

Associate in Applied Science Degree 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

BUILDING CODES AND ENFORCEMENT

Building Codes and Enforcement Certificate

CARDIAC TECHNOLOGY

Associate in Applied Science Degree
Cardiographic Technician Certificate
Diagnostic Cardiac Sonographer Certificate
Electrocardiography Certificate

COMPUTER INFORMATION SYSTEMS

Associate in Applied Science Degree:
Computers in Business
Associate in Applied Science Degree: Programming
Associate in Applied Science Degree: Web Development
Advanced LAN Management Certificate
Computer Support Specialist Certificate
Computers in Business Certificate
LAN Management Certificate
Microcomputer Support Specialist Certificate
Microcomputers in Business Certificate
NetPrep™ Senior Network Specialist Certificate
Network Specialist Certificate
Programming 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

DENTAL HYGIENE

Associate in Applied Science Degree

DIAGNOSTIC MEDICAL SONOGRAPHY

Associate in Applied Science Degree
Diagnostic Medical Sonography Certificate
Vascular Technologist Certificate

DIETETIC TECHNICIAN

Associate in Applied Science Degree
Dietary Manager Certificate

EARLY CHILDHOOD EDUCATION

Associate in Applied Science Degree
Early Childhood Education:
Before/After School Care Certificate
Early Childhood Education: Family Child Care Certificate
Early Childhood Education: Infant/Toddler Certificate
Early Childhood Education:
Special Education Paraprofessional Certificate
Early Childhood Education Administrator Certificate
Early Childhood Education Assistant Teacher Certificate
Early Childhood Education Teacher Certificate

ELECTRONICS ENGINEERING TECHNOLOGY

Associate in Applied Science Degree
Electrical Maintenance Certificate
Electronics Certificate

EMERGENCY MEDICAL SERVICES

Associate in Applied Science Degree
Paramedic Certificate

FASHION DESIGN

Associate in Applied Science Degree
Fashion Design Certificate

FASHION MERCHANDISING

Associate in Applied Science Degree

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

GRAPHIC ARTS TECHNOLOGY

Associate in Applied Science Degree
 Graphic Arts Certificate
 Graphic Arts Design Certificate
 Graphic Arts Desktop Publishing Certificate

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

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

HORTICULTURE (See Plant Science Technology and Park and Golf Maintenance)

HOSPITALITY MANAGEMENT

Associate in Applied Science Degree
 Bread and Pastry Arts Certificate
 Culinary Arts Certificate
 Hospitality Management Certificate
 Food Service Management Certificate
 Hotel Management Certificate

INSURANCE (See Financial Services)

INTERIOR DESIGN

Associate in Applied Science Degree

INTERNATIONAL BUSINESS

Associate in Applied Science Degree
 International Business Certificate

JOURNALISM

Media Writing and Design Certificate
 Online Communications Certificate

LAW OFFICE ADMINISTRATIVE ASSISTANT

Associate in Applied Science Degree
 Law Office Administrative Assistant Certificate

MAINTENANCE

Associate in Applied Science Degree
 Basic Maintenance Certificate
 Commercial Maintenance Certificate
 Supervisory Maintenance Technology Certificate

MAMMOGRAPHY

Mammography 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 Certificate

MARKETING

Associate in Applied Science Degree
 E-Commerce Business Certificate
 Marketing Certificate
 Marketing Research Certificate
 Retail Merchandising Certificate
 Sales Management Certificate

MEDICAL OFFICE ADMINISTRATION

Associate in Applied Science Degree:
 Medical Assistant
 Associate in Applied Science Degree:
 Health Care Office Manager
 Health Care Secretary Certificate
 Health Insurance Specialist Certificate
 Medical 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

PARAMEDIC (See Emergency Medical Services)

PARAPROFESSIONAL EDUCATOR

Associate in Applied Science Degree
 Paraprofessional Educator Certificate

PARK AND GOLF MAINTENANCE

Associate in Applied Science Degree
 Arboriculture Certificate
 Golf Course and Athletic Field Maintenance Certificate
 Turfgrass and Grounds Maintenance Certificate

PHLEBOTOMY

Phlebotomy Certificate

PLANT SCIENCE TECHNOLOGY

Associate in Applied Science Degree
 Advanced Floral Design Certificate
 Basic Horticultural Skills Certificate
 Floral Design Certificate
 Garden Center Operations Certificate
 Landscape Design Certificate

RADIOLOGIC TECHNOLOGY

Associate in Applied Science Degree

REAL ESTATE (See Financial Services)

REFRIGERATION AND AIR CONDITIONING TECHNOLOGY

See Heating, Ventilation and Air Conditioning (HVAC)

SIGN LANGUAGE INTERPRETING

Sign Language Interpreting Certificate

SUPPLY CHAIN MANAGEMENT

Associate in Applied Science Degree
 Inventory/Production Control Certificate
 Physical Distribution Certificate
 Purchasing Certificate
 Supply Chain Management Certificate

ACCOUNTING ASSOCIATE

Associate in Applied Science Degree

This 61 credit-hour program is designed to prepare students for employment as junior accountants in business, industry, and government.

The curriculum includes the study of accounting theory and practice, corporation accounting, and cost accounting. Required business coursework provides for an overview of the corporate community and includes economics, business law, and management classes. Computer information skills are essential to today's accountants and are also required in this degree.

FIRST YEAR

First Semester

ACC 101	Introduction to Financial Accounting	4
CIS 101	Introduction to Computer Information Systems	3
English ¹	.....	3
MGT 111	Introduction to Business Organization	3
Mathematics elective ²	.....	<u>3-4</u>
		16-17

Second Semester

ACC 102	Introduction to Managerial Accounting.....	3
CIS 106	Computer Logic and Programming Technology or	
CIS 218	E-Commerce Development.....	3
ECO 200	Introduction to Economics or	
ECO 211	Microeconomics.....	3
ENG 130	Business Writing ¹	3
Humanities elective	.....	<u>3</u>
		15

SECOND YEAR

First Semester

ACC or CIS	Elective ³	3
ACC 201	Intermediate Accounting I.....	3
ACC 211	Business Law I.....	3
Business elective ⁴	.....	3
Social Science elective	.....	<u>3</u>
		15

Second Semester

ACC 202	Intermediate Accounting II.....	3
ACC 203	Introductory Cost Accounting	3
Business electives ⁴	.....	6
CIS electives ⁵	.....	<u>3</u>
		15

¹ 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.

² Only MGT 150 or MTH 124 or higher will satisfy this requirement.

³ Elective (students must satisfy prerequisite for course elected): ACC 155, ACC 250, ACC 251, ACC 253, ACC 254, CIS 203.

⁴ Electives (students must satisfy prerequisites for each course elected): ACC 212, ACC 213, BFC 215, MGT 218, MGT 225, MGT 270.

⁵ Electives: CIS 120 or CIS 122, CIS 123, CIS 124, CIS 125.

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 Software.....	1
CIS	124	Advanced Spreadsheet Software	1
CIS	125	Word Processing Software.....	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.

Required:

ACC	101	Introduction to Financial Accounting	4
ACC	102	Introduction to Managerial Accounting.....	3
CIS	123	Spreadsheet Software.....	1
CIS	124	Advanced Spreadsheet Software	1
CIS	125	Word Processing Software.....	1

Accounting-Payroll, State and Local Taxes Certificate

This seven credit-hour certificate program will provide the student with the courses needed for an entry level position in this particular area.

Required:

ACC	155	Tax and Payroll Accounting	4
CIS	123	Spreadsheet Software.....	1
CIS	124	Advanced Spreadsheet fSoftware	1
CIS	125	Word Processing Software.....	1

ADMINISTRATIVE TECHNOLOGY

See also Law Office Administrative Assistant

Associate in Applied Science Degree: Executive Assistant

The 62 credit-hour 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 Administrative Technology	1
OFC	105	Administrative Human Relations	1
OFC	106	Administrative Time Management	1
OFC	107	Internet Applications	1
OFC	113	Computer Keyboarding/Production ¹	3
OFC	133	Word Processing Software I	2
OFC	201	Advanced Features in Word Processing	2
OFC	203	Proofreading and Editing	<u>2</u>
			16

Second Semester

CIS	123	Spreadsheet Software	1
CIS	124	Advanced Spreadsheet Software	1
OFC	134	Word Processing Software II	2
OFC	202	Desktop Publishing Using Word Processing	2
OFC	220	Automated Office Procedures ¹	4
OFC	227	Business Presentations	1
OFC	228	Records Control for the Office	1
OFC	229	Meeting and Conference Planning	1
SPE	101	Fundamentals of Speech Communication	<u>3</u>
			16

SECOND YEAR

First Semester

CAS electives ²		.....	5
MGT	111	Introduction to Business Organization	3
OFC	230	Executive Machine Transcription	2
OFC	237	Administrative Technology Internship I	3
OFC	247	Professional Development	<u>2</u>
			15

ADMINISTRATIVE TECHNOLOGY

Associate in Applied Science Degree continued...

Second Semester

ECO elective ³	3
Humanities elective	3
MTH elective ⁴	3
OFC 238 Administrative Technology Internship II	3
Social Science elective	<u>3</u>
	15

¹ Placement into OFC 113 and OFC 220 is contingent upon previous training and consent of instructor.

² CAS electives: CAS 110, CAS 120, CAS 130, CAS 140, CAS 150, CAS 210, CAS 220.

³ ECO elective: ECO 115, ECO 200.

⁴ 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	4
ENG 130	Business Writing	3
MGT 111	Introduction to Business Organization ¹	3
MGT 160	Principles of Supervision	3
MGT 280	Human Relations in Business	3

Electives: Select at least 15 credit hours from the following courses:

Accounting elective	3
ACC 211 Business Law	3
CIS 101 Introduction to Computer Information Systems	3
CIS 121 General Accounting Applications for Micros	2
CIS 122 Data Base Software	1
CIS 123 Spreadsheet Software	1
CIS 124 Advanced Spreadsheet Software	1
ECO 200 Introduction to Economics	3
ENG 103 Technical Report Writing	3
MGT 265 Human Resource Management	3
MGT 270 Principles of Management	3
PSY 245 Industrial/Organizational Psychology	3
OFC 106 Administrative Time Management	1
OFC 107 Internet Applications	1
OFC 225 Topics in Administrative Technology	1-6
OFC 227 Business Presentations	1
OFC 228 Records Control for the Office ¹	1
OFC 229 Meeting and Conference Planning ¹	1

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
		Administrative Technology electives ²	2-6

¹ For those who have passed the Certified Professional Secretary Examination within the past five years, credit will be given for these courses. Contact the Assessment and Testing Center for information on procedures and appropriate fees.

² Administrative Technology electives: OFC 133, OFC 134, OFC 201, OFC 202, OFC 205.

Certified Professional Secretary Certificate

This is a six 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.

Required:

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 Software.....	1
ENG	100	Composition	3
MGT	111	Introduction to Business Organization	3
MGT	150	Business Math.....	3
OFC	104	Introduction to Administrative Technology	1

ADMINISTRATIVE TECHNOLOGY

General Office Certificate continued...

OFC	105	Administrative Human Relations	1
OFC	107	Internet Applications	1
OFC	110	Beginning Computer Keyboarding	1
OFC	111	Beginning Computer Keyboarding with Applications	3
OFC	112	Computer Keyboarding Review ¹	3
OFC	113	Computer Keyboarding/Production ¹	3
OFC	130	Office Technology Applications	1
OFC	133	Word Processing Software I	2
OFC	134	Word Processing Software II	2
OFC	201	Advanced Features in Word Processing ¹	2
OFC	202	Desktop Publishing Using Word Processing ¹	2
OFC	203	Proofreading and Editing	2
OFC	225	Topics in Administrative Technology	1-6
OFC	247	Professional Development	2
OFC	250	Records Management Basics	3
OFC	251	Records & Information Management I	3
OFC	252	Records & Information Management II	3
OFC	253	Forms Control	3
OFC	254	Records Management Technology	3

¹ 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	Computer Keyboarding Production ¹	3
OFC	130	Office Technology 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 four credit hours from the following courses:

CAS	110	Core Microsoft Office Specialist Certification: Word	1
CAS	120	Core Microsoft Office Specialist Certification: Excel	1
CAS	130	Core Microsoft Office Specialist Certification: Access	1
CAS	140	Core Microsoft Office Specialist Certification: PowerPoint	1
CAS	150	Core Microsoft Office Specialist Certification: Outlook	1
CAS	210	Expert Microsoft Office Specialist Certification: Word	1
CAS	220	Expert Microsoft Office Specialist Certification: Excel	1
OFC	107	Internet Applications	1
OFC	201	Advanced Features in Word Processing	2
OFC	202	Desktop Publishing Using Word Processing	2
OFC	205	Using Tables in Word Processing	2
OFC	225	Topics in Administrative Technology	1-6
OFC	227	Business Presentations	1
OFC	230	Executive Machine Transcription	2

¹ 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 Administrative Technology	1
OFC	105	Administrative Human Relations	1
OFC	106	Administrative Time Management	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	Administrative Technology 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 Software	1
CIS	123	Spreadsheet Software	1
CIS	124	Advanced Spreadsheet Software	1
ENG	130	Business Writing	3
OFC	107	Internet Applications	1
OFC	113	Computer Keyboarding Production ¹	3
OFC	202	Desktop Publishing Using Word Processing	2
OFC	203	Proofreading and Editing	2
OFC	205	Using Tables in Word Processing	2
OFC	225	Topics in Administrative Technology	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

¹ Placement into course 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 ¹	3
Mathematics elective ²			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 ³			<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 ⁴			<u>3</u>
			14

¹ ENG 100, ENG 103, ENG 130 or SPE 101 may be used under certain conditions to satisfy this requirement.

² A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete a three credit-hour ATE elective.

³ Recommended elective: ART 110, MUS 103, MUS 104, PHI 105 or any literature course.

⁴ 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 credit-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.

Required:

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, or the program coordinator. 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	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	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

BUILDING CODES AND ENFORCEMENT

Building Codes and Enforcement Certificate

This 24 credit-hour certificate program 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.

Required:

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 ¹	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

¹ Prerequisite of FIS 122 will be waived.

CARDIAC TECHNOLOGY *

Associate in Applied Science Degree

This 64 credit-hour program prepares students as cardiovascular technologists that work in hospitals and cardiology offices performing tests that assist physicians in the diagnosis of heart diseases. After completing ECG related course work the student is prepared to pursue work as a cardiographic technician performing rhythm an 12 lead ECG, holter monitoring, stress testing and telemetry surveillance, and to take the Cardiovascular Credentialing International (CCI). After degree completion the student is prepare to seek employment as a diagnostic cardiac sonographer performing ultrasound examinations of the heart (echocardiograms). After one year of work the graduate is encourage to be a Registered Cardiac Sonographer (RDCS).

Because of the nature of clinical experiences and individualized instruction required in this program and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with the CTE prefix. Tuition for the courses in this program is 200% of the standard tuition rate.

A 320-hour internship at an area hospital is required once all course work is completed with a grade of C or better.

Admission requirements include:

- For admission requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web page: harpercollege.edu/learning/healthcareers

CARDIAC TECHNOLOGY*

Associate in Applied Science Degree continued

First Semester

BIO	160	Human Anatomy	4
ENG	101	Composition	3
HSC	100	Computer Usage in Health Services ¹	1
HSC	105	Introduction to Health Care Field	2
HSC	112	Medical Terminology	3
HSC	213	Health Care Law and Ethics	3
Mathematics ²		.....	<u>0</u>
			16

Second Semester

BIO	161	Human Physiology	4
CTE	106	Ultrasound Physics and Instrumentation	4
NUR	120	Pharmacology	2
PSY	101	Introduction to Psychology	3
SPE	101	Fundamentals of Speech Communication	<u>3</u>
			16

SECOND YEAR

First Semester

CTE	101	Electrocardiography.....	4
CTE	104	Cardiovascular Principles	3
CTE	107	Diagnostics I	4
CTE	109	Laboratory Techniques I	<u>3</u>
			14

Second Semester

CTE	102	ECG Surveillance and Stress Testing	3
CTE	103	Cardiac Emergencies ³	1
CTE	105	Cardiac Pathophysiology	3
CTE	108	Diagnostic II	4
CTE	110	Laboratory Techniques II	<u>3</u>
			14

Summer/Fall Semester

CTE	111	Cardiac Technology Internship ⁴	4
CTE	112	Laboratory TechniquesIII ⁵	1

* Cardiac Technology is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Office for updated information.

