

associate in
applied science



Codes throughout this section of the catalog represent major/field of study.

At press time, program information was current. For updated information, consult the college web site: www.cod.edu.

Accounting

AAS Degree, Three Certificates

The Accounting program is designed to provide the theoretical and practical background necessary for supervisory and administrative careers in accounting and accounting-related areas. This degree program consists of a minimum of 64 credits in general education, program requirements and program electives. The following list contains the required and elective courses.

AAS Degree Program Requirements

Code 3203

[	Accou	1110	Accounting Procedures	4
			OR	
[	Accou	1140	Financial Accounting	4
[	Accou	1150	Managerial Accounting	4
[	Accou	2205	Federal Taxation I	3
[	Accou	2241	Intermediate Accounting I	4
[	Accou	2242	Intermediate Accounting II	4
[	Accou	2251	Cost Accounting	3
[	Busin	1100	Introduction to Business	3
[	Cis	1150	Introduction to Computer	
			Information	3
[			OR	
[	Cis	1110	Using Computers: An Introduction	2
[	Ofi	1100	Introduction to Computer Keyboarding..	2
			OR	
[	Ofi	1210	Word Processing I	3
[	Econo	2201	Macroeconomics and the	
			Global Economy	3
[	Philo	1114	Business Ethics	3
			<u>35 to 37</u>	

Program Electives

Select at least 17 credits from below.

Accou	1175	Microcomputer Accounting	2
Accou	2200	Income Tax Return Preparation	3
Accou	2206	Federal Taxation II	3
Accou	2260	Advanced Accounting	3
Accou	2265	Governmental and Not-for-Profit	
		Accounting	3
Accou	2271	Auditing I	3
Accou	2272	Auditing II	3
Buslw	2211	Business Law I	3
Cis	1221	Introduction to Spreadsheets	3
Co-op	2861	Cooperative Education/Internship I	
		(Occupational)	1
Econo	2202	Macroeconomics and the	
		Global Economy	3
		<u>17</u>	

General Education12 to 16
(In addition to courses listed above)

Total Credits Required64 to 70

Certificates

The **Clerical Accounting certificate** requires a minimum of 16 credits in the courses listed below. Code 4205

[	Accou	1110	Accounting Procedures	4
			OR	
[	Accou	1140	Financial Accounting	4
[	Accou	1175	Microcomputer Accounting	2
[	Cis	1150	Introduction to Computer	
			Information Systems	3
[			OR	
[	Cis	1110	Using Computers: An Introduction	2
[	Engli	1101	English Composition I	3
[	Math	1100	Business Mathematics	3
[	Ofi	1100	Introduction to Computer Keyboarding..	2

The **Accounting certificate** requires a minimum of 32 credits in the courses listed below. Code 4207

[	Accou	1110	Accounting Procedures	4
			OR	
[	Accou	1140	Financial Accounting	4
[	Accou	1150	Managerial Accounting	4
[	Accou	1175	Microcomputer Accounting	2
[	Accou	2205	Federal Taxation I	3
			OR	
[	Accou	2251	Cost Accounting	3
[			OR	
[	Accou	2200	Income Tax Return Preparation	3
[	Busin	1100	Introduction to Business	3
[	Cis	1150	Introduction to Computer	
			Information Systems	3
[			OR	
[	Cis	1110	Using Computers: An Introduction	2
[	Cis	1221	Introduction to Spreadsheets	3
[	Engli	1101	English Composition I	3
[	Math	1100	Business Mathematics	3
[	Ofi	1100	Introduction to Computer Keyboarding..	2
[	Ofi	1210	Word Processing I	3

Advanced Accounting certificate, Code 4209

Current Requirements to Sit for the Illinois CPA Examination

- (1) To be admitted to take the CPA Examination, a candidate in Illinois must have successfully completed at least 150 semester hours of acceptable credit including a baccalaureate or higher degree, including a minimum number of hours in accounting and business courses. CPA Exam candidates having a non-accounting business degree who then earn the Advanced Accounting certificate will accumulate more than the minimum number of hours required. However, all of the courses required to earn this certificate are considered essential for successful CPA Exam candidates.
- (2) The Advanced Accounting certificate is designed for CPA Examination candidates who have already

earned a degree with a business-related major (for example, management, marketing, etc.) other than accounting.

