Physics (3-2) 4 hrs.**

Continues PHY 202. Covers foundations of wave motion, sound, geometrical and physical optics and modern physics. IAI EGR 914

**Prerequisite:** MTH 212 with a grade of "C" or better or concurrent enrollment and PHY 202 with a grade of "C" or better.

### PKM Park and Golf Maintenance

#### **PKM 100 Park and Horticulture Careers (1-0) 1 hr.**

Surveys the green industry in northern Illinois. Acquaints the student with the broad diversity of careers in park and grounds operation management and plant science technology. Identifies personal career aptitudes through computerized career exploration.

#### **PKM 140 Grounds Equipment and Shop Operation (1-6) 4 hrs.**

Operation, maintenance, selection and care of equipment used in park management. Practical experience in the repair, adjustment and trouble-shooting of engines and other specialized equipment.

#### **PKM 141 Basic Carpentry Skills (1-4) 3 hrs.**

Covers basic working knowledge of the general principles, tools and techniques of carpentry used in park districts, grounds maintenance and landscape construction and repair situations. Includes selection of lumber materials, cutting, drilling, shaping methods, fastening methods and safety.

#### **PKM 143 Basic Plumbing Skills (1-4) 3 hrs.**

Provides safe working knowledge of the general principles, tools and techniques of plumbing installations and maintenance. Includes system design, selection of piping materials and fittings assembly procedures and repairs commonly encountered in landscape construction, grounds maintenance and greenhouse operations.

#### **PKM 144 Basic Masonry Skills (1-4) 3 hrs.**

Provides safe working knowledge of the general principles, tools and procedures in masonry installation and maintenance. Includes design, site preparation form work, material selection, installation and aftercare of masonry components commonly encountered in landscape construction, grounds maintenance and associated fields.

**PKM 150 Park and Plant Science Technology Internship (0-35) 5 hrs.**

Offers field training under the supervision of qualified green industry personnel to students completing a minimum of 15 semester hours of PKM or PST courses. Diversified field training will enable the student to acquire skills not thoroughly developed in the classroom-laboratory environment. Students will investigate the organizational structure of the enterprise and document the work processes during the internship.

**Prerequisite:** Minimum 15 semester hours of PKM or PST courses and consent of coordinator.

**PKM 210 Drainage and Irrigation (2-3) 3 hrs.**

Studies the design and installation of drainage and irrigation systems. Particular attention toward types of systems, materials and costs.

**PKM 213 Landscape Graphics (2-4) 4 hrs.**

Presents principles of land and topographic measurement, interpretation, recording and drafting as they apply to landscape design. Develops graphic display techniques in plan view, elevation and perspective to communicate landscape ideas. Introduces computer aided graphics as an interactive landscape planning tool.

**PKM 214 Landscape Design (3-3) 4 hrs.**

Presents the fundamentals of construction as applied to landscape projects, the use of materials, installation techniques, tools, equipment, structures, surveys and grading used in landscape construction. Emphasizes basic drafting techniques and principles of landscape design.

**Prerequisite:** PKM 213, PST 101 and PST 103 with grades of "C" or better, or consent of instructor.

**PKM 220 Arboriculture (1-6) 4 hrs.**

Care and management of ornamental trees. Techniques and demonstration of planting, staking, pruning, spraying, fertilizing and general care of shade and specimen trees. Instruction in the techniques of climbing and use of safety equipment, methods of bracing, cabling and guying of trees, cavity repair and surgical practices and the organization and management of municipal street tree departments.

**Prerequisite:** PKM 140 with a grade of "C" or better or consent of instructor.

**PKM 230 Contracts, Specifications, Estimating (2-3) 3 hrs.**

Emphasizes interpretation of maps, grading plans, construction drawings and landscape design plans, especially specifications, cost estimates and client relationships. Additional topics which deal with land use, land acquisition, park planning and the legal aspects of park and landscape contracting.

**PKM 240 Grounds Equipment Power Units (1-6) 4 hrs.**

Explains the operation, servicing and preventive maintenance of power units, electrical systems, power trains, hydraulic systems and associated components commonly found on grounds equipment. Gives special attention to applied mechanical learning experiences similar to those a student can expect to encounter in a grounds equipment service operation.

**PKM 242 Golf Course Management (3-3) 4 hrs.**

Surveys daily activities and maintenance practices utilized in the operation of both public and private golf courses including associated elements of planning, design and construction.

**Prerequisite:** PST 110 and PST 212 with grades of "C" or better, or consent of instructor.

**PKM 250 Park Management and Plant Science Seminar (1-0) 1 hr.**

Surveys the management principles of organizational behavior as it applies to the green industry.

**Prerequisite:** Minimum 30 semester hours of PKM or PST courses.

**PLS Paralegal Studies**

**PLS 101 Introduction to Paralegal Studies (3-0) 3 hrs.**

Surveys the functions of law; courts and lawyers in modern society; analysis of the origin, training and role of the paralegal; professional responsibilities of the lawyer, outline of the fields and specializations within the practice of law; and instruction in legal research and writing upon a review of the sources and works of law. Students must take the Paralegal Studies entrance examination.

**PLS 102 Fundamentals of Legal Research (3-0) 3 hrs.**

Orients students to law library and various legal publications, treatises and other legal writings encountered in day-to-day practice of law. Emphasizes developing student capability to analyze, interpret and communicate facts, ideas and law through comprehension of legal research techniques.

**Prerequisite:** PLS 101 with a grade of "C" or better, or consent of coordinator.

**PLS 103 Litigation (3-0) 3 hrs.**

Emphasizes the role of the paralegal in litigation. Analyzes civil procedure and instruction in preparation of documents used in lawsuits, covering pre-and post-trial matters, evidentiary problems and assistance during trials.

**Prerequisite:** PLS 101 with a grade of "C" or better, or consent of coordinator.

## COURSE DESCRIPTIONS

### **PLS 105 Family Law (3-0) 3 hrs.**

Emphasizes the role of the paralegal in family law. Examines domestic relations law with emphasis on marriage, divorce, annulment, separation agreements, adoption and other legal matters involving the family.

**Prerequisite:** PLS 101 with a grade of "C" or better, or consent of coordinator.

### **PLS 123 Real Property Law (3-0) 3 hrs.**

Provides historical study of common law estates and interests and statutes. Emphasizes the role of and relationship between the attorney and the paralegal in preparing the more common types of real property transactions and conveyances such as deeds, contracts and leases; drafting problems involving these various instruments; special research projects related to the subject matter, and a study of the system of recording and search of public documents. Students must take the Paralegal Studies entrance examination or have the coordinator's consent prior to registration.