¹ A proficiency test, available in the Assessment and Testing Center, may be utilized to meet the computer requirement.

² Group 2 math requirement is met by Cardiac Technology program admission requirements.

³ This course may be waived with proof of current health care provider CPR certification.

⁴ Assignments will be based on site availability.

⁵ This course is an elective and is not required for graduation.

CARDIAC TECHNOLOGY*

CARDIOGRAPHIC TECHNICIAN CERTIFICATE*

This 33 credit-hour certificate trains students to pursue work as a cardiographic technician performing rhythm and 12 lead ECG, holter monitoring, stress testing and telemetry surveillance in hospitals and cardiology offices, and to take the Certified Cardiographic Technician (CCT) examination given through Cardiovascular Credentialing International (CCI).

Because of the nature of clinical experiences and individualized instruction required in this program, and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with the CTE prefix. Tuition for these courses in this program is 200% of the standard tuition rate.

Admission Requirements

- For admissions requirements, please contact the Admission Outreach Office at 847.935.6700 or check the following web page: harpercollege.edu/learning/healthcareers

FIRST YEAR

First Semester

BIO	160	Human Anatomy	4
ENG	101	Composition	3
HSC	100	Computer Usage in Health Services ¹	1
HSC	105	Introduction to Health Care Field	2
HSC	112	Medical Terminology	<u>3</u>
			13

Second Semester

BIO	161	Human Physiology	4
HSC	213	Health Care Law and Ethics	3
NUR	120	Pharmacology	<u>2</u>
			9

SECOND YEAR

First Semester

CTE	101	Electrocardiography.....	4
CTE	104	Cardiovascular Principles	<u>3</u>
			7

Second Semester

CTE	102	ECG Surveillance and Stress Testing	3
CTE	103	Cardiac Emergencies	<u>3</u>
			6

Summer/Fall Semester

CTE	112	Laboratory TechniquesII ²	1
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* Cardiographic Technician is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Office for updated information.

¹ A proficiency test, available in the Assessment and Testing Center, may be utilized to meet the computer requirement.

² Group 2 math requirement is met by Cardiac Technology program admission requirements.

CARDIAC TECHNOLOGY*

DIAGNOSTIC CARDIAC SONOGRAPHER CERTIFICATE

This 33 credit-hour certificate program prepares direct patient care providers with a recognized two year allied health career degree to change careers by becoming a diagnostic cardiac sonographer performing ultrasound examinations of the heart (echocardiograms) in hospitals or cardiology offices. After one year of work the graduate is encouraged to take the American Registry of Diagnostic Medical Sonography (ARDMS) examination to be a Registered Diagnostic Cardiac Sonographer (RDCS)

Because of the nature of clinical experiences and individualized instruction required in this program, and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with the CTE prefix. Tuition for these courses in this program is 200% of the standard tuition rate.

A 320-hour internship at an area hospital is required once all coursework is completed with a grade of C or better.

Admission Requirements

- For admissions requirements, please contact the Admission Outreach Office at 847.935.6700 or check the following web page: harpercollege.edu/learning/healthcareers

FIRST YEAR

Spring/Summer Semester

CTE	106	Ultrasound Physics and Instrumentation	4
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First Semester

CTE	101	Electrocardiography.....	4
CTE	104	Cardiovascular Principles	3
CTE	107	Diagnostics I	4
CTE	109	Laboratory Techniques I	<u>3</u>
			14

Second Semester

CTE	103	Cardiac Emergencies ¹	1
CTE	105	Cardiac Pathophysiology	3
CTE	108	Diagnostics II	4
CTE	110	Laboratory Techniques II	<u>3</u>
			11

SECOND YEAR

Summer/Fall Semester

CTE	111	Cardiac Technology Internship ²	4
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* Diagnostic Cardiac Sonographer is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Office for updated information.

¹ This course will be waived with proof of current health care provider CPR certification.

² Assignments will be based on site availability.

CARDIAC TECHNOLOGY*

ELECTROCARDIOGRAPHY CERTIFICATE*

This 11 credit-hour certificate program is for health care professionals who would like to add as additional clinical skill to their repertoire by learning how to interpret 12 lead and rhythm ECGs. Those eligible must be health care professionals with direct patient care responsibilities or students in an allied health care program who will obtain work as direct patient care providers.

Because of the nature of clinical experiences and individualized instruction required in this program, and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with the CTE prefix. Tuition for these courses in this program is 200% of the standard tuition rate.

Required

BIO	135	Introduction to Human Anatomy and Physiology.....	4
CTE	101	Electrocardiography.....	4
HSC	112	Medical Terminology.....	3

* Electrocardiography is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Office for updated information.

COMPUTER INFORMATION SYSTEMS

Associate in Applied Science Degree: Computers in Business

The 66-67 credit-hour technical curriculum trains students for various positions in the field of computers. The student will take courses in business, computer information systems, and general education. The student may choose from six specialized study areas: Database Management, Geographic Information Systems, LAN Administration, Management Information Systems, NetPrep™ Network Technology, and Packages. Graduates of the program may find employment as network technicians and consultants.

Required Core Courses:

CIS	101	Introduction to Computer Information Systems	3
CIS	106	Computer Logic and Programming Technology	3
CIS	128	Command Line Fundamentals (1) and	
CIS	147	Windows (2) or	
CIS	149	Introduction to Linux (3)	3
MGT	111	Introduction to Business Organization	3

Required General Education Courses:

ENG	101	Composition	3
ENG	102	Composition or	
ENG	103	Technical and Report Writing ¹	3
SPE	101	Fundamentals of Speech Communication	3
MGT	150	Business Math or	
MTH	080	Foundations of Mathematics II (4) or	3-4
		Humanities, Natural Science, or Social Science electives ³	6
PHI	115	Ethics or	
PHI	150	Business Ethics	6

Specialized Study Areas:

Database Management

Required:

CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database for Software (1) and	
CIS	123	Spreadsheet Software (1) and	
CIS	125	Word Processing Software (1)	3
CIS	143	Introduction to Database Systems	3
CIS	144	Advanced PC Operating Systems	3
CIS	145	PC Hardware	3
CIS	171	Introduction to Local Area Networks	3
CIS	172	Internet Protocols	3
CIS	243	Database Management	3
CIS	244	Database Design and Implementation	3
CIS	electives ⁴	.....	9

COMPUTER INFORMATION SYSTEMS

Associate in Applied Science Degree: Computers in Business...continued

Geographic Information Systems

Required:

CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database Software (1) and	
CIS	123	Spreadsheet Software (1) and	
CIS	125	Word Processing Software (1)	3
CIS	130	Visual Basic Programming I	4
CIS	143	Introduction to Database Systems	3
CIS	231	Visual Basic Programming II	4
CIS	280	Visual Basic Programming III	4
GEG	151	Geographic Information Systems I	3
GEG	152	Geographic Information Systems II	3
MGT	115	Introduction to International Business (3) or	
MKT	248	Direct Marketing (3) or	
MKT	260	International Marketing (3)	3
MKT	245	Principles of Marketing	3
MKT	255	Internet Marketing	3

LAN Administration

Required:

CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database Software (1) and	
CIS	123	Spreadsheet Software (1) and	
CIS	125	Word Processing Software (1)	3
CIS	144	Advanced PC Operating Systems	3
CIS	145	PC Hardware	3
CIS	162	PC Operating Systems (3) and	
CIS	163	Network Operating Systems (3) and	
CIS	260	Network Infrastructure Administration (3) and	
CIS	261	Directory Services Administration (3) or	
CIS	165	Linux Fundamentals (3) and	
CIS	275	Linux System Administration (3) and	
CIS	276	Linux Networking and Security Administration (3) and	
CIS	277	Linux Shell Scripting and Server Services (3) or	
CIS	173	Cisco Networking Basics (3) and	
CIS	174	Cisco Routers and Routing Basics (3) and	
CIS	175	Cisco Switching Basics and Intermediate Routing (3) and	
CIS	177	Cisco WAN Technologies (3)	12
CIS	171	Introduction to Local Area Networks	3
CIS	172	Internet Protocols	3
CIS	electives ⁵	.....	6

COMPUTER INFORMATION SYSTEMS

Associate in Applied Science Degree: Computers in Business...continued

Management Information Systems

Required:

ACC	101	Introduction to Financial Accounting	4
ACC	211	Business Law I	3
CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database Software (1) and	
CIS	123	Spreadsheet Software (1) and	
CIS	125	Word Processing Software (1)	3
CIS	119	Web Site Development I	3
CIS	158	NetPrep™ Protocol Analysis	3
CIS	124	Advanced Spreadsheet Software	1
CIS	141	Advanced Database Software	1
CIS	143	Introduction to Database Management	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	218	E-Commerce Development.....	3
MGT	218	Introduction to Finance	3
MGT	270	Principles of Management	3
MKT	245	Principles of Marketing	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	144	Advanced PC Operating Systems	3
CIS	145	PC Hardware.....	3
CIS	155	NetPrep™ TCP/IP.....	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
CIS	electives ⁶	.....	3

Packages

Required:

CAS	110	Core Microsoft Office Specialist Certification: Word.....	1
CAS	120	Core Microsoft Office Specialist Certification: Excel	1
CAS	130	Core Microsoft Office Specialist Certification: Access .	1
CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database for Micros (1) and	
CIS	123	Spreadsheet Software (1) and	
CIS	125	Word Processing Software (1)	3
CIS	124	Advanced Spreadsheet Software	1
CIS	126	Business Graphics.....	1
CIS	144	Advanced PC Operating Systems	3
CIS	145	PC Hardware.....	3
Electives ⁷		.....	16
OFC	105	Administrative Human Relations.....	1
OFC	247	Professional Development	2

COMPUTER INFORMATION SYSTEMS

- ¹ Students in Database Management of LAN Administration specializations are required to choose from ENG 102 or ENG 103; ENG 103 is recommended.
- ² Students in Geographic Information Systems are required to take MTH 165.
- ³ Students must take six hours in a minimum of two of these areas. Students in Geographic Information Systems are required to take ECO 200 of GEG 210; students in Management Information Systems are required to take ECO 200 and PSY 101.
- ⁴ CIS electives: CIS 162, CIS 163, CIS 165, CIS 203, CIS 204, CIS 260, CIS 262, CIS 275, CIS 275, CIS 276, CIS 277.
- ⁵ CIS electives: CIS 162, CIS 163, CIS 165, CIS 173, CIS 174, CIS 175, CIS 177, CIS 250, CIS 260, CIS 261, CIS 262, CIS 271, CIS 275, CIS 276, CIS 277.
- ⁶ CIS electives: CIS 124, CIS 141, CIS 144, CIS 145, CIS 15, CIS 146, CIS 151, CIS 165, CIS 170, CIS 171, CIS 172, CIS 250, CIS 271 or up to three credit hours from CIS 120, CIS 122, CIS 123, CIS 125.
- ⁷ Electives: ACC 101, CAS 140, CAS 150, CAS 210, CAS 220, CAS 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 15, CIS 146, CIS 148, CIS 152, CIS 154, CIS 205, CIS 223, CIS 224, CIS 231.

Associate in Applied Science Degree: Programming

The 60 credit-hour curriculum trains students for various programming positions in the field of computer information systems. The student will take courses in mathematics, business, computer information systems, and general education. The student may choose from three specialized study areas: C++ Programming, Java Programming, or Visual Basic Programming. Graduates of the program may find employment as microcomputer programmers, systems analysts, or consultants.

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
Humanities, Natural Science, or Social Science, electives ¹			9
Mathematics elective ²			3

Required Core Courses:

CIS	101	Introduction to Computer Information Systems	3
CIS	106	Computer Logic and Programming Technology.....	3
CIS	119	Web Site Development I	3
CIS	122	Database Software.....	1
CIS	128	Command Line Basics.....	1
CIS	143	Introduction to Database Systems.....	3
CIS	147	Windows.....	2
CIS	203	Systems Analysis and Design I.....	3
CIS	204	Systems Analysis and Design II.....	3

Specialized Study Areas:

C++ Programming

Required:

CIS	130	Visual Basic Programming I or	
CIS	168	Java Programming I.....	4
CIS	166	C++ Programming I	4
CIS	176	C++ Programming II.....	4
CIS	266	C++ Programming III.....	4
CIS electives ³			4

Associate in Applied Science Degree: Programming continued...

Java Programming

Required:

CIS 130	Visual Basic Programming I or	
CIS 166	C++ Programming I	4
CIS 168	Java Programming I	4
CIS 178	Java Programming II	4
CIS 278	Java Programming III	4
CIS electives ³	.....	4

Visual Basic Programming

Required:

CIS 130	Visual Basic Programming I	4
CIS 166	C++ Programming I or	
CIS 168	Java Programming I	4
CIS 231	Visual Basic Programming II	4
CIS 280	Visual Basic Programming III	4
CIS electives ³	.....	4

¹ Students must take a total of nine credit hours in a minimum of two of these areas.

² Students must take at least three credit hours in a mathematics course at the level of MTH 080 or above.

³ CIS 102, CIS 118, CIS 120, CIS 130, CIS 134, CIS 137, CIS 138, CIS 152, CIS 161, CIS 168, CIS 173, CIS 189, CIS 218, CIS 230.

COMPUTER INFORMATION SYSTEMS

Associate in Applied Science Degree: Web Development

The 64-65 credit-hour technical curriculum trains students for various positions in the field of web site design, development and maintenance. The student will take courses in business, marketing, web scripting, web graphics, e-commerce, and database. 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 developers, web designers, web site managers, and consultants.

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 ¹	4
		Natural Science, Social Science, or	
		Humanities electives ²	6

Required Core Courses:

CIS	101	Introduction to Computer Information Systems	3
CIS	102	NetPrep™ Networking or	
CIS	170	Introduction to Data Communication	3
CIS	106	Computer Logic and Programming Technology	3
CIS	119	Web Site Development I	3
CIS	122	Database Software.....	1
CIS	138	Web Site Development II	3
CIS	139	Web Authoring Tools	3
CIS	143	Introduction to Database Systems	3
CIS	147	Windows.....	2
CIS	218	E-Commerce Development.....	3
CIS	219	Web Site Management	3
MGT	111	Introduction to Business Organization	3
MKT	245	Principles of Marketing or	
MKT	252	Internet Marketing	3

Specialized Study Areas:

Web Application Developer

Required:

CIS	161	Introduction to Perl Programming or	
CIS	229	Open Source Web Application Development	3
CIS	189	Extensible Markup Languages	3
CIS	239	Web Site Development III	3
		Humanities, Natural Science or Social Science electives ²	2

Web Visual Design

Required:

ART	121	Design I.....	3
CIS	105	Introduction to Multimedia	3
CIS	109	Web Graphics	3
CIS	126	Business Graphics.....	1
CIS	205	Multimedia Development	3

¹ Students must take four credit hours in a mathematics course at the level of MTH 080 or above.

² Students must take a total of nine credit hours in a minimum of two of these areas.