- (3) The Advanced Accounting certificate is also designed for CPA Examination candidates who have already earned a degree with a non-business major. However, to meet the minimum semester hours required in business courses to be eligible to sit for the exam, candidates are encouraged to choose from among the following courses (all of which are three credit hours): Business 1100 (Introduction to Business), Business 2210 (Principles of Finance), Business 2200 (Budgeting), Business 2255 (International Business), Business 2260 (International Finance), Economics 2201 (Economics I), Economics 2202 (Economics II), Management 2210 (Principles of Management), Management 2220 (Organizational Behavior), Marketing 2210 (Principles of Marketing), and Philosophy 1114 (Business Ethics).
- (4) A computer information systems course, which includes coverage of word processing and spreadsheet applications, will not count toward the accounting or business hours required, but is also considered essential.

The **Advanced Accounting certificate** requires a total of 43 credits that must be earned by successfully completing the following required courses:

Accou	1140	Financial Accounting	4
Accou	1150	Managerial Accounting	4
Accou	2205	Federal Taxation I	3
Accou	2206	Federal Taxation II	3
Accou	2241	Intermediate Accounting I	4
Accou	2242	Intermediate Accounting II	4
Accou	2251	Cost Accounting	3
Accou	2260	Advanced Accounting	3
Accou	2265	Governmental and Not-for-Profit Accounting	3
Accou	2271	Auditing I	3
Accou	2272	Auditing II	3
Buslw	2211	Business Law I	3
Buslw	2212	Business Law II	3

Advertising, Design and Illustration

AAS Degree, Five Certificates

The mission of the Advertising, Design and Illustration program is to help students develop skills necessary to build a portfolio that demonstrates their creative, problem-solving, and verbal presentation abilities, applicable to the professional fields of advertising, graphic design, and illustration. This portfolio can be used to seek entrance to a baccalaureate-granting institution or art school, or to represent talent and skill levels as the student seeks professional employment in a creative field.

The Graphic Design and Illustration degree consists of 18 credits in general education, and 48 hours in program requirements, totaling 68 credits. The following list contains the required courses.

AAS Degree Program Requirements Code 3513

Adsgn	1100	Drawing for Design I	3
Adsgn	1102	Design I	3
Adsgn	1104	Drawing for Design	3
Adsgn	1105	Design II: Typography	3
Adsgn	1106	Three-Dimensional Design	3
Adsgn	1107	Image Creation and Composition	3
Adsgn	1108	Digital Illustration for Design	3
Adsgn	2201	Design III	3
Adsgn	2202	Web/Interactive Design I	3
Adsgn	2203	Design for Advertising	3
Adsgn	2204	Advanced Illustration	3
Adsgn	2205	Design IV	3
Adsgn	2206	Web/Interactive Design II	3
Adsgn	2207	Media Campaign	3
Adsgn	2208	Portfolio Seminar	3
Graph	1102	Introduction to Graphic Publishing Applications	3
			48

General Education 18
(In addition to courses listed above)

Electives 2
2 hours in any 1000 or 2000-level courses

Total Credits Required 68

Certificates

The **Advertising Design certificate** prepares students to be creative professionals and requires 24 in the courses listed below. Code 4515

Adsgn	1100	Drawing for Design I	3
Adsgn	1102	Design I	3
Adsgn	1105	Design II: Typography	3
Adsgn	1104	Drawing for Design II	3
Adsgn	2203	Design for Advertising	3
Adsgn	2207	Media Campaign	3
Adsgn	2208	Portfolio Seminar	3
Graph	1102	Introduction to Graphic Publishing Applications	3
			24