### **PLS 200 Probate (3-0) 3 hrs.**

Emphasizes the role of the paralegal in probate matters. Surveys the principles, history and sources of probate law; examines probate court forms and tax returns; and details instruction in gathering information and preparing documents for the paralegal's supervising attorney.

### **PLS 201 Tort and Insurance Law (3-0) 3 hrs.**

Emphasizes the role of the paralegal in tort and insurance law. Studies basic tort and insurance principles, examines insurance claim procedures and pleading forms used in litigation of various actions.

### **PLS 202 Estate Planning (3-0) 3 hrs.**

Emphasizes the role of the paralegal in estate planning. Examines common forms of wills and trusts; survey of legal principles applicable thereto; and instruction in draftsmanship of documents by the paralegal for the supervising attorney.

### **PLS 203 Income Taxation I (3-0) 3 hrs.**

Emphasizes the role of the paralegal in matters relating to income taxation. Examines in detail federal and state income taxation as applicable to individuals; covers the preparation of returns and forms; surveys administrative and judicial procedures relative thereto.

### **PLS 204 Income Taxation II (3-0) 3 hrs.**

Examines in detail federal, state and local taxes with instruction in preparation of corporate, partnership, fiduciary and other returns and forms. Continues to emphasize the paralegal's role in taxation procedures.

### **PLS 205 Contract Law (3-0) 3 hrs.**

Surveys the principles, history and sources of contract law. Examines the elements of a valid, enforceable contract. Provides instruction regarding the drafting of contracts. Examines Article 2 of the Uniform Commercial Code regarding the sale of goods. Emphasizes the role of the paralegal in contract law.

### **PLS 208 Internship in Paralegal Studies (1-10) 3 hrs.**

Provides supervised experience in a legal setting to enhance students' technical paralegal skills. One-hour seminar each week devoted to paralegal issues.

**Prerequisite:** PLS 101, PLS 102, PLS 103 and an elective PLS course with grades of "C" or better.

### **PLS 210 Corporate and Securities Law (3-0) 3 hrs.**

Prepares paralegal student to aid in incorporation, corporate record keeping and compliance with administrative regulations. This includes the understanding of statutes, rules, forms and releases pertaining to the principal acts administered by the Securities and Exchange Commission.

### **PLS 212 Law Office Management (3-0) 3 hrs.**

Studies law office management relying on the system analysis approach to examine design, methods and develop processes necessary for integrating the paralegal into the hierarchy of the organization of a law office with emphasis on defining functions of the lawyer, paralegal and legal secretary.

### **PLS 220 Community Law (3-0) 3 hrs.**

Develops skills and competencies needed to recognize legal problems and comply with the procedures relating to various government agencies. Emphasis will be on federal housing and landlord-tenant law; mental and civil commitments, welfare laws; labor law; social security law; and consumer protection law. The paralegal's role in community law is stressed.

### **PLS 221 Bankruptcy Law (3-0) 3 hrs.**

Surveys the principles, history and sources of bankruptcy law in the United States. Examines the law relating to Chapters 7, 9, 11, 12 and 13 of the United States Bankruptcy Code. Provides instruction in the drafting of the schedules needed for Chapter 7, 9, 11, 12 and 13 filings. Examines the jurisdiction of the federal bankruptcy courts. Stresses the role of the paralegal in bankruptcy law.

### **PLS 230 Topics In Paralegal Studies (3-0) 3 hrs.**

Studies selected problems or topics in paralegal studies. The exact content and instructional methodology will vary semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated two times to a maximum of 6 credit hours.



**PSC Political Science**

**PSC 101 American Politics and Government (3-0) 3 hrs.**

Focuses on political involvement, elections, campaigns, interest groups, Congress, courts, the presidency and the constitution. Discusses how our government runs, as well as current political controversies. Utilizes political figures as guest speakers and offers opportunities for political participation, especially in election year. IAI S5 900

**PSC 210 Topics in Political Science (1-0 to 6-0) 1-6 hrs.**

Studies selected problems or topics in political science. The exact content and instructional methodology will vary from semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be taken from one to six credit hours.

**PSC 220 State and Local Government in the United States (3-0) 3 hrs.**

Examines state and local governments including their powers, organization, functions, development, politics and contemporary issues/problems. IAI S5 902

**PSC 250 Comparative Politics (3-0) 3 hrs.**

Explores the politics of selected countries in Africa, Asia, Europe, Latin America and/or the Middle East. Examines economic, social and political patterns and problems in different nations. IAI S5 905

**PSC 260 Middle Eastern Politics (3-0) 3 hrs.**

Examines political, social, economic, military, religious and terrorist forces in the Middle East. Investigates the politics of specific countries in the area.

**PSC 270 Global Politics (3-0) 3 hrs.**

Uses role playing to study how foreign policy is made. Explores human problems such as populations, food and energy on a global dimension. Examines international bodies, including the United Nations, and explores how nations interact. IAI S5 904N

**PSC 280 Non-Western Comparative Politics (3-0) 3 hrs.**

Examines the political systems of selected non-Western countries, including common governmental problems, causes of political instability and revolution and techniques of political analysis. IAI S5 906N

**PST Plant Science Technology**

**PST 101 Woody Plants (3-3) 4 hrs.**

Identifies woody plant materials, their growth habits, cultural requirements and discusses the use of ornamental shrubs, trees, vines and ground covers adapted to Illinois and the Midwestern area.

**PST 102 Plant Diseases and Pests (3-3) 4 hrs.**

Identifies diseases and discusses methods of prevention and control used in landscape and park operations, pests significant to the turf, soils and plant materials found in parks and other landscape areas.

**PST 103 Herbaceous Plants (3-3) 4 hrs.**

Identifies perennial and annual plants commonly used in Midwest gardens and landscapes. Discusses their culture, growth habits, landscape uses, and associated pests and disease problems. Emphasizes the use of botanical nomenclature and the use of morphological features for identification.

**PST 104 Floral Design (2-3) 3 hrs.**

Presents basic principles of floral design including classic designs, centerpieces, corsages, boutonnières, dried flower arrangements, holiday and special occasion designs. Emphasis is placed on design elements of color, line and form utilizing foliage and flowers of different varieties. Attention is given to commercial floral piece arrangements and mechanics of construction. IAI AG 912

**PST 105 Indoor Plants (2-4) 4 hrs.**

Examines identification, growth habits, cultural requirements and the use of indoor ornamental and foliage plants commonly used in interior plantscapes and residential indoor gardening.