COMPUTER INFORMATION SYSTEMS

Advanced LAN Management Certificate

This 32 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	134	Command Line Scripting	3
CIS	147	Windows.....	2
CIS	162	PC Operating System (3) and	
CIS	163	Network Operating System (3) and	
CIS	260	Network Infrastructure Administration (3) and	
CIS	261	Directory Services Administration (3) or	
CIS	165	Linux Fundamentals (3) and	
CIS	275	Linux System Administration (3) and	
CIS	276	Linux Networking and Security Administration (3) and	
CIS	277	Linux Shell Scripting and Server Services (3).....	12

Electives: Group I (Select six credit hours¹):

CIS	106	Computer Logic and Programming Technology	3
CIS	137	Computer Internship I	3
CIS	146	Operating System–OS/2	3
CIS	149	Introduction to Linux	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	203	Systems Analysis and Design I.....	3
CIS	204	Advanced Systems Analysis and Design II	3
CIS	259	Network Troubleshooting	3
CIS	262	Designing a Network Infrastructure	3
CIS	263	Designing for Network Security	3
CIS	264	Implementing Directory Services.....	3
CIS	265	Exchange Server Administration.....	3

Electives: Group II (Select six credit hours¹):

CIS	102	NetPrep™ Networking Fundamentals.....	3
CIS	107	NetPrep™ Local Area Networks	3
CIS	155	NetPrep™ TCP/IP.....	3
CIS	157	NetPrep™ Internetworking Devices and Concepts... ..	3
CIS	159	NetPrep™ Network Analysis Design.....	3

¹ Students must satisfy prerequisite for each course selected.

Computer Support Specialist Certificate

This 30 credit-hour certificate program is designed to prepare students for employment as HELP Desk personnel or other computer support positions.

Required:

CIS	101	Introduction to Computer Information Systems	3
CIS	102	NetPrep™ Networking Fundamentals.....	3
CIS	107	NetPrep™ Local Area Networks	3
CIS	119	Web Site Development I	3
CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database Software (1) and	
CIS	123	Spreadsheet Software (1) and	
CIS	125	Word Processing Software (1)	3
CIS	125	Business Graphics.....	1
CIS	134	Command Line Scripting	3

COMPUTER INFORMATION SYSTEMS

Customer Support Specialist...continued

CIS	134	Command Line Scripting	3
CIS	147	Windows.....	2
ENG	130	Business Writing (3) or	
OFC	105	Administrative Human Relations (1) and	
OFC	247	Professional Development (2).....	3
MGT	111	Introduction to Business Organization	3

Electives: Select at least three hours from the following courses:¹

CIS	105	Introduction to Multimedia	3
CIS	118	Introduction to the Internet.....	1
CIS	124	Advanced Spreadsheet Software	1
CIS	141	Advanced Database Software	1
CIS	154	Desktop Publishing	3
CIS	170	Introduction to Data Communications	3
CIS	224	Spreadsheet Macros and Other Advanced Topics....	1

¹ Students must satisfy prerequisites for each course elected.

Computers in Business Certificate

This is a 16 credit-hour certificate program designed to familiarize a student with the business uses of computers. The student will gain exposure to computers and computer software. This exposure will be useful to the person whose job or business requires the use of a computer.

Required:

CIS	100	Computer Fundamentals or	
CIS	101	Introduction to Computer Information Systems	3
CIS	120	Introduction to Business Software Packages (3) or	
CIS	122	Database Software (1) and	
CIS	123	Spreadsheet Software (1) and	
CIS	125	Word Processing Software (1)	3
CIS	126	Business Graphics.....	1
CIS	134	Command Line Scripting	3

Electives: Select six credit hours from the following:¹

CAS	110	Core Microsoft Office Specialist Certification: Word..	1
CAS	120	Core Microsoft Office Specialist Certification: Excel..	1
CAS	130	Core Microsoft Office Specialist Certification: Access	1
CAS	140	Core Microsoft Office Specialist Certification: PowerPoint	1
CAS	150	Core Microsoft Office Specialist Certification: Outlook ..	1
CAS	210	Expert Microsoft Office Specialist Certification: Word ...	1
CAS	220	Expert Microsoft Office Specialist Certification: Excel ...	1
CIS	104	Multimedia Presentations	2
CIS	105	Introduction to Multimedia	3
CIS	106	Computer Logic and Programming Technology.....	3
CIS	117	Introduction to Window	1
CIS	118	Introduction to the Internet.....	1
CIS	119	Web Site Development I	3
CIS	121	General Accounting Applications for Micros	2
CIS	124	Advanced Spreadsheet Software	1
CIS	127	Advanced Business Graphics	1
CIS	129	Personal Information Management	1
CIS	130	Visual Basic Programming I.....	4

COMPUTER INFORMATION SYSTEMS

Computers in Business Certificate...continued

CIS	132	Advanced Business Software Packages	4
CIS	133	Personal Computer Programming-Assembler Language ...	4
CIS	141	Advanced Database Software	1
CIS	144	Advanced PC Operating Systems	3
CIS	145	PC Hardware.....	3
CIS	146	Operating System-OS/2.....	2
CIS	147	Windows.....	2
CIS	148	Personal Computer Utilities.....	2
CIS	152	Database Programming, Microcomputers.....	3
CIS	153	Expert Systems	3
CIS	154	Desktop Publishing	3
CIS	166	C++ Programming I	4
CIS	168	Java Programming I	4
CIS	170	Introduction to Data Communications	3
CIS	171	Introduction to Local Area Networks.....	3
CIS	176	C++ Programming II	4
CIS	186	C Programming for Graphical User Interfaces	4
CIS	196	Advanced C Programming for Graphical User Interfaces....	4
CIS	203	System Analysis and Design I	3
CIS	204	System Analysis and Design II	3
CIS	205	Multimedia Development.....	3
CIS	223	Spreadsheet Graphics.....	1
CIS	224	Spreadsheet Macros and other Advanced Topics.....	1
CIS	231	Visual Basic Programming II	4
CIS	266	C++ Programming II	4

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.

Required:

CIS	101	Introduction to Computer Information Systems	3
CIS	102	NetPrep™ Networking Fundamentals.....	3
CIS	107	NetPrep™ Local Area Networks	3
CIS	134	Command Line Scripting	3
CIS	144	Advanced PC Operating Systems	3
CIS	145	PC Hardware.....	3
CIS	147	Windows.....	2

NetPrep™ Senior Network Specialist Certificate

This 12 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	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

COMPUTER INFORMATION SYSTEMS

Network Specialist Certificate

This is a 12 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: Select 12 credit hours from either NetPrep™ or Cisco course sequence.

CIS	102	NetPrep™ Networking Fundamentals (3) and	
CIS	107	NetPrep™ Local Area Networks (3) and	
CIS	115	NetPrep™ Wide Area Networks (3) and	
CIS	155	NetPrep™ TCP/IP	12
or			
CIS	173	Cisco Networking Basics (3) and	
CIS	174	Cisco Routers and Routing Basics (3) and	
CIS	175	Cisco Switching Basics and	
		Intermediate Routing (3) and	
CIS	177	Cisco WAN Technologies (3)	12

Programming Certificate

This is an 28 credit-hour certificate program to familiarize a student with the business use of programming on the microcomputer. The student will gain experience using a choice of three programming languages, C++, Visual Basic, or Java. This exposure will be useful to a person whose job or business requires the use of these programming languages in a business environment. The student will be prepared for an entry-level programming position.

Required:

CIS	101	Introduction to Computer Information Systems	3
CIS	106	Computer Logic and Programming Technology	3
CIS	119	Web Site Development I	3
CIS	122	Data Base for Micros	1
CIS	143	Introduction to Database Management	3
CIS	189	Extensible Markup Language	3

Electives: Choose a language and complete all three courses in that sequence (12 credit hours):

CIS	166	C++ Programming I (4) and	
CIS	176	C++ Programming II (4) and	
CIS	266	C++ Programming III (4)	12

or

CIS	130	Visual Basic Programming I (4) and	
CIS	231	Visual Basic Programming II (4) and	
CIS	280	Visual Basic Programming III (4)	12

or

CIS	168	Java Programming I (4) and	
CIS	178	Java Programming II (4) and	
CIS	278	Java Programming III (4)	12

COMPUTER INFORMATION SYSTEMS

Technical Certificate

Any combination of 15 credit hours may be selected from the courses listed below, providing the appropriate prerequisites have been satisfied.

CAS	110	Core Microsoft Office Specialist Certification: Word.....	1
CAS	120	Core Microsoft Office Specialist Certification: Excel	1
CAS	130	Core Microsoft Office Specialist Certification: Access .	1
CAS	140	Core Microsoft Office Specialist Certification: PowerPoint	1
CAS	150	Core Microsoft Office Specialist Certification: Outlook.	1
CAS	210	Expert Microsoft Office Specialist Certification: Word ..	1
CAS	220	Expert Microsoft Office Specialist Certification: Excel..	1
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	120	Introduction to Business Software Packages ¹	3
CIS	121	General Accounting Applications for Micros ¹	2
CIS	122	Database Software Management ¹	1
CIS	123	Spreadsheet Software ¹	1
CIS	124	Advanced Spreadsheet Software ¹	1
CIS	125	Word Processing Software ¹	1
CIS	126	Business Graphics ¹	1
CIS	127	Advanced Business Graphics ¹	1
CIS	128	Command Line Fundamentals ¹	1
CIS	129	Personal Information Management ¹	1
CIS	130	Visual Basic Programming I	4
CIS	132	Advanced Business Software Packages	4
CIS	133	Personal Computer Programming— Assembler Language	4
CIS	134	Command Line Scripting	3
CIS	152	Data Base Programming, Microcomputers	3
CIS	153	Expert Systems	3
CIS	154	Desktop Publishing	3
CIS	166	C++ Programming I	4
CIS	168	Java Programming I	4
CIS	170	Introduction to Data Communication	3
CIS	171	Introduction to Local Area Networks	3
CIS	176	C++ Programming II	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	Systems Analysis and Design II	3
CIS	220	Topics in Data Processing	1-6
CIS	223	Spreadsheet Graphics	1
CIS	224	Spreadsheet Macros and Other Advanced Topics....	1
CIS	231	Visual Basic Programming II	4
CIS	266	C++ Programming III	4
CIS	280	Visual Programming III	4

¹ No more than four hours may be selected from this group.

COMPUTER INFORMATION SYSTEMS

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	119	Web Site Development I	3
CIS	122	Database Software.....	1
CIS	138	Web Site Development II	3
CIS	219	Web Site Management.....	3
CIS	229	Open Source Web Application Development.....	3
CIS	239	Web Site Development III	3

Electives: Select three credit hours from the following courses:

CIS	118	Introduction to the Internet.....	1
CIS	139	Web Authoring Tools	3
CIS	147	Windows.....	2
CIS	161	Introduction to Perl Programming.....	3
CIS	189	Extensible Markup Languages	3
CIS	218	E-Commerce Development.....	3

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	109	Web Graphics	3
CIS	119	Web Development I	3
CIS	138	Web Development II	3
CIS	139	Web Authoring Tools	3
CIS	219	Web Site Management.....	3

Electives: Select three credit hours from the following courses:

ART	121	Design I.....	3
CIS	105	Introduction to Multimedia	3
CIS	118	Introduction to the Internet.....	1
CIS	122	Database Software.....	1
CIS	126	Business Graphics.....	1
CIS	147	Windows.....	2
CIS	205	Multimedia Development	3
JNM	230	Graphic Design Communication.....	3

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 for graduates include positions as police, corrections, or security officers and they may qualify for juvenile, investigative, crime prevention, or other duties with those agencies. Those wishing to continue in specialized areas or who seek a baccalaureate degree should see an academic advisor for course/program selection.

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:

ENG 101	Composition	3
ENG elective	.....	3
Humanities or Science elective	.....	3-4
Mathematics elective ²	.....	3
Social Science electives ³	.....	6
SPE 101	Fundamentals of Speech Communication.....	3

Required Core Courses:

CRJ 101	Introduction to Criminal Justice	3
CRJ 104	Introduction to Corrections.....	3
CRJ 201	Criminal Law	3
CRJ 202	Criminal Procedures.....	3
CRJ 205	Juvenile Justice.....	3
CRJ 210	Introduction to Criminology ¹	3
CRJ 222	Police Operations.....	3

Electives: Select 17-18 credit hours from the following courses:

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 224	Police Supervision.....	3
CRJ 226	Case Management.....	3
CRJ 235	Street Procedures	4
CRJ 238	Defensive Techniques.....	3
CRJ 250	Industrial Security Administration	3
CRJ 299	Criminal Justice Practicum	3

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

² A competency test, available in the Assessment and Testing center, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a three credit-hour elective.

³ Choose from PSC 101 or PSC 220, PSY 101 or SOC 101.

CRIMINAL JUSTICE

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

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 six 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

DENTAL HYGIENE*

Associate in Applied Science Degree

This program meets State guidelines and is accredited by the Commission on Dental Accreditation of the American Dental Association.

Because of the nature of clinical experiences and individualized instruction required in this program, and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with the prefix DHY. Tuition for these courses in this program is 200% of the standard tuition rate.

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:

- For admissions requirements, please contact the Admission Outreach Office at 847.935.6700 or check the following web page:
harpercollege.edu/learning/healthcareers

FIRST YEAR

Summer Semester

BIO	160	Human Anatomy ²	4
CHM	100	Chemistry for the Health Sciences ² or	
CHM	125	Organic and Biochemistry for the Health Sciences ^{1,2}	<u>4</u>
			8

First Semester

BIO	130	Microbiology ²	4
DHY	100	Pre-Clinic.....	5
DHY	159	Head and Neck Anatomy.....	3
DHY	161	Dental Anatomy.....	2
DIT	101	Fundamentals of Nutrition ²	<u>3</u>
			17

Second Semester

BIO	161	Human Physiology ²	4
DHY	101	Clinical Dental Hygiene I	5
DHY	111	Dental Radiology.....	3
DHY	190	General Oral Pathology.....	2
PSY	101	Introduction to Psychology	<u>3</u>
			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
PSY	270	Dental Material Laboratory Techniques	<u>1</u>
			6

DENTAL HYGIENE*

Associate in Applied Science Degree continued...

SECOND YEAR

First Semester

DHY	200	Periodontology	2
DHY	202	Radiology	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.....	3
			18

Second Semester

DHY	201	Ethics, Jurisprudence and Practice Management.....	2
DHY	203	Radiology I	1
DHY	221	Community Dental Health II	2
DHY	251	Clinical Dental Hygiene IV	5
Mathematics elective ³			3
SOC	101	Introduction to Sociology	3
			16

* Dental Hygiene is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

¹ Meet with the Student Development faculty member or coordinator of the Dental Hygiene program for appropriate testing and/or placement.

² Must be completed with a grade of C or better no earlier than five years prior to beginning the Dental Hygiene Program.

³ A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement.

DIAGNOSTIC MEDICAL SONOGRAPHY*

Associate in Applied Science Degree

This 64 credit-hour program prepares students as a diagnostic medical sonographer that work in hospitals and physician offices. After degree completion the student is prepared to seek employment as a diagnostic medical sonographer performing ultrasound examinations of the abdomen, pelvis, pregnant uterus, blood vessels, neck, chest and extremities to assist the physician in the diagnosis of numerous types of diseases. The graduate is encouraged to take the American Registry of Diagnostic Medical Sonography (ARDMS) examination to be a Registered Diagnostic Medical Sonographer (RDMS).

Because of the nature of clinical experiences and individualized instruction required in this program, and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with CTE or DMS prefix. Tuition for these courses in this program is 200% of the standard tuition rate.

An 800-hour clinical education rotation is included during this program at area hospitals.

Admission Requirements:

- For admissions requirements, please contact the Admission Outreach Office at 847.935.6700 or check the following web page:
harpercollege.edu/learning/healthcareers

FIRST YEAR

First Semester

BIO	160	Human Anatomy	4
ENG	101	Composition	3
HSC	100	Computer Usage in Health Services ¹	1
HSC	105	Introduction to the Health Care Field	2
HSC	112	Medical Terminology	3
HSC	213	Health Care Law and Ethics	3
Mathematics ²		.....	0
			16

Second Semester

BIO	161	Human Physiology	4
CTE	106	Ultrasound Physics and Instrumentation	4
NUR	120	Pharmacology	2
PSY	101	Introduction to Psychology	3
SPE	101	Fundamentals of Speech Communication.....	3
			16

Summer Semester

CTE	103	Cardiac Emergencies ³	1
DMS	202	Introduction to Ultrasound ⁴	1
			2

SECOND YEAR

First Semester

DMS	203	Cross-Sectional Human Anatomy	3
DMS	204	Essentials of Abdominal and Small Parts Sonography I.....	3
DMS	205	Essentials of Obstetrical and Gynecological Ultrasound I.....	3
DMS	206	Ultrasound Practicum I.....	2
DMS	207	Sonography Clinical Education I ⁵	5
			16

DIAGNOSTIC MEDICAL SONOGRAPHY*

Associate in Applied Science Degree continued...