The **Advertising, Design and Illustration Foundation certificate** requires 24 credits in the courses listed below. Code 4516

Adsgn	1100	Drawing for Design I	3
Adsgn	1102	Design I	3
Adsgn	1104	Drawing for Design II	3
Adsgn	1105	Design II: Typography	3
Adsgn	1106	Three-Dimensional Design	3
Adsgn	1107	Image Creation and Composition	3
Adsgn	1108	Digital Illustration for Design	3
Graph	1102	Introduction to Graphic Publishing Applications	3
			24

The **Graphic Design and Illustration Advanced certificate** requires 24 credits in the courses listed below.
Code 4517

Adsgn	2201	Design III	3
Adsgn	2202	Web/Interactive Design I	3
Adsgn	2203	Design for Advertising	3
Adsgn	2204	Advanced Illustration	3
Adsgn	2205	Design IV	3
Adsgn	2206	Web/Interactive Design II	3
Adsgn	2207	Media Campaign	3
Adsgn	2208	Portfolio Seminar	3
			24

The **Web Design certificate** requires 21 credits in the courses listed below. Code 4520

Adsgn	1102	Design I	3
Adsgn	1105	Design II: Typography	3
Adsgn	1107	Image Creation and Composition	3
Adsgn	2202	Web/Interactive Design I	3
Adsgn	2206	Web/Interactive Design II	3
Adsgn	1108	Digital Illustration for Design	3
Graph	1102	Introduction to Graphic Publishing Applications	3
			21

The **Illustration certificate** is designed for students seeking a focus in Illustration and requires 24 credits in the courses listed below. Code 4521

Adsgn	1100	Drawing for Design I	3
Adsgn	1104	Drawing for Design II	3
Adsgn	2204	Advanced Illustration	3
Adsgn	2209	Anatomy and Figure	3
Adsgn	2210	Cartooning	3
Adsgn	1102	Design I	3
Adsgn	1821	Selected Topics in Advertising, Design and Illustration	3
Adsgn	2208	Portfolio Seminar	3
			24

Heating, Air Conditioning and Refrigeration

AAS Degree, Two Certificates

The Heating, Air Conditioning and Refrigeration program offers training in current technology for diagnosing, servicing, repairing, installing and managing heating, air conditioning and refrigeration energy systems.

The Service Technician degree consists of a minimum of 64 credits in general education and program requirements. The following list contains the required courses.

AAS Degree Program Requirements

Code 3902

Airc	1100	Refrigeration Principles	3
Airc	1105	Introduction to Safety, Materials and Equipment	3

Airc	1110	Introduction to Controls	3
Airc	1108	Refrigerant Certification	1
Airc	1180	Introduction to Heating	5
Airc	1186	Introduction to Hydronics	2
Airc	2201	Residential Air Conditioning	3
Airc	2202	Commercial Air Conditioning	3
Airc	2210	Commercial Refrigeration	5
Airc	2225	Troubleshooting Systems	3
Airc	2240	Load Calculations and Duct Design	5
			36

Electives5
Select 5 credits from any 1000- or 2000-level courses.

Program Electives5
Select at least 5 credits from the courses below.

Airc	1112	Residential Refrigeration	3
Airc	1161	Introduction to Sheet Metal	2
Airc	1187	Central Heating Plants	3
Airc	2205	Heat Pumps	2
Airc	2220	Installation	3
Airc	2230	Advanced Controls	3
Airc	2236	Central Cooling Plants	3
Airc	2241	Industrial Air Conditioning Design	3
Airc	2250	System Balancing	2
Co-op	2861	Cooperative Education/Internship (Occupational)	1

General Education18 to 20
(In addition to courses listed above)

Total Credits Required 64 to 66

Certificates

The **Stationary Operator certificate** requires a minimum of 31 credits in the courses listed below.
Code 4901