**PST 106 Introductory Horticulture (2-0) 2 hrs.**

Presents a general study of the fundamental knowledge essential for installation and maintenance of plants either as a hobby, as a necessity or as a cost saving measure. Emphasis is on the cultivation of certain plant varieties, techniques of improving established gardens, and methods of reducing expenses for landscaping and maintenance. **Corequisite:** PST 108 or consent of instructor.

**PST 108 Introductory Horticulture Laboratory (0-4) 2 hrs.**

Complements and reinforces concepts developed in PST 106, including actual hands-on planting and maintenance practices. **Corequisite:** PST 106 or consent of instructor.

## COURSE DESCRIPTIONS

### **PST 110 Soil Science (3-3) 4 hrs.**

Studies the properties and use of soils in relation to plant growth and development. Special emphasis on soil texture, structure, moisture relations, biological activity, organic matter content and plant nutrients as they relate to park management. IAI AG 904

### **PST 111 Basic Horticultural Skills (3-3) 4 hrs.**

Develops specialized skills in ornamental horticulture including planting, transplanting, fertilizing, watering and pruning of trees, shrubs and herbaceous plants in both indoor and outdoor locations. Details seed and vegetable plant propagation methods; causes of plant disorders; installation, care and maintenance of plants used in landscape.

### **PST 204 Intermediate Floral Design (2-3) 3 hrs.**

Presents intermediate principles of floral design including wedding flowers, funeral arrangements, home interiors and current trends of floral art. Emphasis on design qualities, salesmanship and commercial floral accounts.

**Prerequisite:** PST 104 with a grade of "C" or better or consent of instructor.

### **PST 205 Advanced Floral Design I (2-3) 3 hrs.**

Introduces techniques and procedures for using exotic flowers and materials in advanced floral design, includes traditional and contemporary styles of arrangements, adapting the unique attributes of exotic materials to the creative design process and proper care of these unusual foreign and domestic flowers and bulbs.

**Prerequisite:** PST 204 with a grade of "C" or better or consent of instructor.

### **PST 206 Advanced Floral Design II (2-3) 3 hrs.**

Explores and develops the art and skills of arrangements of bouquets, creative hairpieces, corsages, ceremony decorations and reception designs for weddings. Practical experience in creating contemporary sympathy arrangements such as casket saddles, sprays and baskets.

**Prerequisite:** PST 204 with a grade of "C" or better or consent of instructor.

### **PST 207 Advanced Floral Design III (2-3) 3 hrs.**

Develops advanced skills of the use of many kinds of silk and dried flowers for floral arrangements. The principles of design are applied to centerpieces, live arrangements, wreaths, swags and topiaries. Covers the acquisition, storage and special care that permanent flowers require.

**Prerequisite:** PST 204 with a grade of "C" or better or consent of instructor.

### **PST 212 Turfgrass Science (3-3) 4 hrs.**

Identifies and discusses basic characteristics, soil requirements, environmental adaptation, propagation and uses of turfgrass. Special emphasis on the establishment of grasses and their identification. The management of established turfgrasses, emphasizing the essential maintenance practices of fertilization, weeds and their control, mowing, aeration, verticutting, renovation, and spraying for disease and insect control. A study of business procedures essential to turfgrass managers, including budgeting, record-keeping, purchasing and time studies.

### **PST 244 Nursery Management (2-3) 3 hrs.**

Studies operations fundamental to the nursery business including the propagation, planting, culture, harvesting and handling of nursery crops. Emphasis is placed on equipment, materials, procedures and ornamental plant dissemination through production and care of nursery plant materials.

**Prerequisite:** PST 101 and PST 111 with grades of "C" or better, or consent of instructor.

### **PST 247 Floral Shop Management (2-3) 3 hrs.**

Introduces floral shop operations which include equipment, materials used, plant and nonliving materials, floral shop design and construction and the operations which go on each day in the shop.

**Prerequisite:** PST 104 with a grade of "C" or better, or consent of instructor.

### **PST 248 Garden Center Operations (2-3) 3 hrs.**

Details the fundamental skills and facilities required to properly plan and implement the operation of a garden center. Included, but not restricted to, financing, material and supply selections, seasonal requirements and associated business needs.

**Prerequisite:** PST 103 with a grade of "C" or better, or consent of instructor.

## **PSY Psychology \***

### **PSY 101 Introduction to Psychology (3-0) 3 hrs.**

Human behavior with reference to perception, learning, individual differences, intelligence and personality. Developmental method stressed rather than experimental. Reference made to daily life and everyday problems. IAI S6 900 IAI SPE 912.

\* **Educational Psychology, see EDU 211.**

**Psychology of Exceptional Children, see CCA 219.**

**Introductory Social Psychology, see SOC 215**

## COURSE DESCRIPTIONS

### **PSY 106 Practical Psychology (3-0) 3 hrs.**

Presents a practical application of the psychological principles that lead to efficiency of learning, adjustment, motivation, communication and attitudes in everyday life and classroom situations. This course does not meet Social Science requirements.

### **PSY 107 Humanistic Psychology (2-0) 2 hrs.**

Focuses on various aspects of human behavior and personality. Several theories of psychosocial adjustment are presented and discussed. Through class discussion and structured activities in this workshop style course, students will examine their values, attitudes, experiences, strengths, weaknesses and interpersonal skills and how these affect themselves and others.

### **PSY 108 Topics in Psychology (2-0) 2 hrs.**

Provides specific topic seminars which allow each student the opportunity to examine current issues, such as career development, developing self-esteem, or young adult development. The focus is on the analysis and organization of experiences for personal and positive growth. Goal setting, decision-making and lifestyle planning are emphasized.

### **PSY 145 Psychology in Business and Industry (3-0) 3 hrs.**

Human behavior and its practical applications in business. Psychological applications in personnel and marketing problems, employee selection, morale and supervisory practices.

**Prerequisite:** PSY 101.

### **PSY 150 Psychology of Deafness (3-0) 3 hrs.**

Considers the effects of prelingual and postlingual hearing impairment on the psychological and emotional development or adaptation of the individual. Study of cognitive and linguistic functioning, personality and interpersonal behavior.

**Prerequisite:** PSY 101.

### **PSY 210 Introduction to Research in Psychology (3-0) 3 hrs.**

Introduction to the logic and theory of the scientific method. Emphasis on the basic statistical procedures and principles of experimental design. The purpose is to promote critical interpretations of behavioral data through an understanding of methods used in psychology.