Second Semester

DMS	208	Essentials of Abdominal and Small Parts Sonography II	4
DMS	209	Ultrasound Practicum II	2
DMS	210	Essentials of Obstetrical and Gynecological Ultrasound II....	3
DMS	211	Sonography Clinical Education II ⁵	<u>5</u>
			14

* Diagnostic Medical Sonography is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

¹ A proficiency test, available in the Assessment and Testing Center, may be utilized to meet computer requirement.

² Group 2 math is met the Diagnostic Medical Sonography program admission requirements.

³ This course will be waived with proof of current health care provider cardiopulmonary resuscitation (CPR) certification.

⁴ Students that are Registered Diagnostic Cardiac Sonographer (RDCS), Registered Vascular Technologist (RVT) or have equivalent past experience in ultrasound may not be required to take this course.

⁵ Assignments will be based on site availability.

Diagnostic Medical Sonography Certificate

This 36 credit-hour certificate program prepares direct patient care providers with a recognized two-year allied health degree to change careers by becoming a diagnostic medical sonographer performing ultrasound examinations of the abdomen, pelvis, pregnant uterus, blood vessels, neck, chest and extremities to assist the physician in the diagnosis of numerous types of diseases in hospitals or physician offices. The graduate is encouraged to be a Registered Diagnostic Medical Sonographer (RDMS).

Because of the nature of clinical experiences and individualized instruction required in this program, and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with CTE or DMS prefix. Tuition for these courses in this program is 200% of the standard tuition rate.

An 800-hour clinical education rotation is included during this program at area hospitals.

Admission Requirements:

- For admissions requirements, please contact the Admission Outreach Office at 847.935.6700 or check the following web page:
harpercollege.edu/learning/healthcareers

Spring/Summer Semester

CTE	103	Cardiac Emergencies ¹	1
CTE	106	Ultrasound Physics and Instrumentation	4
DMS	202	Introduction to Ultrasound ^{2,3}	<u>1</u>
			6

DIAGNOSTIC MEDICAL SONOGRAPHY*

Diagnostic Medical Sonography Certificate continued...

First Semester

DMS	203	Cross-Sectional Human Anatomy	3
DMS	204	Essentials of Abdominal and Small parts Sonography I.....	3
DMS	205	Essentials of Obstetrical and Gynecological Ultrasound I.....	3
DMS	206	Ultrasound Practicum I.....	2
DMS	207	Sonography Clinical Education I ⁴	5
			16

Second Semester

DMS	208	Essentials of Abdominal and Small parts Sonography II	4
DMS	209	Ultrasound Practicum II.....	2
DMS	210	essentials of Obstetrical and Gynecological Ultrasound II.....	3
DMS	211	Sonography Clinical Education II ⁴	5
			14

* Diagnostic Medical Sonography is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

¹ This course will be waived with proof of current health care provider cardiopulmonary resuscitation (CPR) certification.

² Students that are Registered Diagnostic Cardiac Sonographer (RDCS), Registered Vascular Technologist (RVT) or have equivalent past experience in ultrasound may not be required to take this course.

³ Prerequisite of BIO 161 will be waived for Diagnostic Medical Sonography certificate students.

⁴ Assignments will be based on site availability.

Vascular Technologist Certificate

This 6 credit-hour certificate program allows ultrasound professionals with a recognized ultrasound degree or certificate or American Registry of Diagnostic Medical Sonography (ARDMS) registry status to expand their skills into vascular sonography. Vascular technologists perform ultrasound examinations of the cerebral, peripheral, and abdominal vessels to assist the physician in the diagnosis of disorders affecting the circulation. After completing the necessary number of vascular examinations at their workplace the graduate is encouraged to take the American Registry of Diagnostic Medical Sonography (ARDMS) examination to be a Registered Vascular Technologist (RVT).

Because of the nature of clinical experiences and individualized instruction required in this program, and specialized technology and the equipment necessary to offer this program, a higher tuition rate is assessed for career specific courses. These include courses with the CTE of DMS prefix. Tuition for these courses in this program is 200% of the standard tuition rate.

Admission Requirements:

- For admissions requirements, please contact the Admission Outreach Office at 847.935.6700 or check the following web page: harpercollege.edu/learning/healthcareers

Required:

DMS	212	Essentials of Vascular Sonography.....	4
DMS	213	Art of Vascular Sonography	2

* Vascular Sonography is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

DIETETIC TECHNICIAN

Associate in Applied Science Degree

This 63 credit-hour 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 currently granted accreditation by the Commission on Accreditation for Dietetics Education of the American Dietetic Association, 120 South Riverside Plaza, Chicago, IL, 60606-6995, 312.899.5400. The Commission is 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 ¹	4
DIT	100	Introduction to Dietetics ²	2
DIT	101	Fundamentals of Nutrition	3
FSM	114	Food Standards and Sanitation	2
HSC	112	Medical Terminology	3
Mathematics elective ³			<u>3</u>
			17

Second Semester

BIO	136	Introduction to Human Disease ¹	3
DIT	102	Advanced Nutrition	3
DIT	150	Dietetic Clinical Laboratory I ⁴	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 ⁴	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 ⁴	5
SPE	101	Fundamentals of Speech Communication	<u>3</u>
			14

¹ BIO 135 and BIO 136 are recommended for the first year of the program to avoid scheduling conflicts.

² DIT 100 must be taken fall semester, prior to taking DIT 150 offered only in spring.

³ A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a three credit-hour elective.

⁴ 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 ¹	5
DIT	220	Food Systems Administration ¹	<u>3</u>
			11

¹ Prerequisites waived for Dietary Manager student.

EARLY CHILDHOOD EDUCATION

Associate in Applied Science Degree

The 60 credit-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.

Students must choose a basic program of study as a teacher or director. Students earning an associate in applied science degree in early childhood education must complete the following required general education courses, required core courses, and 21 credit hours from the specialized study areas.

Upon completion of courses for the specialized area of director, and in order to qualify for the Illinois Director Credential, students will need to provide proof of First Aid/CPR certification, and verification of 1200 hours of management experience.

Required General Education Courses:

ENG	101	Composition	3
ENG	103	Technical and Report Writing or	
SPE	101	Fundamentals of Speech Communication.....	3
		Humanities elective ¹	3
		Mathematics ²	3
		Natural Science elective ³	3
PSY	101	Introduction to Psychology	3

Required Core Courses:

ECE	101	Introduction to Early Childhood Education	3
ECE	102	Child Development I	3
ECE	103	Child Development II	3
ECE	115	Principles of Early Childhood Curriculum	3
ECE	226	Observation and Guidance of the Young Child	3
ECE	250	Health, Nutrition and Safety	3
ECE	252	Child-Family-Community	3

Specialized Study Areas:

Required:

Early Childhood Education: Teacher

ECE	209	Language Development and Activities for the Young Child	3
ECE	210	Creative Activities for Young Children or	
ECE	230	Movement and Rhythms for the Young Child.....	3
ECE	219	Psychology of Exceptional Children or	
ECE	223	Exceptional Child in Early Childhood Programs	3
ECE	221	Math and Science for the Young Child	3
ECE	291	Early Childhood Practicum I	3
ECE	292	Early Childhood Practicum II	3
ECE		electives ⁴	3

Early Childhood Education: Director

CIS	120	Introduction to Business Software.....	3
ECE	219	Psychology of Exceptional Children	3
ECE	253	Administration of Early Childhood Programs	3

EARLY CHILDHOOD EDUCATION

Associate in Applied Science Degree continued...

ECE	254	Interpersonal Relations in Early Childhood Education	1
ECE	293	Early Childhood Director Practicum.....	3
FSM	114	Food Standards and Sanitation	2
MGT	160	Principles of Supervision.....	3
MKT	245	Principles of Marketing	3

¹ Humanities elective: ART 105, HST 210, HUM 110, LIT 219, MUS 103, MUS 104, PHI 115, SGN 101, SPE 111.

² A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics 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.

³ Natural Science elective: BIO 101 or BIO 103.

⁴ ECE electives: Any ECE course including ECE 140, ECE 143, ECE 144, ECE 146, ECE 149, ECE 151, ECE 152, ECE 153, ECE 154, ECE 155 or ECE 156.

Early Childhood Education: Before/After School Care Certificate

This six credit-hour certificate program provides basic knowledge about developmentally appropriate programming and guidance for school age care.

Required:

ECE	226	Observation and Guidance of the Young Child	3
ECE	235	Principles of School Age Care	3

Early Childhood Education: Family Child Care Certificate

This nine credit-hour certificate program provides practical knowledge, including the legal requirements, for administering and running a family child care home.

Required:

ECE	140	Family Child Care Management	1
ECE	143	Safety for the Young Child.....	1
ECE	144	Nutrition for the Young Child	1
ECE	151	Communicating with Parents and Children.....	1
ECE	152	Principles of Child Growth and Development, Birth-5	1
ECE	153	Guiding Children and Managing the Classroom	1
ECE	154	Activities and Resources for Young Children I.....	1
ECE	155	Activities and Resources for Young Children II.....	1

Elective: Select one course from the following:

ECE	146	Programming for School Age Care	1
ECE	149	Topics in Early Childhood Education	1
ECE	156	Effective Teaching.....	1

EARLY CHILDHOOD EDUCATION

Early Childhood Education: Infant/Toddler Certificate

This nine credit-hour certificate program provides theoretical and practical knowledge about infants and toddlers.

Required:

ECE	102	Child Development I	3
ECE	111	First Three Years of Life.....	3
ECE	112	Play and Assessment for the Young Child.....	3

Early Childhood Education: Special Education Paraprofessional Certificate

This six 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.

Required:

ECE	120	Introduction to Special Education for Paraprofessionals	3
ECE	121	Behavioral Management in Special Education Setting.....	3

Early Childhood Education 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.

Required:

ECE	102	Child Development I	3
ECE	103	Child Development II	3
ECE	115	Principles of Early Childhood Curriculum	3
ECE	226	Observation and Guidance of the Young Child	3
ECE	252	Child-Family-Community	3
ECE	253	Administration of Early Childhood Programs	3
ECE	254	Interpersonal Relationships In Early Childhood Education	1

EARLY CHILDHOOD EDUCATION

Early Childhood Education Assistant Teacher Certificate

This six 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.

Required:

ECE	102	Child Development I	3
ECE	115	Principles of Early Childhood Curriculum	3

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.

Required:

ECE	101	Introduction to Early Childhood Education	3
ECE	102	Child Development I	3
ECE	115	Principles of Early Childhood Curriculum	3
ECE	209	Language Development and Activities for the Young Child	3
ECE	210	Creative Activities for Young Children or	
ECE	221	Math and Science for the Young Child	3
ECE	219	Psychology of Exceptional Children or	
ECE	223	Exceptional Child in Early Childhood Programs	3
ECE	226	Observation and Guidance of the Young Child	3
ECE	252	Child-Family-Community	3
ECE	291	Early Childhood Practicum I	3
ENG	101	Composition	3

ELECTRONICS ENGINEERING TECHNOLOGY

Associate in Applied Science Degree

This 67 credit-hour program is designed to prepare students for careers in the field of electronics and other related technology industries. The curriculum satisfies general education requirements, and offers courses in mathematics, computer science and physics to cultivate student critical thinking skills. A broad range of electronics courses provides considerable emphasis on analysis and application, or applied technology. Specific electronics technology topics for this program include: electrical laws and principles, network analysis, semiconductor devices and circuits, digital and analog circuits, communications systems, and microprocessors and microcomputers. Additional courses in the industrial electronics area are also available.

Graduates of this program may find employment as technical sales specialists, applications engineers, engineering laboratory technicians, technical writers, manufacturing and quality control technicians, and customer service engineers.

FIRST YEAR

First Semester

Communications elective ¹	3
ELT 101 DC Network Analysis	4
ELT 110 Introductory Electronics	4
Humanities or Social Science elective ²	3
MTH 103 College Algebra	<u>3</u>
	17

Second Semester

Communications elective ¹	3
CIS/CSC elective ³	3
ELT 102 AC Network Analysis	4
ELT 111 Semiconductor Devices and Circuits	2
MTH 140 Precalculus	<u>5</u>
	17

SECOND YEAR

First Semester

ELT 103 RF Network Analysis	4
ELT 203 Digital Electronics	4
Humanities or Social Science elective ²	3
PHY 121 Introductory Physics I	<u>5</u>
	16

Second Semester

ELT 204 Analog Electronics	4
ELT 207 Communications Systems	4
ELT 218 Microprocessors and Microcomputers	4
PHY 122 Introductory Physics II ⁴	<u>5</u>
	17

¹ Communications electives must satisfy associate in applied science degree Group 1 requirement.

² Humanities and Social Science electives must satisfy associate in applied science degree Group 4 or 5 requirements.

³ CIS/CSC elective must be approved by the program coordinator.

⁴ Students may substitute any 5-6 hour combination of ELT 125, ELT 130, ELT 135, ELT 140, ELT 215 courses for PHY 122.

ELECTRONICS ENGINEERING TECHNOLOGY

Electrical Maintenance Certificate

This 10 credit-hour certificate program is designed to prepare students for careers in the field of electrical installation and service, and other related facilities or industrial electronics maintenance areas. The curriculum is tailored to provide entry-level career training in the least amount of time. Emphasis is placed on equipment operation, application, installation and servicing. Courses specific to instruction include: basic electricity and electronics, residential/commercial electrical wiring and codes, and industrial control systems. Topics within these courses involve: practical electrical concepts and measurements, digital and analog circuits, hydraulic and pneumatic controls, AC/DC motors, optics and sensors, and programmable logic controllers.

Students completing this program may find employment as electrical technicians, electrician apprentices, electricians, and facilities or plant maintenance technicians.

Students may also continue their education by pursuing an associate in applied science degree. Students considering this option are encouraged to meet with the program coordinator and their Student Development faculty member prior to beginning the program, and also when planning their schedule each semester.

Required:

ELT	110	Introductory Electronics	4
ELT	142	Electrical Wiring	2
ELT	215	Industrial Control Systems	4

ELECTRONICS ENGINEERING TECHNOLOGY

Electronics Certificate

This 16 credit-hour certificate program is designed to prepare students for careers in the field of electronics and other related technology industries. The curriculum is very flexible as it allows students to choose from a number of electronics courses in many diverse technology areas and is tailored to provide entry-level career training in a relatively short time. A broad range of electronics courses provides considerable emphasis on analysis, operation, application, installation and servicing. Many courses do not require a prerequisite. However, for those courses that do, please consult with the program coordinator.

Students completing this program may find employment in various entry-level positions in technical sales, manufacturing and quality control, and customer service.

Students may also continue their education by pursuing an associate in applied science degree. Students considering this option are encouraged to meet with the program coordinator and a Student Development faculty member prior to beginning the program, and also when planning their schedule each semester.

Any combination of 16 semester hours may be selected from the following list with program coordinator approval.