Airc	1100	Refrigeration Principles	3
Airc	1105	Introduction to Safety, Materials and Equipment	3
Airc	1110	Introduction to Controls	3
Airc	1108	Refrigerant Certification	1
Airc	1180	Introduction to Heating	5
Airc	1186	Introduction to Hydronics	2
Airc	1187	Central Heating Plants	3
Airc	2202	Commercial Air Conditioning	3
Airc	2230	Advanced Controls	3
Airc	2236	Central Cooling Plants	3
Airc	2250	System Balancing	2
			31

The **Service Technician certificate** requires 34 credits in the courses listed below. Code 4902

Airc	1100	Refrigeration Principles	3
Airc	1105	Introduction to Safety, Materials and Equipment	3
Airc	1110	Introduction to Controls	3
Airc	1161	Introduction to Sheet Metal	2
Airc	1108	Refrigerant Certification	1
Airc	1180	Introduction to Heating	5
Airc	2201	Residential Air Conditioning	3

Airc	2202	Commercial Air Conditioning	3
Airc	2210	Commercial Refrigeration	5
Airc	2220	Installation.....	3
Airc	2225	Troubleshooting Systems	3
			34

Architecture

Four AAS Degrees, Three Certificates

Architectural Technology Degree Option

The Architectural Technology degree includes the core group of architecture courses as well as courses designed to prepare students for immediate entry into the workplace as a drafter. This degree program consists of a minimum of 66 required credits from courses listed below.

Program Requirements

Code 3921

Arch	1100	Introduction to Architecture	3
Arch	1101	Basic Architectural Drafting	2
Arch	1111	Building Materials	4
Arch	1121	Architectural Design Communication.....	4
Arch	1131	Introduction to Architectural Design.....	4
Arch	2102	Frame and Masonry Construction.....	4
Arch	2103	Steel and Concrete Construction	4
Arch	2210	Mechanical, Electrical and Plumbing Systems	3
Arch	2230	Structural Systems.....	3
Arch	2240	Codes, Specifications and Contracts.....	3
Arch	1211	Basic Computer-Aided Drafting — AutoCad	3
Arch	1212	Advanced Computer-Aided Drafting — AutoCad	3
Cadd	2220	Architectural Modeling	2
Arch	2220	Architectural Computer Modeling.....	2
Engli	1101	English Composition I	3
Physi	1201	General Physics I.....	5
Math	1431	Precalculus I	5
			57

Program Electives

(In addition to those courses listed above)

Arch	2260	Construction Estimating	3
Arch	2840	Architectural Experimental/ Pilot Class.....	1 to 6
CIT	1121	Networking Basics.....	3
Inter	1120	Interior Systems.....	2
Inter	1170	Environmental Materials and Applications	3
Photo	1101	Foundations of Digital Photography	3

General Education.....9

(In addition to courses listed above)

Speech.....	3
Humanities	3
Social and Behavioral Science.....	3

Total Credits Required.....66

Pre-Architecture Degree Option

The Pre-Architecture degree includes the core group of architecture courses as well as courses designed to

prepare students for transfer to baccalaureate or professional programs. The second year curriculum emphasizes portfolio production while the electives allow students to customize their curriculum to match the transfer institution. The degree program consists of a minimum of 65 credits from courses listed below.

Program Requirements

Code 3922

Arch	1100	Introduction to Architecture	3
Arch	1111	Building Materials	4
Arch	1121	Architectural Design Communication.....	4
Arch	1131	Introduction to Architectural Design.....	4
Arch	2201	Architectural Design I	5
Arch	2202	Architectural Design II	5
Arch	2203	Introduction to Architectural Theory	3
Arch	2250	Architectural Presentation and Portfolio	3
Arch	1211	Basic Computer-Aided Drafting — AutoCad	3
Cadd	2220	Architectural Modeling	2
		OR	
Arch	2220	Architectural Computer Modeling.....	2
Engli	1101	English Composition I	3
Math	1431	Precalculus I	5
Speec	1100	Fundamentals of Speech Communication	3
		OR	
Speec	1120	Small-Group Communication	3
		OR	
Speec	1150	Introduction to Business Communication	3
			47