**Prerequisite:** PSY 101.

### **PSY 216 Child Psychology I (3-0) 3 hrs.**

Individual child from conception to fetal development, infancy and latency. Emphasis placed on child rearing practices and techniques that appear beneficial in creation of independent and well-adjusted personality. Child's interaction with parents, siblings, peers and greater community considered in the formation of the integrated self.

**Prerequisite:** PSY 101. IAI S6 903

### **PSY 217 Adolescent Psychology (3-0) 3 hrs.**

Psychological study of the human organism from pubescence through adolescence and the beginnings of adulthood. Adolescence is studied as a time of rapid change resulting from increased drive state, physical maturity and changed social expectation. Emphasis is on how these changes are influenced by social institutions such as the family, the schools and the world of work, as well as by the divisions and conflicts taking place in society generally. IAI S6 904

**Prerequisite:** PSY 101

### **PSY 218 Adult Psychology (3-0) 3 hrs.**

Focuses on human psychological development from young adulthood to old age and adult psychological processes of personality. Emphasizes identity and intimacy of young adults and changing male and female roles with maturity; the family; work; personality and psychopathology; aging and death. IAI S6 905

**Prerequisite:** PSY 101 or consent of instructor.

### **PSY 220 Biological Basis of Behavior (3-0) 3 hrs.**

Studies the physiological aspects of behavior. Emphasizes the physiological foundations of motivation, consciousness, learning, emotion, aggression and stress. Clarifies the interaction between physiology, behavior and environment.

**Prerequisite:** PSY 101.

### **PSY 225 Psychology of Personality (3-0) 3 hrs.**

Investigates the determining factors and dynamics of human personality. Studies major contemporary approaches such as psychoanalytic, humanistic learning as well as trait and factor theories. Also considers methods of personality assessment.

**Prerequisite:** PSY 101.

### **PSY 228 Psychology of Human Development (3-0) 3 hrs.**

Introduces a complete coverage of human growth from conception to death. Emphasizes psychological and psychosexual developmental stages and crises. Incorporates interaction of biological factors with psychosocial stressors of one's environment.

IAI S6 902 IAI EED 903 IAI SED 903 IAI SPE 913

**Prerequisite:** PSY 101. IAI S6 902

### **PSY 230 Psychology of Human Adjustment and Abnormal Behavior (3-0) 3 hrs.**

Studies scientifically the research and theories of psychology relevant to the dynamics of human adjustment. Emphasizes the meaning and concept of adjustment applied to motivation, frustration, conflict, stress, anxiety, learning, personality, psychological diagnosis and psychotherapy.

**Prerequisite:** PSY 101.

## COURSE DESCRIPTIONS

### **PSY 235 Learning Theory and Human Behavior (3-0) 3 hrs.**

Studies the basic principles of learning theory, particularly as they apply to human behavior. Includes application of these principles to the modification of human behavior.

**Prerequisite:** PSY 101.

## **QUA Quality Assurance**

### **QUA 130 Quality Assurance Concepts (3-0) 3 hrs.**

Introduces techniques of establishing and maintaining quality systems related to products or services. Covers system concepts, team problem-solving tools including statistical process control, continuous improvement, and application of quality standards, specifically ISO 9000 and companion standards. IAI MTM 914.

**Prerequisite:** MGT 150, MTH 080, or MTH 087 with a grade of "C" or better.

### **QUA 131 Quality Systems and TQM (1-0) 1 hr.**

Introduces the principles and procedures that underlie quality systems and support total quality management. Emphasis is on the human resource, planning and auditing issues that support organizing for quality. Both domestic and international standards will be addressed. Credit will not be given for both QUA 131 and QUA 130.

### **QUA 132 Quality and Continuous Improvement Tools (1-0) 1 hr.**

Provides a survey of tools and techniques supporting an organization committed to total quality management and continuous improvement. Includes the classical tools for quality control and techniques specific to quality management. Credit will not be given for both QUA 132 and QUA 130.

**Prerequisite:** QUA 131 with a grade of "C" or better, or consent of instructor.

### **QUA 133 Introduction to Statistical Process Control (1-0) 1 hr.**

Provides a survey of the principles and processes that are necessary to implement statistical process control (SPC). Encompasses a management overview of the concepts of SPC and demonstrates how they may be integrated with Total Quality Management. Credit will not be given for both QUA 133 and QUA 130.

**Prerequisite:** QUA 131 with a grade of "C" or better, or consent of instructor.

### **QUA 160 Dimensional Metrology I (2-2) 3 hrs**

Introduces the basic concepts of dimensional metrology and inspection. Covers basic hand tools, reference surfaces, mechanical indicating equipment, optical equipment, fixed gages and special measuring and inspection problems found in manufacturing applications. Includes use of a coordinate measuring machine along with the more common measuring equipment.

**Prerequisite:** MET 105 and MTH 100 with grades of "C" or better, or consent of instructor.

### **QUA 230 Statistical Process Control (3-0) 3 hrs.**

Continues material introduced in QUA 130. Emphasizes statistical inference through the use of data, presentations, quantitative methods of summarizing data, probability theory, acceptance sampling, statistical process control methods, and trend analysis.

**Prerequisites:** QUA 130, and MGT 225 or MTH 165 with grades of "C" or better.

### **QUA 235 Practical Problems of Quality Management (3-0) 3 hrs.**

Introduces the organization and operation of the quality function as it relates to both services and manufacturing. Emphasizes the various activities involved in managing the quality system including motivation for quality, quality improvement, customer relations and organization for quality.

**Prerequisite:** QUA 130 with a grade of "C" or better or consent of instructor.

### **QUA 260 Introduction to Geometric Dimensioning and Tolerancing (2-0) 2 hrs.**

Provides an introduction to geometric dimensioning and tolerancing using both ASME/ANSI Y14.5M and appropriate ISO standards. Material presented deals with interpretation and application of geometric controls as they apply to design, manufacturing and inspection. Credit will not be given for both MET 202 and QUA 260. IAI MTM 932

**Prerequisite:** Experience in design, manufacturing or inspection.

### **QUA 265 Dimensional Metrology II: CMM (2-2) 3 hrs.**

Introduces the concepts of coordinate metrology and inspection. Covers the various types of coordinate measuring machines (CMM) and their applications in process control and functional inspection. Emphasis is on inspection process planning, selection and setup of appropriate equipment including probes and fixturing, programming considerations, operating environment, and measurement uncertainty.