ELT	101	DC Network Analysis	4
ELT	102	AC Network Analysis.....	4
ELT	103	RF Network Analysis	4
ELT	105	Electronic Product Documentation	3
ELT	110	Introductory Electronics	4
ELT	111	Semiconductor Devices and Circuits	2
ELT	125	Fiber Optics	2
ELT	130	Fluid Power	3
ELT	135	Optics and Sensors	2
ELT	140	Programmable Logic Controllers	2
ELT	142	Electrical Wiring	2
ELT	143	Advanced Electrical Wiring.....	2
ELT	144	AC and DC Motors.....	2
ELT	145	Variable Frequency Drives	2
ELT	161	Industrial Control Applications.....	3
ELT	203	Digital Electronics	4
ELT	204	Analog Electronics	4
ELT	207	Communications Systems.....	4
ELT	215	Industrial Control Systems	4
ELT	218	Microprocessors and Microcomputers	4
ELT	281	Topics in Electronics Engineering Technology	1-3

Associate in Applied Science Degree

This 61 credit-hour program is a joint educational venture with Northwest Community Healthcare, the Emergency Medical Services (EMS) Department, and William Rainey Harper College. Emergency Medical Technician-Paramedic (EMT-P) program fulfills prescribed requirements by the Illinois Department of Public Health (IDPH) to practice the art and science of pre-hospital care under the direct supervision of a licensed physician or a registered professional nurse credentialed in emergency care. Where authorized, EMT-P function under the direction of an EMS medical director in an Illinois Department of Public Health approved Advanced Life Support (ALS) provider agency. EMT-P follows strict guidelines for procedures that can be performed and for those procedures that provide extensive pre-hospital care. Paramedics are accountable to medical directors, their peers, the health care team and the public.

Paramedics are professional providers whose goal is to prevent and reduce mortality and morbidity due to illness and injury. They are expected to assess and recognize medical, traumatic, emotional, and psychological emergencies as well as render basic life support care through advanced life support care in a wide variety of environmental conditions to people of all ages. They are responsible for transporting patients to medical facilities for further care and attention.

Working conditions vary. Paramedics work both indoors and outdoors. Openings occur for all working shifts including working on weekends and holidays. Many employers in this field require employees to be on call. Competition for jobs will be excellent in fire, police, or rescue squad departments, hospitals and private ambulance service due to attractive pay, benefits and job security. Many job openings occur due to replacement needs. Employment is projected to grow rapidly as paid emergency medical technician positions replace unpaid volunteers.

**Admission Requirements:

- For admissions requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web page: harpercollege.edu/learning/healthcareers

Required Core Courses

Emergency Medical Technician¹:

EMS	110	Emergency Medical Technician Training	7
Total			7

EMT—Paramedic²:

EMS	210	Paramedic I—Preparatory	6
EMS	211	Paramedic II—Medical Emergencies I	6
EMS	212	Paramedic II—Medical Emergencies II	6
EMS	213	Paramedic III—Trauma Emergencies and Special Clients	3
EMS	214	Paramedic—Hospital Internship	2
EMS	215	Paramedic—Field Internship	3
EMS	216	Paramedic Seminar	3
Total			29

EMERGENCY MEDICAL SERVICES*

Associate in Applied Science Degree continued...

Required General Education and Support Courses

BIO	160	Human Anatomy	4
BIO	161	Human Physiology	4
		Electives ³	4
ENG	101	Composition	3
HSC	112	Medical Terminology	3
		Mathematics elective ⁴	0
NUR	120	Physical Assessment	1
PSY	101	Introduction to Psychology or	
SOC	101	Introduction to Sociology	3
SPE	101	Fundamentals of Speech Communication	<u>3</u>
		Total	25
		Degree Total	61

^{1,2} Separate application and admission policies exist for both EMS 110 and the EMT—Paramedic. Please contact the Admissions Outreach Office at 847.925.6700 or check the following web page: harpercollege.edu/learning/healthcareers for specific admission requirements

³ Electives: BIO 130 or CHM 100, HSC 100, HSC 213.

⁴ Group 2 math requirement is met by the Emergency Medical Services admission requirements. Courses with an EMS prefix are limited enrollment.

* Emergency Medical Services is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

EMERGENCY MEDICAL SERVICES*

Paramedic Certificate*

The 29 credit-hour certificate program is to be offered in two semesters starting in August (fall semester) and concluding the following May (spring semester). The program is designed to expand the entry-level knowledge and skills initially acquired through Emergency Medical Technician-Basics (EMT-B) or Emergency Medical Technician-Intermediate (EMT-I) training. Paramedics reach that status through successful completion of either EMT-B or EMT-I training that includes classroom instruction, hospital-based, and field-based clinical experiences under the direct supervision of a preceptor. The Paramedic program exposes the students to a wide variety of emergency situations, including direct patient care in one of the involved EMS system hospitals and on emergency vehicles. Instructional content and design is based on the cognitive, psychomotor, and affective standard objectives specified in the U.S. Department of Transportation, 1998 National Emergency Medical Technician-Paramedic Curriculum. The Illinois Department of Public Health, Division of EMS and Highway Safety accredits the Paramedic program.

The Paramedic program coursework including the internships are administered through Northwest Community Healthcare, Emergency Medical Services Department. Hospital internships are completed at eight area-wide hospitals while the field internship is completed at the Advanced Life Support (ALS) provider agency with which the student is either employed or has a participation agreement. After completion of the program, candidates are eligible to take the EMT-Paramedic licensure exam in the State of Illinois.

**Admission Requirements:

- For admissions requirements, please contact the Admission Outreach Office at 847.935.6700 or check the following web page: harpercollege.edu/learning/healthcareers

Required

EMS	210	Paramedic I-Preparatory	6
EMS	211	Paramedic II-Medical Emergencies I	6
EMS	212	Paramedic II-Medical Emergencies II	6
EMS	213	Paramedic III-Trauma Emergencies and Special Clients	3
EMS	214	Paramedic-Hospital Internship	2
EMS	215	Paramedic-Field Internship	3
EMS	216	Paramedic Seminar	3
			<u>29</u>

* Paramedic is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Office for updated information.

FASHION DESIGN

Associate in Applied Science Degree

This 66 credit-hour 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 ¹	.....	3
FAS 101	Flat Pattern Design and Draping I	3
FAS 103	Apparel Design and Construction I	3
FAS 105	Fashion Design Illustration I	1
FAS 107	Textiles I	2
FAS 110	Costume History.....	2
Social Science elective	.....	<u>3</u>
		17

Second Semester

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

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

² A competency test, available in the Assessment and 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.

³ ART 105 is recommended.

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	4
FAS	103	Apparel Design and Construction I	3
FAS	104	Apparel Design and Construction II	4
FAS	105	Fashion Design Illustration I	1
FAS	106	Fashion Design Illustration II	1
FAS	107	Textiles I	2
FAS	108	Textiles II	2
FAS	109	Fashion Arts and Design	2
FAS	110	Costume History	2
FAS	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

This 64 credit-hour 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	130	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 ¹		.....	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 ²	.....	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 ³	.....	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 ⁴	.....	11

Real Estate

Required:

RES 101	Real Estate Transactions.....	3
Electives ⁵	.....	20

¹ Select at least five credit hours from the following: 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.

² Select at least eight 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.

³ Select at least eight 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.

⁴ Select at least 11 credit hours from one of the following: CIS 117, CIS 122, CIS 123, MTH 103 or MTH 134, MGT 225, PHI 150, PSY 101, PSY 145.

⁵ 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 140, RES 141, RES 142, RES 143, RES 144, 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.

Required:

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 ¹		.....	3

¹ 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.

Required:

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 ¹		.....	3

¹ Electives: BFC 121, BFC 200 or MGT 170, MGT 150

Real Estate Brokers License Preparation Certificate

This eight 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.

Required:

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 ¹		.....	2

¹ Electives: RES 105, RES 110, RES 194, and RES 196

Real Estate Sales Professional Certificate

This three credit-hour certificate program is designed to prepare students for the Illinois real estate salesperson's licensing exam.

Required:

RES	101	Real Estate Transactions.....	3
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FIRE SCIENCE TECHNOLOGY

Associate in Applied Science Degree

This 62 credit-hour program is applicable to both current firefighters and fire officers, as well as those wishing to enter the fire service. Some fire departments require a two-year degree in fire science before the student is eligible for entry level positions, while other departments offer promotional and salary incentives to associate degree program graduates.

Many of the courses offered are articulated with the Office of the Illinois State Fire Marshal and count toward requirements for Instructor I, Instructor II, Fire Officer I, Fire Officer II, Fire Apparatus Engineer, Hazardous Materials 1st Responder and Technician. Other areas of employment for fire science graduates include fire equipment sales and service, municipal fire protection, fire prevention and inspection in industry and private insurance companies, and emergency medical services.

Students wishing to pursue a career in fire science should discuss these opportunities with the program coordinator or a Student Development faculty member before entering the program.

Required General Education Courses:

ENG	101	Composition	3
Humanities	elective	.....	3
MTH	080	Foundations of Mathematics II	4
Natural Science	elective	.....	4
PSY	101	Introduction to Psychology	3
SPE	101	Fundamentals of Speech Communication.....	3

Required Core Courses:

CIS	100	Computer Fundamentals or	
CIS	101	Introduction to Computer Information Systems	3
FIS	100	Fundamentals of Fire Protection	3
FIS	102	Fire Service Management I.....	3
FIS	103	Fire Strategies and Tactics I.....	3
FIS	104	Building Construction for Fire Protection	3
FIS	121	Fire Behavior and Combustion	3
FIS	122	Introduction to Fire Prevention Principles	3
FIS	132	Hazardous Materials I	3
FIS	145	Fire and Emergency Service Instructor I	3

Electives:

Select at least 15 credit hours from the following courses.

EMS	110	Emergency Medical Technician Training	7
FIS	109	Firefighter II Certification.....	12
FIS	123	Advanced Fire Prevention Principles.....	3
FIS	133	Hazardous Materials II	3
FIS	200	Fire Service Internship	2
FIS	202	Fire Service Management II	3
FIS	203	Fire Strategies and Tactics II.....	3
FIS	210	Fire-Arson Investigation	3
FIS	212	Fire Protection Systems.....	3
FIS	220	Fire and Emergency Services Instructor II.....	3
FIS	240	Fire Apparatus Engineer	3

GRAPHIC ARTS TECHNOLOGY

Associate in Applied Science Degree

This 60 credit-hour program is designed to prepare students for a wide range of employment opportunities in the printing industry. The program provides a well-rounded foundation of knowledge and skills to prepare students for new jobs as well as provide career advancement opportunities. This degree covers all of the latest computer software and production techniques. Emphasis is on digital pre-press and production.

FIRST YEAR

First Semester

CIS	100	Computer Fundamentals or	
CIS	101	Introduction to Computer Information Systems	3
ENG	101	Composition	3
GRA	101	Introduction to Graphic Arts Technology	3
GRA	102	Graphic Arts Desktop Publishing.....	3
GRA	103	Digital Imaging I.....	<u>3</u>
			15

Second Semester

ENG	102	Composition	3
GRA	111	Graphic Arts Offset Press	3
GRA	112	Digital Imaging II.....	3
GRA	113	Advanced Digital Imaging	3
		Social Science elective	<u>3</u>
			15

SECOND YEAR

First Semester

GRA	201	Digital Scanning and Tone Reproduction	3
GRA	202	Color Reproduction.....	3
		Graphic Arts elective ¹	3
		Mathematics elective ²	3
		Social Science elective	<u>3</u>
			15

Second Semester

GRA	211	Graphic Arts Estimating and Scheduling.....	3
GRA	212	Paper and Ink Technology	3
GRA	213	Bindery and Finishing Operations	3
		Graphic Arts elective ¹	3
		Humanities elective	<u>3</u>
			15

¹ Graphic Arts electives: ART 105, ART 121, CIS 119, CIS 138, JNM 230, MGT 111.

² A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement. Students in this program who utilize the competency test to meet the mathematics requirement must complete a three credit-hour graphic arts elective from: ART 105, ART 121, CIS 119, CIS 138, JNM 230 or MGT 111.

GRAPHIC ARTS TECHNOLOGY

Graphic Arts Certificate

This 24 credit-hour program is designed to prepare students for direct employment in the printing industry. These technical courses are designed to provide students with basic knowledge of the graphic arts industry. This program covers all of the latest computer software and production techniques.

Required:

CIS	119	Web Site Development I	3
GRA	101	Introduction to Graphic Arts Technology	3
GRA	102	Graphic Arts Desktop Publishing	3
GRA	103	Digital Imaging I.....	3
GRA	111	Graphic Arts Offset Press	3
GRA	112	Digital Imaging II.....	3
GRA	211	Graphic Arts Estimating and Scheduling.....	3
GRA	213	Bindery and Finishing Operations	3

Graphic Arts Design Certificate*

This 30 credit-hour certificate program is designed to provide students with the skills to design information for the Internet and printing publications (advertising, brochures and marketing materials). This program covers design, page layout, computer graphics, web page design, and importing and exporting images.

Required:

ART	105	Introduction to Arts.....	3
ART	121	Design I.....	3
CIS	119	Website Development I.....	3
GRA	101	Introduction to Graphic Arts Technology	3
GRA	102	Graphic Arts Desktop Publishing.....	3
GRA	103	Digital Imaging I.....	3
GRA	112	Digital Imaging II.....	3
GRA	113	Advanced Digital Imaging	3
GRA	201	Digital Scanning and Tone Reproduction	3

Graphic Arts Desktop Publishing Certificate

This 27 credit-hour certification program is designed for students interested in specializing in electronic prepress highlighting the latest software. This certificate will enhance a student's current employment position as well as provide new employment opportunities.

Required:

ART	105	Introduction to Arts.....	3
ART	121	Design I.....	3
CIS	119	Web Site Development I	3
GRA	101	Introduction to Graphic Arts Technology	3
GRA	102	Graphic Arts Desktop Publishing.....	3
GRA	103	Digital Imaging I.....	3
GRA	112	Digital Imaging II.....	3
GRA	113	Advanced Digital Imaging	3
GRA	201	Digital Scanning and Tone Reproduction	3

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

Associate in Applied Science Degree: Refrigeration and Air Conditioning Technology

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 63 credit-hour program may be employed as engineering laboratory assistants, equipment salesmen, heating and refrigeration service-men, estimators and system designers.

FIRST YEAR

First Semester

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

Second Semester

ELT 142	Electrical Wiring		3
RAC 102	Refrigeration Systems		4
RAC 104	Residential Comfort Systems		4
RAC 106	Advanced Controls		<u>4</u>
			14

Summer Semester

RAC 108	Domestic Refrigeration Appliances		4
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SECOND YEAR

First Semester

English elective ¹			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 ²			3
Mathematics elective ³			3
RAC 202	Refrigeration System Design II		4
RAC 204	Air Distribution		3
Social Science elective			<u>3</u>
			16

¹ 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.

² Suggested humanities elective: ART 122 or PHI 110.

³ A competency test, Available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement. Students in this program who utilize the competency test to meet the mathematics requirement must take MNT 110.

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

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

Required:

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

Required:

RAC	103	Heating Principles.....	4
RAC	105	Heating and Cooling Controls.....	4
RAC	106	Advanced Controls	4

Refrigeration Service Certificate

Required:

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

Required:

ELT	142	Electrical Wiring	2
ELT	143	Advanced Electrical Wiring.....	2
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

Required:

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.

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 60-61 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 must choose a program of study in one of the specialized areas, Food Service Operations Management or Hotel Operations Management.

Required General Education Courses:

DIT	101	Fundamentals of Nutrition	3
ENG	101	Composition	3
ENG	102	Composition	3
		Humanities elective ¹	3
		Mathematics elective ²	3
PSY	101	Introduction to Psychology	3

Required Core Courses:

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

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 15 credit hours from the courses listed below:

CIS	100	Computer Fundamentals	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
FSM	299	Topics in Hospitality Management .....	.5-3

HOSPITALITY MANAGEMENT

Associate in Applied Science Degree continued...

Hotel Operations Management

Electives: Select at least 15 credit hours from the courses listed below:

CIS	100	Computer Fundamentals	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
FSM	299	Topics in Hospitality Management.....	.5-3

¹ SPA 101 is recommended.