Electives.....9

9 hours in any 1000- or 2000-level courses

General Education.....9 to 10

(In addition to courses listed above)

Total Credits Required.....65

Construction Management Technology Degree Option

The Construction Management Technology degree combines a variety of architecture and business classes to prepare students for entry level positions in construction management and construction firms. The certificate consists of a minimum of 66 credits from courses listed below.

Program Requirements

Code 3924

Arch	1111	Building Materials	4
Arch	1130	Blueprint Reading.....	2
Arch	1141	Construction Methods I.....	2
Arch	1301	Introduction to Construction Management	3
Arch	2142	Construction Methods II.....	2
Arch	2150	Basic Surveying.....	2
Arch	2240	Codes, Specifications and Contracts.....	3
Arch	2260	Construction Estimating.....	3
Arch	2270	Construction Scheduling	3

Accou	1140	Financial Accounting	4
Manag	1100	Supervision	3
Manuf	2280	Industrial Safety	2
Engli	1101	English Composition I	3
Philo	1114	Business Ethics	3
Physi	1100	Physics	4
		OR	
Physi	1161	Technical Physics I	4
Math	1115	Technical Mathematics I	3
		OR	
Math	1533	Finite Mathematics I	4
Cis	1150	Introduction to Computer	
		Information Systems	3
			49 to 50
Program Electives .....11 to 12			
Arch	1100	Introduction to Architecture	3
Arch	1101	Basic Architectural Drafting	2
Arch	1211	Basic Computer-Aided Drafting — AutoCad	3
Arch	1212	Advanced Computer-Aided Drafting— AutoCad	3
Arch	2102	Frame and Masonry Construction	4
Arch	2103	Steel and Concrete Construction	4
Arch	2110	Advanced Architectural CADD	3
Arch	2150	Basic Surveying	2
Arch	2210	Mechanical, Electrical and Plumbing Systems	3
Arch	2230	Structural Systems	3
Engli	1102	English Composition II	3
Engli	1105	Introduction to Technical Writing	3
Engli	1110	Technical Writing	3
Manuf	1160	Technical Static and Strength of Material	4
Math	1635	Statistics	4
			11 to 12

General Education6
(In addition to courses listed above)

Total Credits Required66 to 68

Construction Supervision Degree Option

The Construction Supervision degree combines a variety of architecture and business classes with extensive cooperative work experience to prepare students for supervisory and administrative positions in the construction industry. This degree is designed to coordinate with union apprenticeship programs. It consists of a minimum of 67 credits from courses listed below.

Program Requirements

Code 3934			
Arch	1111	Building Materials	4
Arch	1130	Blueprint Reading	2
Arch	1301	Introduction to Construction Management	3
Arch	2150	Basic Surveying	2
Arch	2240	Codes, Specifications and Contracts	3
Arch	2260	Construction Estimating	3

Arch	2270	Construction Scheduling	3
Arch	2864	Cooperative Education/ Internship (Occupational)	4
Arch	2864	Cooperative Education/ Internship (Occupational)	4
Accou	1140	Financial Accounting	4
Manag	1100	Supervision	3
Manuf	2280	Industrial Safety	2
Engli	1101	English Composition I	3
Physi	1161	Technical Physics I	4
		OR	
Physi	1100	Physics	
Math	1115	Technical Mathematics I	3
		OR	
Math	1533	Finite Mathematics	4
Philo	1114	Business Ethics	3
Cis	1150	Introduction to Computer Information Systems	3
Educa	1105	Career Development	2
Educa	1115	College Success Skills	2
			57 to 58

Program Electives.....4

4 hours in any of the following:

Arch	1100	Introduction to Architecture	3
Arch	1101	Basic Architectural Drafting	2
Arch	1211	Basic Computer-Aided Drafting — AutoCad	3
Arch	1212	Advanced Computer-Aided Drafting — AutoCad	3
Arch	2102	Frame and Masonry Construction	4
Arch	2103	Steel and Concrete Construction	4
Arch	2210	Mechanical, Electrical and Plumbing Systems	3
Arch	2230	Structural Systems	3
Engli	1102	English Composition II	3
Engli	1105	Introduction to Technical Writing	3
Engli	1110	Technical Writing	3
Manuf	1160	Technical Static and Strength of Material	4
Math	1635	Statistics	4

General Education6
(In addition to the courses listed above)

Speech	3
Social and Behavioral Science	3

Total Credits Required67 to 68

Certificates

The **Architectural Rendering certificate** requires 18 credits in the courses listed below and gives students specific skills for preparing professional architectural presentations in a variety of media. Students should have a background in architecture or art. Code 4919

Arch	1121	Architectural Design Communication	4
Arch	2250	Architectural Presentation and Portfolio	3
Arch	1212	Advanced Computer-Aided Drafting — AutoCad	3

{	Cadd	2220	Architectural Modeling	2
			OR	
	Arch	2220	Architectural Computer Modeling.....	2
	Photo	1101	Foundations of Digital Photography	3
Art	2221	Painting I	3	

The **Pre-Architecture certificate** requires 34 to 37 credits in the courses listed below. It provides students with the group of classes commonly required for transfer to an architectural program. Code 4920

Program Requirements

Arch	1100	Introduction to Architecture	3
Arch	1121	Architectural Design Communication.....	4
Arch	1131	Introduction to Architectural Design.....	4
Arch	2201	Architectural Design I	5
Arch	2250	Architectural Presentation and Portfolio.....	3
			19

Program Electives5 to 8
2 of the following courses based on transfer institution requirements. Requires approval by architecture adviser.

Arch	1211	Basic Computer-Aided Drafting — AutoCad	3
Arch	1212	Advanced Computer-Aided Drafting — AutoCad	3
Arch	2202	Architectural Design II	5
Arch	2203	Introduction to Architectural Theory	3
Arch	2220	Architectural Computer Modeling.....	2

General Education10
10 hours minimum based on transfer institution requirements. Requires approval by architecture adviser.

Total Credits Required34 to 37

The **Architectural Technology certificate** requires 35 credits in the courses listed below and prepares students for entry level positions as drafters in architectural or construction firms. Code 4921

Arch	1101	Basic Architectural Drafting	2
Arch	1111	Building Materials	4
Arch	2102	Frame and Masonry Construction.....	4
Arch	2103	Steel and Concrete Construction	4
Arch	2110	Advanced Architectural CADD.....	3
Arch	2210	Mechanical, Electrical and Plumbing Systems.....	3
Arch	2230	Structural Systems.....	3
Arch	2240	Codes, Specifications and Contracts.....	3
Arch	2260	Construction Estimating.....	3
Arch	1211	Basic Computer-Aided Drafting — AutoCad	3
Arch	1212	Advanced Computer-Aided Drafting — AutoCad	3

Automotive Service Technology

AAS Degree, Certificate

The Automotive Service Technology program is designed to prepare students for career entry or career advancement in the automotive field. Students will learn

skills in diagnosing, servicing and maintaining today's sophisticated vehicles. This program is NATEF-certified. This degree program consists of a minimum of 64 credits in general education, program requirements and electives. The following list contains the required courses.