**Prerequisite:** QUA 160 and QUA 260 with grades of "C" or better.

**QUA 281 Topics in Quality Assurance (.5-0 to 3-0) .5-3hrs.**  
 Studies selected problems or topics in quality assurance. The exact content and instructional method will vary from semester to semester. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be repeated two times to a maximum of three credit hours.

**RAC Refrigeration and Air Conditioning**

**RAC 100 Heating and Cooling Career Exploration (.5-10) 1 hr.**  
 Studies career and employment possibilities in the heating and cooling industry. Includes observation or practices in heating and cooling and attendance at a seminar to discuss related experiences. For Tech Prep students with no prior courses or work experience in the heating and cooling field. (NOTE: Summer semester only.)  
**Prerequisite:** Consent of coordinator.

**RAC 101 Refrigeration Fundamentals (3-3) 4 hrs.**  
 Introduces vocabulary, concepts and scientific principles used in the refrigeration industry. Develops skills in pipe fitting, use of hand tools and operation of instruments used in the refrigeration trade.

**RAC 102 Refrigeration Systems (3-3) 4 hrs.**  
 Continues to develop principles and concepts learned in RAC 101. Familiarizes students with components and accessories added to basic refrigeration systems for special applications. Develops trouble diagnosing procedures.  
**Prerequisite:** RAC 101 with a grade of "C" or better.

**RAC 103 Heating Principles (3-3) 4 hrs.**  
 Describes sources and methods of producing heat for residential, commercial and industrial systems. Develops skills in testing, adjusting and replacing heating system components.

**RAC 104 Residential Comfort Systems (3-3) 4 hrs.**  
 Integrates concepts, principles and knowledge of equipment available for residential comfort systems including solar heat. Describes several residential systems and places emphasis on diagnosing system malfunctions.  
**Prerequisites:** RAC 101 and RAC 103 with grades of "C" or better.

**RAC 105 Heating and Cooling Controls (3-3) 4 hrs.**  
 Describes the purposes and principles of operation and causes of failure in electrical components common to residential and small commercial systems. Emphasizes wiring schematics and diagrams.

**RAC 106 Advanced Controls (3-3) 4 hrs.**  
 Continues RAC 105. Includes electrical components. Emphasizes control systems, system malfunctions and proper repair procedures.

**RAC 108 Domestic Refrigeration Appliances (3-3) 4 hrs.**  
 Provides a comprehensive examination of the operation, problem solving and repair of residential refrigeration appliances.  
**Prerequisite:** RAC 101 and RAC 105 with grades of "C" or better.

**RAC 200 Heating and Cooling Internship (1-15) 2 hrs.**  
 Applies appropriate skills to the heating and cooling technology field. (NOTE: Summer semester only.)  
**Prerequisite:** RAC 100 with a grade of "C" or better and consent of coordinator.

**RAC 201 Refrigeration System Design I (3-3) 4 hrs.**  
 Considers the factors in the selection of refrigeration compressors, evaporators, condensers and compressor oil, as well as the accessories used in commercial refrigeration. Examines the thermo-dynamic properties of the common refrigerants.  
**Prerequisite:** RAC 102 with a grade of "C" or better or consent of instructor.

**RAC 202 Refrigeration System Design II (3-3) 4 hrs.**  
 Continues consideration of factors in the selection of metering devices, pipe sizing, motors and controls. Develops concepts of lubrication, multi-staging and cascade freezer systems.  
**Prerequisite:** RAC 201 with a grade of "C" or better or consent of instructor.

**RAC 203 Air Conditioning Principles (3-3) 4 hrs.**  
 Examines the properties of air through the use of the psychrometric chart and tables. Studies methods of computing heat gains and losses for residential and light commercial systems.  
**Prerequisite:** RAC 104 with a grade of "C" or better or consent of instructor.

**RAC 204 Air Distribution (2-3) 3 hrs.**  
 Considers the factors in the selection of a duct system for efficient air distribution. Studies fan laws and pressure drops for proper fan and duct size selection. Describes types of registers and their location for optimum performance.  
**Prerequisite:** RAC 104 with a grade of "C" or better or consent of instructor.

## COURSE DESCRIPTIONS

### **RAC 208 Industrial Controls (3-0) 3 hrs.**

Describes the controls found in industrial HVAC and refrigeration systems. Emphasizes energy efficient systems.

**Prerequisite:** RAC 106 with a grade of "C" or better or consent of instructor.

### **RAC 211 Residential Solar Heating (3-0) 3 hrs.**

Examines the nature of solar radiation and collections of solar energy. Studies existing systems for heating and cooling residential space and water.

**Prerequisite:** RAC 101 with a grade of "C" or better or consent of program coordinator.

### **RAC 290 Independent Study (3-0) 3 hrs.**

For students with some experience who do not wish to duplicate their present knowledge, or who cannot attend classes regularly. Study plan to be worked out by instructor and student.

## **RDG Reading**

### **RDG 090 Fundamentals of Reading (3-0) 3 hrs.**

Presents instruction in the fundamental skills of reading. Designed for students whose linguistic and reading skills are insufficient for successful college work. Enrollment is determined by a score below the required score on the Harper College reading assessment test. Prepares students for RDG 097 or RDG 099. Carries no transfer credit.

### **RDG 097 Reading and the College Textbook (3-0) 3 hrs.**

Provides classroom instruction in reading strategies to improve comprehension and vocabulary development in the college text. Utilizes a specific text from a selected college course and related readings with the goal to bring textbook reading skills to college level. Student must enroll in an identified course that is paired with RDG 097. Successful completion of RDG 097 fulfills the reading proficiency requirement of the Harper College assessment policy. Carries no transfer credit.

**Prerequisite:** RDG 090 or the Harper College reading placement test with an acceptable score.

### **RDG 099 Developmental Reading (3-0) 3 hrs.**

Provides classroom instruction in comprehension utilizing a wide variety of written materials for students who need assistance in bringing their reading skills to college level. Enrollment in RDG 099 is determined by obtaining a score below the passing score on the Harper College reading placement test. Successful completion of RDG 099 fulfills the reading proficiency requirement of the Harper College assessment policy. Carries no transfer credit.

**Prerequisite:** RDG 090 or the Harper College reading placement test with an acceptable score.

### **RDG 100 Reading for the Technologies (3-0) 3 hrs.**

Teaches reading, writing and problem-solving strategies appropriate to vocational/technical programs. Provides practice with applying skills necessary for success in specific career-vocational programs.