² A competency test, available in the Assessment and 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 a three credit-hour elective approved by 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 ¹		.....	<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 ¹		.....	<u>3</u>
			12

¹ 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 ¹	.....	<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 ¹	.....	<u>3</u>
			16

¹ FSM electives: FSM 111, FSM 113, FSM 120, FSM 172, FSM 173, FSM 211, FSM 212, FSM 214, FSM 220.

Food Service Management Certificate

This is a 26 credit-hour certificate program designed for people wanting to upgrade their management skills enabling them 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.

Required:

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	214	Hospitality Operations Analysis	3
FSM	215	Restaurant Layout and Equipment	3
FSM	230	Hospitality Law and Risk Management.....	3

HOSPITALITY MANAGEMENT

Hotel Management Certificate

This 20 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:

FSM	120	Front Office Operations.....	3
FSM	210	Hospitality Facility Maintenance	3
FSM	212	Hospitality Supervision.....	3
FSM	220	Hospitality Promotions	3
FSM	230	Hospitality Law and Risk Management.....	3

Electives: Select at least five credit hours from the following:

CIS	100	Computer Fundamentals	3
FSM	111	Introduction to the Hospitality Industry	3
FSM	114	Food Standards and Sanitation	2
FSM	211	Purchasing and Storage	3
FSM	214	Hospitality Operations Analysis	3
FSM	216	Introduction to Wines, Spirits and Beverage Management	3

INSURANCE

See: Financial Services

INTERIOR DESIGN

Associate in Applied Science Degree

This 63-65 credit-hour 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, contract design or kitchen and bath design. They may elect courses in computer aided design (CAD), sales or merchandising. Those wishing to work in the kitchen and bath and contract design fields are advised to elect CAD courses and should consult with an advisor. Periodic field trips are required and will help students learn 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. The program is endorsed by the National Kitchen and Bath Association (NKBA). 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.

FIRST YEAR

First Semester

IND	100	Interior Design Theory.....	1
IND	101	Basic Interior Design I.....	3
IND	103	Furniture History.....	3
IND	106	Materials and Sources	3
ART	121	Design I.....	3
English ¹		.....	<u>3</u>
			16

Second Semester

IND	102	Basic Interior Design II.....	3
IND	107	Interior Perspective and Rendering.....	3
IND	108	Color for Interior Design/CAD	3
IND	114	Codes for Interior Designers.....	1
IND	116	Interior Detailing and Construction Drawing.....	3
ART	130	History of Art I or	
ART	131	History of Art II or	
ART	132	History of Art III	<u>3</u>
			16

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.....	3
IND	216	Kitchen and Bath Design and Construction.....	3
		Elective ²	2-3
SPE	101	Fundamentals of Speech Communication.....	<u>3</u>
			17-18

Second Semester

IND	207	Interior Design Internship (3) or	
IND	217	Advanced Sketching (2) or	
		Elective (2-3) ²	2-3
IND	208	Advanced Residential Interiors or	
IND	209	Contract Interior Design.....	3
IND	211	Professional Practices for Interior Design.....	3
		Mathematics elective ³	3
		Social Science elective.....	<u>3</u>
			14-15

¹ A assessment test, available in the Assessment and Testing Center, must be taken before registering for ENG 101 or ENG 130.

² Electives: ATE 105, ATE 106, IND 215, MGT 154, MKT 106, MKT 110, MKT 140.

³ A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement.

INTERNATIONAL BUSINESS

Associate in Applied Science Degree

Completing this 65 credit-hour 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 ¹	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 Fundamentals or	
CIS	101	Introduction to Computer Information Systems	3
ENG	130	Business Writing	3
MAT	101	Supply Chain 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
		Electives ²	<u>9</u>
			16

¹ A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a three credit-hour elective or must complete a three credit-hour MKT elective.

² Electives: MAT 230, MKT 191, MKT 193, MKT 196, MKT 252, MKT 292, MKT 293.

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:¹

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 three credit hours from the following:^{1, 2}

BFC	225	International Finance.....	3
MAT	230	International Supply Chain Management.....	3
MKT	191	Business in the European Union.....	3
MKT	193	Business in ASEAN/North Pacific Asia	3
MKT	196	Business in Latin America.....	3
MKT	252	Internet Marketing	3
MKT	292	International Marketing Research.....	3
MKT	293	International Marketing Channel Strategy.....	3

¹ 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.

² Students must satisfy the prerequisites for each course selected.

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 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 Communications ¹	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	234	Mass Communications.....	3
JNM	235	Magazine Editing and Design.....	3
JNM	240	Topics in Journalism.....	1-6

¹ This course is strongly recommended before taking JNM 232, JNM 233, or JNM 235.

Online Communications Certificate

This is an 18-19 credit-hour certificate program that provides a background in writing, editing, and design.

Required:

CIS	118	Introduction to the Internet.....	1
JNM	130	Fundamentals of Journalism.....	3
JNM	140	Writing, Editing, and Design for the Internet.....	3
JNM	230	Graphic Design Communications.....	3
JNM	241	Online Magazine Publishing	3
JNM	243	Communication Web Site Applications.....	3

Electives: Select one course from the following:

CIS	119	Web Site Development I	2
JNM	131	News Reporting and Writing	3
JNM	133	Feature Writing	3
JNM	137	Media Writing	3
JNM	232	Advertising Copywriting and Design	3
JNM	233	Public Relations Writing and Design.....	3
JNM	234	Mass Communications.....	3
JNM	242	Using the Internet as a Communications Tool	2

LAW OFFICE ADMINISTRATIVE ASSISTANT

Also See: Administrative Technology

Associate in Applied Science Degree

This 61 credit-hour 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 Administrative Technology		1
OFC 105	Administrative Human Relations		1
OFC 106	Administrative Time Management		1
OFC 107	Internet Applications		1
OFC 113	Computer Keyboarding Production ¹		3
OFC 133	Word Processing Software I		<u>2</u>
			15

Second Semester

CIS 123	Spreadsheet/Budgeting for Micros		1
OFC 202	Desktop Publishing Using Word Processing		2
OFC 203	Proofreading and Editing		2
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

CAS electives ²			5
OFC 227	Business Presentations		1
OFC 233	Document Processing in the Law Office		3
OFC 237	Administrative Technology 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 ³		3
OFC 238	Administrative Technology Internship II		3
	Social Science elective		<u>3</u>
			15

¹ Placement into OFC 113 is contingent upon previous training and consent of instructor.

² CAS electives: CAS 110, CAS 120, CAS 130, CAS 140, CAS 150, CAS 210, CAS 220.

³ A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a three credit-hour elective approved by the program coordinator.

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.

Required:

ACC	211	Business Law I.....	3
OFC	102	Survey of Law Office Practice.....	3
OFC	104	Introduction to Administrative Technology.....	1
OFC	105	Administrative Human Relations.....	1
OFC	106	Administrative Time Management.....	1
OFC	107	Internet Applications.....	1
OFC	133	Word Processing Software I.....	2
OFC	225	Topics in Administrative Technology.....	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	Administrative Technology Internship I.....	3

MAINTENANCE TECHNOLOGY

Associate in Applied Science Degree

Students can prepare for employment in the fast growing building maintenance service sector of urban society. Graduates of this 65 credit-hour program may be employed directly in building maintenance as directors, managers or operators for industrial and commercial properties. Other graduates may find employment as assistants in residential properties managed through associations including assisted living housing for the elderly.

Required General Education Courses

Communications elective	6
Humanities elective	3
MTH 060 Foundations of Mathematics I ¹	4
Natural Science or Social Science electives.....	6

Required Core Courses

CIS 100	Computer Fundamentals	3
ELT 142	Electrical Writing	2
FLS 122	Introduction to Fire Prevention Principles	3
MGT 160	Principles of Supervision.....	3
MNT 110	Basic Welding	3
MNT 111	Prints and Schematics	2
MNT 115	Basic Carpentry	2
MNT 125	Basic Plumbing	2
MNT 215	Commercial Carpentry	2
MNT 225	Commercial Plumbing.....	2
MNT 235	Maintenance Troubleshooting Skills.....	3
MNT 245	Force and Motion Basics	2
MNT 255	Belts/Bearings and Mechanical Drives.....	2
RAC 101	Refrigeration Fundamentals.....	4

Electives: Select 11 credit hours from the following courses:

ACC 099	Business Recordkeeping	3
ATE 210	Cost Estimating	3
ATE 213	Construction Management Process.....	3
BCE 104	Basic Mechanical and Energy Conservation Codes.....	3
ELT 143	Advanced Electrical Wiring.....	2
ELT 144	AC and DC Motors.....	2
ELT 145	Variable Frequency Drives.....	2
MNT 105	Machining Processes I.....	3
MNT 120	Machining Processes II.....	3
MNT 210	Advanced Welding	3
PKM 140	Grounds Equipment and Shop Operation	4
RAC 103	Heating Principles.....	4
RAC 104	Residential Comfort Systems	4

¹A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement.

MAINTENANCE TECHNOLOGY

Basic Maintenance Certificate

This 16 credit-hour certificate program provides the basic knowledge and skill for entry-level jobs in building and residential maintenance.

Electives: Select 16 credit hours from the following courses:

CIS	100	Computer Fundamentals	3
ELT	142	Electrical Wiring	2
MNT	110	Basic Welding	3
MNT	111	Prints and Schematics	2
MNT	115	Basic Carpentry	2
MNT	125	Basic Plumbing	2
PKM	140	Grounds Equipment and Shop Operations	4
RAC	101	Refrigeration Fundamentals	4

Commercial Maintenance Certificate

This 16 credit-hour certificate program builds on the Basic Maintenance certificate to prepare students for more advanced maintenance jobs in commercial or industrial maintenance.

Electives: Select 16 credit hours from the following courses:

BCE	104	Basic Mechanical and Energy Conservation Codes...	3
ELT	143	Advanced Electrical Wiring	2
ELT	144	AC and DC Motors	2
MNT	210	Advanced Welding	3
MNT	215	Commercial Carpentry	2
MNT	225	Commercial Plumbing	2
MNT	235	Maintenance Troubleshooting Skills	2
RAC	103	Heating Principles	4

Supervisory Maintenance Technology Certificate

This 16 credit-hour certificate program builds on the Basic Maintenance and Commercial Maintenance certificates to prepare students for supervisory positions in commercial, industrial or residential maintenance.

Electives: Select 16 credit hours from the following courses:

ACC	099	Business Recordkeeping	3
ATE	210	Costing Estimating	3
ATE	213	Construction Management Process	3
ELT	140	Programmable Logic Controllers	2
FIS	122	Introduction to Fire Prevention Principles	3
MGT	160	Principles of Supervision	3
MNT	245	Force and Motion Basics	2
MNT	255	Belts/Bearings and Mechanical Drives	2
SPE	205	Group Discussion	3

MAMMOGRAPHY*

Mammography Certificate

This four credit-hour certificate program provides a study in the theory and practice of mammography technology. The mammogram is a non-invasive procedure that assists in the detection of breast cancer.

The individual who successfully completes this program will be eligible to sit for the Mammography Technologist Certification exam.

Admission Requirements

- For admissions requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web page: harpercollege.edu/learning/healthcareers

Required:

MAM	206	Principles and Procedures in Mammography	3
MAM	207	Mammography Internship	1

**Admission Requirements:

- For admissions requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web page: harpercollege.edu/learning/healthcareers

MANAGEMENT

Associate in Applied Science Degree: Management

This 64 credit-hour 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 ¹	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	245	Industrial/Organizational Psychology	3
			<u>15</u>

SECOND YEAR

First Semester

ACC	211	Business Law I	3
ECO	200	Introduction to Economics	3
		Electives ²	6
MKT	245	Principles of Marketing	3
			<u>15</u>

Second Semester

		Humanities elective	3
		Electives ²	6
MGT	218	Introduction to Finance	3
MGT	291	Problems in Management and Supervision	3
			<u>15</u>

¹ A proficiency test, available in the Assessment and Testing Center, may be utilized to meet the MGT 150 requirement.

² Electives: ACC 216, MGT 115, MGT 154, MGT 165, MGT 168, MGT 170, MGT 204, MGT 205, MGT 206, MGT 207, MGT 211, MGT 225, MGT 230, MGT 254, MGT 265, MGT 266, MGT 274, MGT 275, MGT 276, MGT 280.

MANAGEMENT

Associate in Applied Science Degree: Small Business Management

This 60 credit-hour 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	Database Software.....	1
		Elective ¹	3
ENG	130	Business Writing	3
MGT	154	Small Business Management.....	3
OFC	133	Word Processing Software I ²	<u>2</u>
			15

SECOND YEAR

First Semester

CIS	124	Advanced Spreadsheet Software	1
		Elective ¹	6
MGT	160	Principles of Supervision.....	3
PHI	150	Business Ethics	3
PSY	245	Industrial/Organizational Psychology	<u>3</u>
			16

Second Semester

		Electives ¹	7
MGT	254	Small Business Formation.....	3
MKT	245	Principles of Marketing	<u>3</u>
			13

¹ Electives: ECO 115, MAT 101, MGT 115, MGT 165, MGT 205, MGT 206, MGT 207, MGT 211, MGT 230, MGT 265, MGT 270, MGT 274, MGT 275, MGT 280, MKT 106, MKT 140, MKT 217, MKT 240, MKT 250

² 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
MGT	160	Principles of Supervision.....	3
MGT	270	Principles of Management.....	3

Electives: Select at least nine 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 12 credit-hour certificate program offers the student the opportunity to receive fundamental management skills for entry-level management positions.

Required:

MGT	111	Introduction to Business Organization.....	3
MGT	160	Principles of Supervision.....	3
MGT	270	Principles of Management.....	3
Elective ¹		.....	3

¹ Electives: MGT 150, MGT 205, MGT 206, MGT 207, MGT 280, MGT 291

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 nine 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

MARKETING

Associate in Applied Science Degree

This 61-62 credit-hour 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 credit hours of course work from the specialized study areas¹.

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 ² (3-4).....	3-4
PSY	101	Introduction to Psychology	3
PSY	245	Industrial/Organizational Psychology	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 ³ or	
ECO	211	Microeconomics.....	3
CIS	100	Computer Fundamentals 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

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	105	Sports Marketing.....	3
MKT	106	Retail Merchandising	3
MKT	140	Principles of Professional Selling	3
MKT	202	Marketing for Non-Profit Organizations.....	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	252	Internet Marketing	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:*⁴

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 nine credit hours from the following:*⁴

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	252	Internet Marketing	3
MKT	248	Direct Marketing.....	3
MKT	281	Internship in Marketing	3
MKT	285	Topics in Marketing .....	.5-3

Sales

*Required:*⁴

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 nine credit hours from the following:*⁴

MGT	160	Principles of Supervision.....	3
MKT	105	Sports Marketing.....	3
MKT	106	Retail Merchandising or	
MAT	125	Purchasing	3
MKT	120	Customer Service.....	1
MKT	202	Marketing for Non-Profit Organizations.....	3
MKT	246	Business to Business Marketing	3
MKT	248	Direct Marketing.....	3
MKT	252	Internet Marketing	3
MKT	281	Internship in Marketing	3
MKT	285	Topics in Marketing .....	.5-3

Marketing Communications

*Required:*⁴

JNM	137	Media Writing	3
JNM	232	Advertising Copywriting and Design or	
MKT	217	Advertising.....	3
MKT	255	Marketing Research.....	3

MARKETING

Associate in Applied Science Degree continued....

Electives: Select at least 12 credit hours from the following:⁴

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
MKT	246	Business to Business Marketing.....	3
MKT	247	Consumer Buying Behavior	3
MKT	248	Direct Marketing.....	3
MKT	252	Internet Marketing.....	3
MKT	260	International Marketing	3
MKT	281	Marketing Internship	3

¹ 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.

² Mathematics elective: MTH 103, MTH 124, MTH 134, MTH 165. Meet with Student Development faculty member or program coordinator for appropriate course.

³ Meet with Student Development faculty member or program coordinator for appropriate ACC, CIS or ECO course.

⁴ Students must satisfy the prerequisites for each course selected.