AAS Degree

Program Requirements

Code 3909

Auto	1110	Engine Design and Operation	4
Auto	1120	Manual Drive Train and Axles	4
Auto	1131	Automotive Basic Electricity	4
Auto	1140	Suspension, Steering and Alignment	4
Auto	1232	Automotive Engine Electricity	4
Auto	1240	Braking Systems	4
Auto	1250	Automotive Air Conditioning and Heating	4
Auto	1261	Engine Controls and Emissions I.....	4
Auto	2120	Automatic Transmission	4
Auto	2162	Engine Controls and Emissions II	4
Auto	2180	Automotive Service	6
			46

Complete a course from the Global Studies/Multicultural Studies or Contemporary Life Skills category.

General Education18 to 22
(In addition to courses listed above)

Total Credits Required64 to 68

Certificate

The **Automotive Service Technology certificate** requires 46 credits in the courses listed below. Code 4909

Auto	1110	Engine Design and Operation	4
Auto	1120	Manual Drive Train and Axles	4
Auto	1131	Automotive Basic Electricity	4
Auto	1140	Suspension, Steering and Alignment	4
Auto	1232	Automotive Engine Electricity	4
Auto	1240	Braking Systems	4
Auto	1250	Automotive Air Conditioning and Heating	4
Auto	1261	Engine Controls and Emissions I.....	4
Auto	2120	Automatic Transmission	4
Auto	2162	Engine Controls and Emissions II	4
Auto	2180	Automotive Service	6
			46

Computer Information Systems (CIS)

Two AAS Degree Options, 11 Certificates

The Computer Information Systems program prepares students to work in the field of computer technology.

AAS Degrees

The **Microcomputer Specialist degree program** consists of a total of 64 credits in program requirements, program electives and general education. The following list contains the required courses, some of which may be used to meet general education requirements.

Program Requirements

Code 3216

Cis	1120	The Internet.....	2
Cis	1130	Windows Basics.....	2
Cis	1150	Introduction to Computer Information Systems.....	3
Cis	1160	Windows Command Line (DOS)	2
Cis	1180	Introduction to Networking.....	3
Cis	1205	Office Suite Software and Integration	3
Cis	1221	Introduction to Spreadsheets	3
Cis	1222	Advanced Spreadsheets	2
Cis	1230	Microcomputer Database Application	3
Cis	1310	HTML and CSS.....	3
Cis	1400	Programming Logic and Technique.....	4
Cis	2770	Introduction to System Analysis and Design.....	3
Accou	1110	Accounting Procedures	4
		OR	
Accou	1140	Financial Accounting	4
			37

Program Electives.....9
Select 5 to 9 hours from any Cis courses except Cis 1110.

General Education18
(In addition to courses listed above)

Total Credits Required.....64

The **Application Programmer degree program** consists of a minimum of 64 credits in program requirements, program electives, emphasis courses and general education. The following list contains the required courses, some of which may be used to meet general education requirements.

Program Requirements

Code 3222

Cis	1150	Introduction to Computer Information Systems.....	3
Cis	1160	Windows Command Line (DOS)	2
		OR	
Cis	1230	Microcomputer Database Application	3
		OR	
Cis	1310	HTML and CSS.....	3
Cis	1400	Programming Logic and Technique.....	4
Cis	1450	Introduction to Linux/Unix Operating Systems.....	3
Cis	1230	Microcomputer Database Application	3
OR			
Cis	2710	Database Management	4
Cis	2541	C++ Language Programming	4
Cis	2542	Advanced C++ with Data Structure Applications	4
Cis	2770	Introduction to System Analysis and Design.....	3
Cis	2790	Systems Analyst Simulation	3
			29 to 31

Emphases Courses

Choose Java, Visual Basic or C++ emphasis.

Java Emphasis8
The following courses are required in addition to core program requirements.

Cis	2571	Introduction to Java	4
Cis	2572	Applications in Java.....	4

Visual Basic Emphasis10
The following courses are required in addition to core program requirements.

Cis	1130	Windows Basics.....	2
Cis	1510	Graphical User Interface Programming	4
Cis	2510	Advanced Graphical User Interface Programming.....	4

Visual C++ Emphasis8
The following courses are required in addition to core program requirements.