### **RDG 105 College Reading (2-0) 2 hrs.**

Increases reading rate and flexibility and improves ability to interpret written materials critically. Emphasis is on improving rate while maintaining comprehension.

**Prerequisite:** 10th-grade reading level or above.

### **RDG 106 Critical College Reading Skills (3-0) 3 hrs.**

Develops the full array of mature, fluent reading skills, including critical and analytical comprehension, content area reading, predictive reading, vocabulary development, speed and flexibility. Also covers theories of comprehension and language development.

## **RES Real Estate**

### **RES 101 Real Estate Transactions (3-0) 3 hrs.**

Provides instruction in basic real estate fundamentals for those who wish to qualify for a real estate license. Surveys real estate law, interests in real estate, ownership, the real estate business, financing and appraisal. Also covers agency relationships and responsibilities, disclosure, and environmental issues.

(NOTE: Students must be 21 years of age to qualify for the State of Illinois Real Estate Exam.)

### **RES 105 Real Estate Math Applications (1-0) 1 hr.**

Explains use of mathematics in the real estate business and drills in land area and volume, capitalization rates, computing valuations and prorations. Emphasizes logical approach to arithmetic situations.

Recommended **Corequisite:** RES 101.

### **RES 110 Real Estate Survey (1-0) 1 hr.**

Covers the most current real estate laws, both Illinois and federal, affecting the real estate business as well as the information required of real estate licensees.

### **RES 190 Contracts and Conveyancing (1-0) 1 hr.**

Covers deeds, contracts, options, leases and other legal instruments used in the use and transfer of ownership of Illinois real estate. Fulfills one part of the State of Illinois education requirements to obtain a Real Estate Broker's license.

**Prerequisite:** RES 101 with a grade of "C" or better, or consent of instructor.

**RES 192 Advanced Principles of Real Estate (1-0) 1 hr.**

Covers the most current real estate agency, disclosure, environmental and license laws affecting the real estate business. Fulfills one part of the State of Illinois education requirements to obtain a Real Estate Broker's License in compliance with the Real Estate License Act of 2000.

**Prerequisite:** RES 101 with a grade of "C" or better, or consent of instructor.

**RES 194 Real Estate Finance (1-0) 1 hr.**

Examines mortgages, articles of agreement, primary and secondary money markets. Borrower and property evaluations are considered. Both residential and commercial financing are covered. Fulfills one part of the State of Illinois education requirements to obtain a Real Estate Broker's license.

**Prerequisite:** RES 101 with a grade of "C" or better, or consent of instructor.

**RES 196 Property Management (1-0) 1 hr.**

Considers aspects of legal responsibility as to accounting, reporting, insuring and protecting income property. Americans with Disabilities Act, civil rights laws and regional occupancy laws are to be covered. Problem solving is stressed. Fulfills one part of the State of Illinois education requirements to obtain a Real Estate Broker's license.

**Prerequisite:** RES 101 with a grade of "C" or better, or consent of instructor.

**RES 198 Brokerage Administration (1-0) 1 hrs.**

Covers operation of a real estate brokerage company including ethics, management skills and record and account management. Fulfills one part of the State of Illinois education requirements to obtain a Real Estate Broker's license in compliance with the Real Estate Broker's License Act of 2000.

**Prerequisite:** RES 101 with a grade of "C" or better, or consent of the instructor.

**RES 220 Real Estate Investment Analysis I (3-0) 3 hrs.**

Presents the beginning skills used in interpreting investment potential of real property. Highly quantitative, requires advanced calculators and some knowledge of personal computers.

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

**RES 221 Real Estate Investment Analysis II (3-0) 3 hrs.**

Continues study of real estate investment potential. Case studies research into the current marketplace, and applications using modern methodology, calculators, and personal computers will be used.

**Prerequisite:** RES 220 with a grade of "C" or better.

**SGN Sign Language**

**SGN 101 American Sign Language I (4-0) 4 hrs.**

Introduces the student to American Sign Language with emphasis on receptive and expressive vocabulary skill development and appropriate use of grammatical structures. Information about the deaf community and its culture is also presented. Designed for students with no previous experience in American Sign Language.

**SGN 102 American Sign Language II (4-0) 4 hrs.**

Reviews American Sign Language vocabulary and grammar essentials presented in SGN 101 and continues receptive and expressive American Sign Language skill development and application of increasingly complex grammatical structures. Additional cultural information is also presented.

**Prerequisite:** SGN 101 with a grade of "C" or better or consent of department chairperson.

**SGN 103 Fingerspelling and Numbering Systems in American Sign Language (3-0) 3 hrs.**

Provides instruction in the rules of fingerspelling and numbering systems in American Sign Language. Students will have opportunities for practice in the development of expressive and receptive skills at increasing levels of complexity. Receptive skill development focuses on whole words and numbers in isolation, as well as reading fingerspelling and numbers embedded in signed sentences. Expressive skill development focuses on accuracy, fluency, clarity and speed.

**Prerequisite:** SGN 101 with a grade of "C" or better, or consent of department chairperson.

## COURSE DESCRIPTIONS

### **SGN 104 CASE: Signed English (1-0 to 3-0) 1-3 hrs.**

Provides instruction in conceptually accurate signed English and introduces students to deaf culture. Combines English grammatical structures with American Sign Language signs, initialized signs, fingerspelling and specific ASL linguistic principles. Designed for parents and teachers of the hearing impaired, other interested professionals and students preparing to enter the Sign Language Interpreting program.

**One Credit:** Covers introduction to the manual alphabet and numbers 1-20, basic linguistic principles including signing space, sight line, sign parameters, Time Line and questions, and basic vocabulary skill development and introduces the student to deaf culture.

**Two Credits:** Covers preceding content along with numbers 20-30, linguistic principles: negation, present and absent referent, person affix/agency, additional lexical items and information regarding myths and stereotypes and conversation regulators.

**Three Credits:** Covers preceding content along with numbers 30-100, directional verbs, number incorporation, noun-verb pairs, classifiers, lexical development and cultural information, including the deaf community and deaf education.

### **SGN 201 American Sign Language III (4-0) 4 hrs.**

Reviews American Sign Language vocabulary and grammatical structures presented in SGN 102 and focuses on grammatical and lexical expansion with emphasis on idiomatic usage and sociocultural communicative functions.