E-Commerce Business Certificate

This 15 credit-hour certificate program is designed to give individuals with little technical or business training the skills necessary to start and manage viable Web-based businesses or consult with others on e-commerce business start-ups. The principles learned in this program could also be applied to existing businesses wishing to expand by offering a Web-based alternatives.

Required:

CIS	218	E-Commerce Development.....	3
MGT	154	Small Business Management.....	3
PLS	252	Internet Marketing	3

Electives: Select six credit hours from the following courses:

CIS	100	Computer Fundamentals or	
CIS	101	Introduction to Computer Information Systems	3
CIS	119	Web Site Development I ¹	3
MKT	245	Principles of Marketing	3
MKT	247	Consumer Behavior	3
MKT	255	Marketing Research.....	3
PLS	222	Intellectual Property	3

¹ Students must satisfy prerequisite.

MARKETING

Marketing Certificate

This is 12 credit-hour certificate program is designed for those interested in obtaining basic marketing skills that can be used in entry-level marketing positions.

Required:

MKT	245	Principles of Marketing	3
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Electives: Select nine credit hours from the following:

MKT	105	Sports Marketing.....	3
MKT	140	Principles of Professional Selling	3
MKT	202	Marketing for Non-Profit Organizations.....	3
MKT	217	Advertising.....	3
MKT	247	Consumer Buying Behavior	3
MKT	252	Internet Marketing.....	3
MKT	255	Marketing Research.....	3
MKT	281	Internship in Marketing	3

Marketing Research Certificate

This 6 credit-hour certificate program is designed to give individuals with little or no formal training the skills necessary to function as a market research analyst. The principles learned in these classes will help individuals efficiently target markets, design research instruments, and identify potential markets for new and existing products and services.

Required:

GEG	151	Geographic Information Systems I	3
MKT	255	Market Research.....	3

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 six 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

MARKETING

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 six 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 nine 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

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: Health Care Office Manager

This 63-64 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 ¹	4
BIO	136	Introduction to Human Disease (3) or	
BIO	161	Human Physiology (4) ¹	3-4
Communications electives			6
Humanities or Social Science elective			3
Mathematics elective ²			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 ³	3
MGT	111	Introduction to Business Organization	3
MOA	145	Health Care Records Management ³	2
MOA	195	Principles of Health Insurance Billing ³	3
MOA	235	Health Care Office Procedures ^{3, 6}	3
MOA	245	Health Care Office Management ^{3, 7}	3
MOA	265	Medical Office Administration Externship ^{3, 7}	3
NUR	120	Pharmacology ⁴	2
PED	201	Standard First Aid	3

Electives: Group I Select any combination of a minimum of six credit hours from the following courses:

MOA	196	Current Procedural Terminology (CPT) Coding ^{3, 6}	3
MOA	197	International Classification of Disease (ICD) Coding ^{3, 6}	3
MOA	215	Clinical Procedures ^{3, 6}	8
MOA	240	Medical Transcription I	3
MOA	242	Medical Transcription II	3

MEDICAL OFFICE ADMINISTRATION

Associate in Applied Science Degree: Health Care Office Manager continued...

Electives: Group II Select any combination of a minimum of six credit hours from the following courses:

ACC	101	Introduction to Financial Accounting	4
ACC	102	Introduction to Managerial Accounting ³	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 ⁵	3
HSC	106	Health Occupations Career Observation.....	1
MGT	150	Business Math ⁵	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 ³	3

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

² A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics elective requirement.

³ Students must satisfy prerequisites for each course selected.

⁴ Prerequisite waived for Health Care Office Manager students.

⁵ May be used to fulfill general education requirement(s); meet with program coordinator or Student Development faculty member for advice on electives.

⁶ Offered during fall semester only.

⁷ Offered during spring semester only.

Associate in Applied Science Degree: Medical 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 Assistant degree and certificate programs at Harper College have been accredited by the Commission 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).

MEDICAL OFFICE ADMINISTRATION

Associate in Applied Science Degree: Medical Assistant continued...

FIRST YEAR

First Semester

BIO	135	Introduction to Human Anatomy and Physiology ¹ 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 ¹ (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 ²	2
MOA	195	Principles of Health Insurance Billing ²	3
NUR	120	Pharmacology	2
PED	201	Standard First Aid ³	3
			<u>17-18</u>

SECOND YEAR

First Semester

MOA	215	Clinical Procedures ^{2, 6}	8
MOA	235	Health Care Office Procedures ^{2, 6}	3
		Elective ⁴	3
			<u>14</u>

Second Semester

HSC	213	Health Care Law and Ethics	3
		Mathematics elective ⁵	3
MOA	240	Medical Transcription I ²	3
MOA	245	Health Care Office Management ^{2, 7}	3
MOA	280	Medical Assistant Externship ^{2, 7}	3
			<u>15</u>

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

² Students must satisfy prerequisites for each course selected.

³ Students must submit an American Heart Associate Cardiopulmonary Resuscitation for the Health Care Provider (CPR) certificate before entering externship.

⁴ Requires approval of program coordinator.

⁵ A competency test, available in the Assessment and 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 take a three credit-hour elective.

⁶ Offered during fall semester only.

⁷ Offered during spring semester only.

MEDICAL OFFICE ADMINISTRATION

Health Care Secretary Certificate

This 23 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 30 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
MOA	145	Health Care Records Management ¹	2
MOA	195	Principles of Health Insurance Billing ^{1,2}	3
MOA	235	Health Care Office Procedures ^{1,3}	3
MOA	240	Medical Transcription I.....	3
MOA	245	Health Care Office Management ⁴	3
MOA	265	Medical Office Administration Externship.....	3

¹ Students must satisfy prerequisites for each course selected.

² Prerequisite of BIO 135 and BIO 136 waived for Health Care Secretary students.

³ Offered during fall semester only.

⁴ Offered during spring semester only.

MEDICAL OFFICE ADMINISTRATION

Health Insurance Specialist Certificate

This concentrated 30 credit-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 International Classification of Diseases (ICD) and Current Procedural Terminology (CPT) coding, billing reimbursement and collections procedures, including the current software utilized.

Some keyboarding skills and knowledge of computers is recommended.

Professional Certification:

Students in the Health Insurance Specialist program are encouraged to join the local chapter of the American Association of Procedural Coders (AAPC) and the American Health Information Management Association (AHIMA). An experienced coder is eligible to sit for the national examination in order to become a Certified Procedural Coder (CPC).

BIO	135	Introduction to Human Anatomy and Physiology.....	4
BIO	136	Introduction to Human Diseases.....	3
HSC	112	Medical Terminology.....	3
HSC	213	Health Care Law and Ethics ¹	3
MOA	145	Health Care Records Management ^{1,2}	2
MOA	195	Principles of Health Insurance Billing ¹	3
MOA	196	Current Procedural Terminology (CPT) Coding ^{1,2}	3
MOA	197	International Classification of Disease (ICD) Coding ^{1,2}	3
MOA	235	Health Care Office Procedures ^{1,3}	3
MOA	265	Medical Office Administration Externship ^{1,4}	3

¹ Students must satisfy prerequisites for each course selected.

² Prerequisite of HSC 100 waived for Health Insurance Specialist students.

³ Offered during fall semester only.

⁴ Offered during spring semester only.

MEDICAL OFFICE ADMINISTRATION

Medical 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 Assistant certificate and degree programs at Harper College have been accredited by the Commission 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 ¹	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 ¹	2
MOA	195	Principles of Health Insurance Billing ^{1,2}	3
MOA	215	Clinical Procedures ^{1,4}	8
MOA	235	Health Care Office Procedures ⁴	3
MOA	240	Medical Transcription I ¹	3
MOA	245	Health Care Office Management ^{1,5}	3
MOA	280	Medical Assistant Externship ^{1,3,5}	3
NUR	120	Pharmacology ²	2
PED	201	Standard First Aid ³	3

¹ Students must satisfy prerequisites for each course selected.

² Prerequisite of BIO 135 waived for Medical Assistant certificate students.

³ Students must submit an American Heart Association Cardiopulmonary Resuscitation for the Health Care Provider (CPR) certificate before entering externship.

⁴ Offered during fall semester only.

⁵ Offered during spring semester only.

Medical Transcriptionist Certificate

This concentrated 25 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	135	Introduction to Human Anatomy and Physiology.....	4
BIO	136	Introduction to Human Diseases.....	3
HSC	100	Computer Usage in Health Services.....	1
HSC	112	Medical Terminology	3
HSC	213	Health Care Law and Ethics ¹	3
MOA	145	Health Care Records Management ¹	2
MOA	240	Medical Transcription I ¹	3
MOA	242	Medical Transcription II ¹	3
MOA	260	Medical Transcriptionist	
MOA	265	Medical Office Administration Exernship ^{1,2}	3

¹ Students must satisfy prerequisites for each course selected.

² Offered during spring semester only.

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 approved by the Illinois Department of Professional Regulation and accredited by the National League for Nursing Accrediting Commission.

The associate in applied science degree in Nursing qualifies the graduate for NCLEX-RN and application for Illinois licensure as a registered nurse. Legal limitations could prohibit an individual from taking this licensing examination. Questions regarding these restrictions should be directed to the Illinois Department of Professional Regulation at 217.782.8556. Positions are available in a variety of health care settings.

Admission requirements:

- For admission requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web page:

FIRST YEAR¹

First Semester

BIO	160	Human Anatomy	4
NUR	101	Nursing Fundamentals.....	9
NUR	120	Pharmacology ²	2
PSY	101	Introduction to Psychology	3
Mathematics ³		.....	0
			18

Second Semester

BIO	161	Human Physiology ⁴	4
Computer elective ⁵		.....	1
NUR	102	Nursing Care of Clients with Commonly Occurring Health Needs	9
PSY	228	Human Development	3
			17

Summer Semester

NUR	199	Bridge to Advanced Nursing ⁶	1
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SECOND YEAR

First Semester

BIO	130	Microbiology	4
ENG	101	Composition	3
NUR	201	Advanced Nursing I	10
			17

Second Semester

SPE	101	Fundamentals of Speech Communication.....	3
NUR	202	Advanced Nursing II	10
SOC	101	Introduction to Sociology	3
NUR	210	Physical Assessment ⁷	1
			17

* Nursing is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

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

1 A grade of C or better in all NUR courses, BIO 130, BIO 160 and BIO 161 is required for all students.

2 Must be completed no earlier than three years before graduation.

3 Group 2 math requirement is met by Nursing program admission requirements.

4 Must be taken within three years of the required semester.

5 CIS 100, CIS 101, CIS 117, CIS 125, HSC 100, OFC 133.

6 Required for the LPN admit and the student reentering the second level.

7 Can be taken any time after NUR 102

NURSING

Licensed Practical Nursing Certificate *

Admission requirements:

- For admissions requirements, please contact the Admission Outreach Office at 847.925.6700 or check the following web page: harpercollege.edu/learning/healthcareers

The Licensed Practical Nursing certificate qualifies the graduate to sit for the NCLEX-PN and application for Illinois licensure as a practical nurse.

FIRST YEAR¹

First Semester

BIO	160	Human Anatomy	4
NUR	101	Nursing Fundamentals	9
NUR	120	Pharmacology ²	2
PSY	101	Introduction to Psychology	3
Mathematics ³		.....	<u>0</u>
			18

Second Semester

BIO	161	Human Physiology ⁴	4
		Computer elective ⁵	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. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

¹ A grade of C or better in all NUR courses, BIO 130, BIO 160 and BIO 161 is required for all students.

² Must be completed no earlier than three years before graduation.

³ Group 2 math requirements is met by Nursing program admission requirements.

⁴ Must be taken within three years of the required semester.

⁵ CIS 100, CIS 101, CIS 117, CIS 125, HSC 100, OFC 133.

NURSING

Certified Nursing Assistant Certificate *

This seven 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.

This program is part of Harper's Dual Credit Career Partnership. Applicants from this high school Dual Credit Career Partnership must have completed the 11th grade prior to entering and must also meet the program's special admission requirements.

Admission requirements:

- For admission requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web page:
harpercollege.edu/learning/healthcareers

Required:

CNA 101 Nursing Assistant Training 7

* Certified Nursing Assistant is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Office for updated information.

PARALEGAL STUDIES

Associate in Applied Science Degree

The 63 credit-hour 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, book-keeping, serving and filing legal documents and preparing legal forms.

FIRST YEAR

First Semester

ENG	101	Composition	3
		Humanities elective ¹	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>
			15

SECOND YEAR

First Semester

		Mathematics elective ²	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 ³	12
PLS	208	Externship in Paralegal Studies ⁴	<u>3</u>
			18

¹ 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.

² A competency test, available in the Assessment and Testing Center, 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.

³ CRJ 201 or CRJ 202, PLS 200, PLS 202, PLS 212, PLS 220, PLS 221, PLS 222, PLS 223, PLS 230.

⁴ 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 ¹ 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	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	222	Intellectual Property.....	3
PLS	223	Computer-Assisted Legal Research.....	3
PLS	230	Topics in Paralegal Studies.....	3

¹ Students may take CRJ 201 or CRJ 202, but not both

PARAMEDIC

See: Emergency Medical Services

PARAPROFESSIONAL EDUCATOR

Associate in Applied Science Degree

This 62 credit-hour program is designed to promote the development of skills necessary when working with children in Title 1 programs in the K-12 public or private school classrooms. Students must complete the required courses for the program and 18 hours of approved electives.

Required General Education Courses:

ENG	101	Composition	3
Humanities elective		.....	3
MTH	130	Mathematics for Elementary Teaching I.....	4
PSC	101	American Politics and Governments.....	3
PSY	101	Introduction to Psychology	3
SPE	101	Fundamentals of Speech Communication.....	3

Required Core Courses:

DIV	101	Exploring Diversity in the U.S.....	3
ECE	102	Child Development I	3
ECE	219	Psychology of Exceptional Children	3
EDU	201	Introduction to Education.....	3
EDU	202	Pre-Student Teaching Clinical Experience.....	1
EDU	211	Educational Psychology.....	3
EDU	230	Introduction to Language Arts in Elementary/Middle School Teaching.....	3
EDU	250	Technology in the Classroom.....	3
LIT	219	Children's Literature	3

Electives:

ANT	101	Introduction to Anthropology.....	3
ANT	202	Cultural Anthropology	3
ART	105	Introduction to the Arts or	
FNA	111	History of Art	3
ECE	103	Child Development II	3
ECE	120	Introduction to Special Education for Paraprofessionals.....	3
ECE	121	Behavioral Management in Special Education Setting	3
ENG	102	Composition	3
GEG	101	World/Regional Geography	3
HST	111	The American Experience to 1877.....	3
HST	112	The American Experience Since 1877.....	3
LNG	105	Introduction to Language and Linguistics	3
MTH	131	Mathematics for Elementary Teaching II.....	4
PHS	111	Introduction to Physical Science or	
PHS	112	Exploring the Earth and Universe	4
PSY	217	Adolescent Psychology or	
PSY	228	Psychology of Human Development.....	3
SGN	101	American Sign Language	4

PARAPROFESSIONAL EDUCATOR

Paraprofessional Educator Certificate

This 32 credit-hour program is designed to promote the skills necessary when working with children in non-Title 1 positions in K-12 public or private schools. Individuals can also use the certificate program toward completion of the Paraprofessional Education associate in applied science degree.

Required:

DIV	101	Exploring Diversity in the U.S.....	3
ECE	102	Child Development I	3
ECE	219	Psychology of Exceptional Children	3
EDU	201	Introduction to Education.....	3
EDU	202	Pre-Student Teaching Clinical Experience.....	1
EDU	211	Educational Psychology.....	3
EDU	230	Introduction to Language Arts in Elementary/Middle School Teaching.....	3
EDU	250	Technology in the Classroom.....	3
LIT	219	Children's Literature	3
MTH	130	Mathematics for Elementary Teaching I.....	4
PSY	101	Introduction to Psychology	3

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 63 credit hours.