**Prerequisite:** SGN 102 with a grade of "C" or better or consent of department chairperson.

### **SGN 202 American Sign Language IV (3-0) 3 hrs.**

Reviews American Sign Language grammatical structures and lexical items presented in SGN 201. Focuses on conversational practice to develop expressive and receptive facility with the language. Includes culturally significant topics and interaction with members of the deaf community.

**Prerequisite:** SGN 201 with a grade of "C" or better or consent of department chairperson.

### **SGN 205 American Sign Language V (3-0) 3 hrs.**

Provides an in-depth examination of the linguistic structure of American Sign Language and includes a contrastive analysis of English and American Sign Language syntax. Designed for students interested or currently enrolled in the Sign Language Interpreting program.

**Prerequisite:** SGN 202 with a grade of "C" or better or consent of department chairperson.

### **SGN 210 American Sign Language Community: A Cultural Perspective (4-0) 4 hrs.**

Examines the history of American Sign Language, the emergence of the deaf community as a linguistic and cultural group, the cultural norms, values, traditions and rules of social behavior of the deaf community, minority dynamics and cross cultural interactions. IAI H1 900

**Prerequisite:** SGN 201 with a grade of "C" or better or consent of department chairperson.

## **SOC Sociology**

### **SOC 101 Introduction to Sociology (3-0) 3 hrs.**

Analysis and description of the structure and dynamics of human society. Application of scientific methods to the observation and analysis of social norms, groups, inter-group relations, social change, social stratification and institutions. IAI S7 900

### **SOC 120 The Family In Contemporary Society (3-0) 3 hrs.**

Examines the family as a social institution and as a dynamic interactive system. Topics include courtship, marriage, family systems, parenting, non-traditional forms of the family. IAI S7 902

**Prerequisite:** SOC 101 with a grade of "C" or better 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. IAI S7 901

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

### **SOC 210 Social Institutions (3-0) 3 hrs.**

Primary social institutions, including family, religious, educational, economic and political. Questions considered: who participates, what are the functions, what are the consequences, and an evaluation of the effects of the institutions on the society.

### **SOC 215 Introductory Social Psychology (3-0) 3 hrs.**

Introduces the methods used to understand, explain and predict how the thoughts, feelings and actions of individuals are influenced by the thoughts and actions of social groups. Investigates how attitudes, beliefs and behaviors are influenced by others within society and how society is influenced by the individual. IAI S8 900

**Prerequisite:** PSY 101 or SOC 101 with a grade of "C" or better.



**SOC 220 Topics in Social Science (1-0 to 6-0) 1-6 hrs.**

Studies selected problems or topics in social science. The exact content and instructional methodology will vary from semester to semester depending on the material to be studied. A syllabus or course outline containing additional information will be available with preregistration materials each time that the course is offered. This course may be taken from one to six credit hours.

**SOC 230 Sociology of Sex and Gender (3-0) 3 hrs.**

Examines the social processes in society which translate biological differences (sex) between men and women into social and psychological categories or gender roles. Various theories will be considered in an attempt to understand the existence of gender inequality and how the process of socialization influences the proper "place" for men and women in society. Gender roles and power are considered when analyzing the marketplace, politics, marriage and family, or in considering issues such as the feminization of poverty, violence in the home, and male sensitivity.

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

**SPA Spanish**

**SPA 101 Elementary Spanish I (4-0) 4 hrs.**

Introduces the language skills of listening, understanding, speaking, reading and writing in their logical sequence. Designed for students with no previous experience in Spanish.

**SPA 102 Elementary Spanish II (4-0) 4 hrs.**

Continues SPA 101. Situational conversations in Spanish; reading and writing stressed.

**Prerequisite:** SPA 101 with a grade of "C" or better, two years of high school Spanish or consent of instructor.

**SPA 201 Intermediate Spanish (4-0) 4 hrs.**

Conversation with emphasis on pronunciation, intonation, stress and rhythm. Introduction to composition, reading of short stories and grammar review.

**Prerequisite:** SPA 102 with a grade of "C" or better, two years of high school Spanish or consent of instructor.

**SPA 202 Intermediate Spanish (4-0) 4 hrs.**

Continues SPA 201. Increases the knowledge of the language and focuses on the culture of Spanish-speaking countries. Continues grammar study. IAI H1 900

**Prerequisite:** SPA 201 with a grade of "C" or better, three years high school Spanish or consent of instructor.

**SPA 205 Intensive Oral Practice (3-0) 3 hrs.**

Conversational practice to develop oral facility; specially designed exercises in pronunciation, stress and rhythm. Individual readings of modern Spanish works discussed in class. Written and oral compositions based on readings. Designed to help students bridge the gap between the intermediate and advanced levels.

**Prerequisite:** SPA 202 with a grade of "C" or better, or equivalent or consent of instructor.

**SPA 210 Introduction to Modern Spanish Literature (3-0) 3 hrs.**

Reading of selected 20th century masterpieces. Introduction to poetry. Oral readings stressing pronunciation and diction. Speaking based on discussion of works read. Writing based on readings and class discussions. Designed to help students bridge the gap between the intermediate and advanced levels. IAI H3 917

**Prerequisite:** SPA 202 with a grade of "C" or better, or equivalent or consent of instructor.

**SPE Speech and Theatre**

**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. IAI C2 900

**SPE 102 Public Speaking and Communication Theory (3-0) 3 hrs.**

Examination of communications principles underlying successful platform behavior. Development of proficiency in the logic of argument and skill of speaking. Consideration of forms of public address; analysis and delivery of one such form as a semester assignment. IAI SPC 911

**Prerequisite:** SPE 101 with a grade of "C" or better or consent of instructor.

**SPE 107 Oral Interpretation (3-0) 3 hrs.**

Provides the student an opportunity to select, prepare and perform various types of literature. Emphasizes the use of body and voice in oral reading. IAI TA 916 IAI SPC 915

**SPE 111 Introduction to the Theatre (3-0) 3 hrs.**

Introduces to theatrical and dramatic art. Emphasis on providing the student with the tools of analysis which give him or her insight into the total imaginative process that makes up the art of the theatre. IAI F1 907

**SPE 115 Interviewing (1-0) 1 hr.**

Focuses on the unique demand of dyadic communication. The student will examine interview types, participate in model interview situations and identify and practice good listening skills.

## COURSE DESCRIPTIONS

### **SPE 180 Applied Forensics I (0-2) 1 hr.**

Provides practical experience in the preparation of public speeches, oral interpretation programs, acting scenes, group performances and/or limited preparation speaking situations for public presentation in forensics/speech competition.