Required General Education Courses:

BIO	120	Botany	4
		Communications electives ¹	6
		Mathematics elective ²	3
PED	201	Safety and First Aid ³	3

Students must select five credit hours from at least two of the following areas:

Humanities, Natural Sciences or Social Sciences	5
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Required Core Courses:

PKM	100	Park and Horticulture Careers ⁴	1
PKM	140	Grounds Equipment and Shop Operation	4
PKM	210	Drainage and Irrigation ⁴	3
PKM	213	Landscape Graphics	3
PKM	220	Arboriculture ⁵	4
PKM	242	Golf Course and Athletic Field Management ⁷	4
PST	101	Woody Plants ⁴	4
PST	102	Plant Diseases and Pests ⁵	4
PST	104	Beginning Floral Design	3
PST	110	Soil Science	4
PST	111	Basic Horticultural Skills	3
PST	212	Turfgrass Science ⁴	4

¹ 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.

² A competency test, available in the Assessment and Testing Center, may be utilized to meet the mathematics requirement. Students who utilize the competency test to meet the mathematics requirement must complete a three credit-hour PKM or PST elective.

³ May be waived if a comparable certificate is presented.

⁴ Offered during fall semester only.

⁵ Offered during spring semester only.

⁶ See coordinator.

⁷ 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.

Required:

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 and Athletic Field Maintenance Certificate

Graduates of this 27 credit-hour certificate program are prepared for employment or promotion in the golf course industry, turfgrass production and athletic field maintenance.

Required:

PKM	100	Park and Horticulture Careers	1
PKM	140	Grounds Equipment and Shop Operation	4
PKM	210	Drainage and Irrigation.....	3
PKM	242	Golf Course and Athletic Field Management.....	4
PKM	102	Plant Diseases and Pests	4
PST	110	Soil Science	4
PST	111	Basic Horticultural Skills.....	3
PST	212	Turfgrass Science	4

Turfgrass and Grounds Maintenance Certificate

Graduates of this 27 credit-hour certificate program prepared for employment or promotion culture and care of gardens, landscapes, parks, turfgrass and other passive or active grounds areas.

Required:

PKM	100	Park and Horticulture Careers	1
PKM	140	Grounds Equipment and Shop Operation	4
PKM	210	Drainage and Irrigation.....	3
PST	101	Woody Plants	4
PST	102	Plant Diseases and Pests	4
PST	110	Soil Science	4
PST	110	Soil Science	4
PST	111	Basic Horticultural Skills.....	3
PST	212	Turfgrass Science	4

PHLEBOTOMY*

Phlebotomy Certificate

This 9 credit-hour certificate program consists of lectures, student laboratories and clinical internship arranged in a local health care facility. This certificate is useful for a number of health care professionals interested in developing the skills and techniques involved in the collection of blood from patients or donors for diagnostic testing. In addition, ethical and legal responsibilities, effective communication skills and safe practice are studied. Phlebotomists are employed in hospitals, hospital laboratories, physician offices, clinics, blood banks, commercial laboratories, or similar facilities. Phlebotomy has become a fast-growing health occupation and is considered a profession with a standardized educational curriculum and accepted routes for national certification.

Admission requirements:

- For admissions requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web site:
harpercollege.edu/learning/healthcareers

Required:

HSC	112	Medical Terminology	3
PHB	101	Phlebotomy Principles and Practice	4
PHB	102	Phlebotomy Internship	2

* Phlebotomy is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

PLANT SCIENCE TECHNOLOGY

Associate in Applied Science Degree

This 64 credit-hour program is designed to prepare students for employment in floral design, garden centers, greenhouses, grounds maintenance, landscape design and construction, nurseries, plant propagation, and other green industry careers.

Required General Education Courses:

BIO	120	Botany	4
ENG	101	Composition	3
		Mathematics elective ¹	3
PED	201	Safety and First Aid ²	3
SPE	101	Fundamentals of Speech Communication	3

Students must select five 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	1
PST	104	Beginning Floral Design	3
PST	105	Indoor Plants	4
PST	111	Basic Horticultural Skills	4

Specialized Study Areas:

It is recommended that students pursue one of the following specialized study areas.

Floral Design

Required:

PST	107	Cut Flower and Foliage Identification	4
PST	112	History of Floral Design I	3
PST	151	Floral Design Internship	3
PST	204	Intermediate Floral Design	3
PST	205	High Style and Tropical Floral Design ⁴	3
PST	206	Wedding and Sympathy Floral Design ⁴	3
PST	207	Permanent Botanical Design ³	3
PST	208	Advanced Floral Techniques ⁴	4
PST	245	History of Floral Design II	3
PST	247	Floral Shop Management ³	3

Horticulture

Required:

PKM	140	Grounds Equipment and Shop Operation	4
PKM	213	Landscape Graphics	3
PKM	214	Landscape Design I	3
PKM	250	Park Management and Plant Science Seminar ⁴	1
PST	101	Woody Plants	4
PST	102	Plant Diseases and Pests	4
PST	103	Herbaceous Plants ³	4
PST	110	Soil Science	4

Electives: Horticulture students must select at least five credit hours from the following:

MGT	elective ⁵	.....	3
PKM	210	Drainage and Irrigation	3
PKM	220	Arboriculture	4
PKM	230	Contracts, Specifications, Estimating ⁶	3
PKM	240	Grounds Equipment Power Units ⁶	4
PKM	242	Golf Course and Athletic Field Management ⁶	4

PLANT SCIENCE TECHNOLOGY

Associate in Applied Science Degree...continued

PST	212	Turfgrass Science	4
PST	248	Garden Center Operations ⁶	3

Landscape Design

Required:

PKM	210	Drainage and Irrigation	3
PKM	213	Landscape Graphics	3
PKM	214	Landscape Design I	3
PKM	215	Landscape Design II	3
PKM	216	Landscape Construction Process and Materials	4
PST	101	Woody Plants	4
PST	103	Herbaceous Plants ³	4
PST	110	Soil Science	4

Electives: Landscape Design students must select at least four credit hours from the following:

MGT elective ⁵		.....	3
PKM	220	Arboriculture	4
PKM	230	Contracts, Specifications, Estimating ⁶	3
PKM	240	Grounds Equipment Power Units ⁶	4
PKM	242	Golf Course and Athletic Field Management ⁶	4
PST	212	Turfgrass Science	4
PST	248	Garden Center Operations ⁶	3

¹ 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. Students who utilize the competency test to meet the mathematics requirement must complete a course in PKM or PST an elective.

² May be waived if a comparable certificate is presented.

³ Offered during fall semester only.

⁴ Offered during spring semester only.

⁵ MGT elective: MGT 111, MGT 154, MGT 160.

⁶ May be offered every other year.

Advanced Floral Design Certificate

Graduates of this 33 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.

Required:

PKM	100	Park and Horticulture Careers	1
PST	104	Beginning Floral Design	3
PST	107	Cut Flower and Foliage Identification	4
PST	112	History of Floral Design I	3
PST	204	Intermediate Floral Design	3
PST	205	High Style and Tropical Floral Design	3
PST	206	Wedding and Sympathy Floral Design	3
PST	207	Permanent Botanical Design	3
PST	208	Advanced Floral Techniques	4
PST	245	History of Floral Design II	3
PST	247	Floral Shop Management	3

PLANT SCIENCE TECHNOLOGY

Basic Horticultural Skills Certificate

Graduates of this 20 credit-hour certificate program will be able to produce disease and pest free plants from seeds as well as by a variety of vegetative methods as commonly encountered in the greenhouse and nursery industry.

Required:

PKM	100	Park and Horticulture Careers	1
PST	101	Woody Plants	4
PST	102	Plant Diseases and Pests	4
PST	105	Indoor Plants	4
PST	110	Soil Science	4
PST	111	Basic Horticulture Skills	3

Floral Design Certificate

Graduates of this 16 credit-hour certificate program are prepared for employment or promotion in retail and wholesale floral businesses.

Required:

PKM	100	Park and Horticulture Careers	1
PST	104	Beginning Floral Design.....	3
PST	107	Cut Flower and Foliage Identification	4
PST	112	History of Floral Design I.....	3
PST	204	Intermediate Floral Design.....	3
PST	247	Floral Shop Management.....	3

Garden Center Operations Certificate

Graduates of this 30 credit-hour certificate program are prepared for employment or promotion with garden center and retail outlets of plant materials and associated merchandise.

Required:

PKM	100	Park and Horticulture Careers	1
PKM	213	Landscape Graphics	3
PST	101	Woody Plants	4
PST	102	Plant Diseases and Pests	4
PST	103	Herbaceous Plants.....	4
PST	105	Indoor Plants	4
PST	110	Soil Science	4
PST	111	Basic Horticultural Skills.....	4
PST	248	Garden Center Operations	3

PLANT SCIENCE TECHNOLOGY

Landscape Design Certificate

Graduates of this 44 credit-hour certificate are prepared for employment or promotion in residential and commercial landscape design and landscape construction planning and estimating.

Required:

PKM	100	Park and Horticulture Careers	1
PKM	140	Grounds Equipment and Shop Operation	4
PKM	210	Drainage and Irrigation	3
PKM	213	Landscape Graphics	4
PKM	214	Landscape Design I.....	3
PKM	215	Landscape Design II.....	3
PKM	216	Landscape Construction Process and Materials	4
PST	101	Woody Plants	4
PST	102	Plant Diseases and Pests	4
PST	103	Herbaceous Plants.....	4
PST	110	Soil Science	4
PST	111	Basic Horticultural Skills.....	4
PST	212	Turfgrass Sciences	4

RADIOLOGIC TECHNOLOGY*

Associate in Applied Science Degree

This 76 credit-hour full-time curriculum prepares radiographers to produce X-ray films (radiographs) of parts of the human body for use in diagnosing medical problems. Additional duties may include processing film, evaluating radiology equipment, managing radiographic quality assurance programs, and providing relevant patient education. The program provides both classroom and clinical instruction in anatomy and physiology, radiobiology, pathology, medical image processing, radiation physics, positioning of patients, patient care procedures, radiation protection, and medical ethics.

Radiographers are employed in health care facilities including hospitals and clinics, specialized imaging centers; urgent care clinics, physician offices and government offices. Some radiographers are employed in educational institutions and in industry.

Admission requirements:

- For admissions requirements, please contact the Admissions Outreach Office at 847.925.6700 or check the following web site:
harpercollege.edu/learning/healthcareers

First Semester

BIO	160	Human Anatomy	4
HSC	105	Introduction to the Health Care Field	2
HSC	112	Medical Terminology	3
HSC	213	Health Care Law and Ethics	3
RAD	102	Radiologic Procedures I.....	3
RAD	103	Radiologic Principles I	3
Mathematics ¹		.....	0
			18

RADIOLOGIC TECHNOLOGY*

Associate in Applied Science Degree continued...

Second Semester

BIO	161	Human Physiology	4
HSC	100	Computer Usage in Health Services.....	1
NUR	120	Pharmacology	2
RAD	105	Radiologic Procedures II.....	3
RAD	106	Radiologic Principles II	3
RAD	107	Radiologic Clinical Education I	<u>3</u>
			16

Summer Semester

RAD	201	Radiologic Clinical Education II	3
PSY	101	Introduction to Psychology	<u>3</u>
			6

SECOND YEAR

First Semester

ENG	101	Composition	3
RAD	202	Radiologic Procedures III.....	3
RAD	203	Advanced Radiologic Principles.....	4
RAD	204	Radiobiology	3
RAD	205	Radiologic Clinical Education III	<u>4</u>
			17

Second Semester

RAD	206	Radiologic Pathology	3
RAD	207	Radiologic Quality Assurance.....	1
RAD	208	Radiologic Seminar.....	1
RAD	209	Radiologic Special Procedures.....	3
RAD	210	Radiologic Clinical Education IV.....	4
SPE	101	Fundamentals of Speech Communication.....	<u>3</u>
			15

Summer Semester

RAD	211	Radiologic Clinical Education	4
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* Radiologic Technology Program is a limited enrollment program. See Limited Enrollment Programs section of this catalog for details. Requirements subject to change. Contact the Admissions Outreach Office for updated information.

¹ Group 2 math requirement is met by placement into MTH 080.

REAL ESTATE

See: Financial Services

REFRIGERATION AND AIR CONDITIONING TECHNOLOGY

See: Heating, Ventilation and Air Conditioning (HVAC)

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.

Required:

ITP	101	Introduction to Interpreting.....	3
ITP	110	Consecutive Interpreting: English to ASL ¹	3
ITP	111	Consecutive Interpreting: ASL to English ¹	3
ITP	120	Simultaneous Interpreting: English to ASL.....	3
ITP	121	Simultaneous Interpreting: ASL to English I.....	3
ITP	200	Transliteration and Educational Interpreting ²	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

¹ Prerequisites include a grade of B or better in ITP 101 and SGN 205 before ITP 110 and ITP 111 may be taken.

² ITP 201 (Topics in Interpreting) is an elective course and may be substituted for ITP 200 with the consent of the coordinator.

SUPPLY CHAIN MANAGEMENT

Associate in Applied Science Degree

This 61 credit-hour program is designed to provide in-service education for those persons working directly in, or in fields allied to, supply chain 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	Database Software	1
CIS	123	Spreadsheet Software	1
CIS	124	Advanced Spreadsheet Software	1
ENG	101	Composition	3
MAT	101	Supply Chain Management	3
MGT	111	Introduction to Business Organization	<u>3</u>
			16

Second Semester

ACC	102	Introduction to Managerial Accounting	3
ENG	130	Business Writing	3
MAT	elective ¹	.....	3
MGT	270	Principles of Management	3
PSY	245	Industrial/Organizational Psychology ²	<u>3</u>
			15

SECOND YEAR

First Semester

ACC	211	Business Law I	3
ECO	200	Introduction to Economics	3
MAT	electives ¹	.....	6
MGT	150	Business Math ³	<u>3</u>
			15

Second Semester

MAT	elective ¹	.....	3
		Supply Chain Management electives ⁴	9
PHI	150	Business Ethics	<u>3</u>
			15

¹ 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

² Prerequisite waived for Supply Chain Management students.

³ A competency test, available in the Assessment and Testing Center, 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.

⁴ Supply Chain Management electives:

MAT	226	Material Requirements Planning .....	.3
MAT	227	Just-In-Time (JIT) .....	.3
MAT	230	International Supply Chain Management .....	.3
MAT	259	Advanced Purchasing .....	.3
MAT	281	Topics in Supply Chain Management	-1-3
MGT	274	Operations Management .....	.3

SUPPLY CHAIN MANAGEMENT

Inventory/Production Control Certificate

This 12 credit-hour certificate program is designed for those currently employed in or seeking employment in the fields of inventory or production control. The coursework is specific to those jobs and issues that deal with all aspects of maintaining inventory for increasing production levels.

Required:

MAT	101	Supply Chain Management	3
MAT	120	Production Control Concepts.....	3
MAT	122	Inventory Control.....	3
MAT	226	Material Requirements Planning (MRP)	3

Supply Chain 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, supply chain management. 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	Supply Chain 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 Supply Chain Management.....	3
MAT	259	Advanced Purchasing	3

SUPPLY CHAIN MANAGEMENT

Physical Distribution Certificate

This 12 credit-hour certificate program is designed for those currently employed in or seeking employment in physical distribution positions. Topics covered will provide the graduate with knowledge of distributing, warehousing, stocking and shipping materials for various industries.

Required:

MAT	101	Supply Chain Management	3
MAT	121	Principles of Physical Distribution.....	3
MAT	122	Inventory Control.....	3
MAT	227	Just-In-Time (JIT)	3

Purchasing Certificate

This 12 credit-hour certificate program is designed for those currently employed in or seeking employment in purchasing positions in various industries. The curriculum emphasizes developing the competencies necessary for on-the-job purchasing management expertise.

Required:

MAT	101	Supply Chain Management	3
MAT	122	Inventory Control.....	3
MAT	125	Purchasing.....	3
MAT	259	Advanced Purchasing	3