### **SPE 181 Applied Forensics II (0-2) 1 hr.**

Continues SPE 180. Provides practical experience in the preparation of public speeches, oral interpretation programs, acting scenes, group performances and/or limited preparation speaking situations for public presentation in forensics/speech competition.

**Prerequisite:** SPE 180 with a grade of "C" or better.

### **SPE 182 Applied Forensics III (0-2) 1 hr.**

Continues SPE 181. Provides practical experience in the preparation of public speeches, oral interpretation programs, acting scenes, group performances and/or limited preparation speaking situations for public presentation in forensics/speech competition.

**Prerequisite:** SPE 181 with a grade of "C" or better.

### **SPE 183 Applied Forensics IV (0-2) 1 hr.**

Continues SPE 182. Provides practical experience in the preparation of public speeches, oral interpretation programs, acting scenes, group performances and/or limited preparation speaking situations for public presentation in forensics/speech competition.

**Prerequisite:** SPE 182 with a grade of "C" or better.

### **SPE 200 Interpersonal Communication (3-0) 3 hrs.**

Studies the nature and scope of interpersonal communication. Equips the student to manage the challenges of daily, one-on-one communication. Includes the study of identity and self as they relate to communication theory and practice as well as communication behaviors associated with the development, maintenance and termination of different types of relationships. Emphasis will be placed on practical communication skills such as listening, perception, language and nonverbal communication. IAI SPC 921

### **SPE 205 Group Discussion (3-0) 3 hrs.**

Provides experience and introduces students to the principles, techniques and types of group discussion including roles, goals, cohesiveness, listening, problem-solving, leadership and conflict. IAI SPC 920

### **SPE 212 Acting I (3-0) 3 hrs.**

Methods used in the art of acting; stress on practical acting situations. IAI TA 914

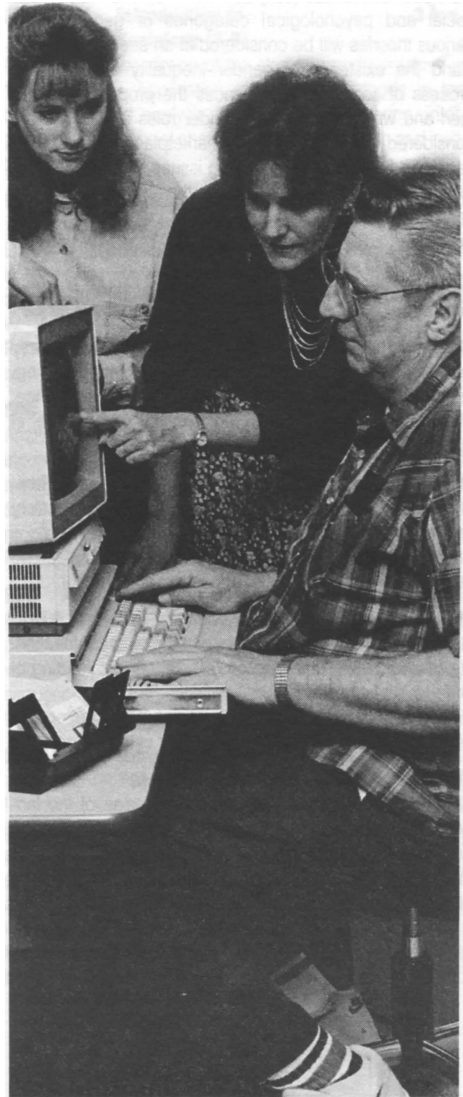
### **SPE 213 Acting II (3-0) 3 hrs.**

Continues the development of acting skills introduced in SPE 212. Helps the student develop a believable character through play analysis and scene study. Introduces the student to acting styles. IAI TA 915

**Prerequisite:** SPE 212 with a grade of "C" or better and consent of instructor.

### **SPE 216 Stagecraft (0-6) 3 hrs.**

Emphasizes the technical processes of the stage. Includes stage structures and scenery, construction processes, lighting theory and practices, costuming and related equipment and hardware. Laboratory work will be correlated with the College's theatrical productions. IAI TA 911



## Board of Trustees

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



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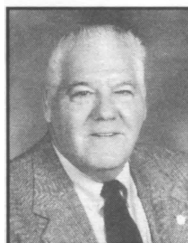
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Meetings of the Board of Trustees, which are open to the public, are held on the fourth Thursday of each month at 7:00 pm in the Board Room of the administration wing of the Student and Administration Center on the Harper campus at Algonquin and Roselle Roads in Palatine.

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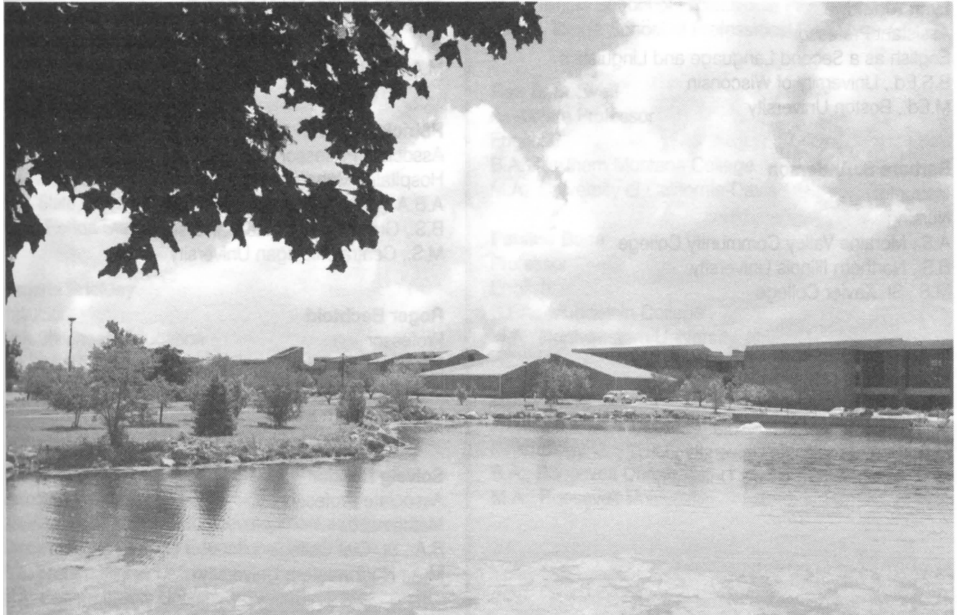
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