Cis	2551	Introduction to MS Visual C++ .NET Programming.....	4
Cis	2552	Object-oriented Program Development with VC++ .NET	4

Program Electives1 to 9

Select from any 1000- or 2000-level Cis courses except 1110 and 1205. The following courses are recommended:
Cis 1600 Fundamentals of Operating Systems3
Cis 2420 Microprocessor Assembly Language.....4

General Education18
(In addition to those listed above)

Total Credits Required.....64

Certificates

The **Microcomputer Software certificate** requires 35 credits in the courses listed below. Code 4924

Cis	1120	The Internet.....	2
Cis	1130	Windows Basics.....	2
Cis	1150	Introduction to Computer Information Systems.....	3
Cis	1160	Windows Command Line (DOS)	2
Cis	1180	Introduction to Networking.....	3
Cis	1205	Office Suite Software and Integration	3
Cis	1221	Introduction to Spreadsheets	3
Cis	1222	Advanced Spreadsheets	2
Cis	1230	Microcomputer Database Application	3
Cis	1240	Presentation Graphics — Windows Based.....	2
Cis	1310	HTML and CSS.....	3
Cis	1400	Programming Logic and Technique.....	4
Cis	1600	Fundamentals of Operating Systems	3

The **UNIX certificate** requires 16 credits in the courses listed below. Code 4929

Program Requirements

Cis	1150	Introduction to Computer Information Systems	3
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Cis 1400 Programming Logic and Technique.....4
 Cis 1450 Introduction to Linux/Unix
 Operating Systems.....3
 Cis 2440 Shell Programming for UNIX/LINUX.....3
 Cis 2450 UNIX System Administration3

The **Database Proficiency certificate** requires 16 credits in the courses listed below. Code 4932

Cis 1130 Windows Basics.....2
 Cis 1150 Introduction to Computer Information
 Systems.....3
 Cis 1230 Microcomputer Database Application3
 Cis 1290 Visual Basic for Applications in
 MSOffice.....4
 Cis 1400 Programming Logic and Technique.....4

The **Spreadsheet Proficiency certificate** requires 17 credits in the courses listed below. Code 4933

Cis 1130 Windows Basics.....2
 Cis 1150 Introduction to Computer Information
 Systems.....3
 Cis 1205 Office Suite Software and Integration3
 Cis 1221 Introduction to Spreadsheets3
 Cis 1222 Advanced Spreadsheets2
 Cis 1400 Programming Logic and Technique.....4

The **Web Programmer certificate** requires 31 credits in the courses listed below. Code 4934

Cis 1120 The Internet.....2
 Cis 1130 Windows Basics.....2
 Cis 1150 Introduction to Computer Information
 Systems.....3
 Cis 1180 Introduction to Networking.....3
 Cis 1300 Web Design Software.....3
 Cis 1310 HTML and CSS.....3
 Cis 1400 Programming Logic and Technique.....4
 Cis 2320 JavaScript and Advanced HTML.....3
 Cis 2571 Introduction to Java4
 Cis 2572 Applications in Java.....4

The **Visual BASIC Language Proficiency certificate** requires 15 credits in the courses listed below. Code 4936

Cis 1150 Introduction to Computer
 Information Systems3
 Cis 1400 Programming Logic and Technique.....4
 Cis 1510 Graphical User Interface Programming...4
 Cis 2510 Advanced Graphical User Interface
 Programming.....4

The **C++ Language Proficiency certificate** requires 15 credits in the courses listed below. Code 4937

Cis 1150 Introduction to Computer
 Information Systems3
 Cis 1400 Programming Logic and Technique.....4
 Cis 2541 C++ Language Programming4
 Cis 2542 Advanced C++ with Data Structure
 Applications4

The **Web Technician certificate** requires 20 credits in the courses listed below. Code 4939

Cis 1120 The Internet.....2
 Cis 1130 Windows Basics.....2
 Cis 1150 Introduction to Computer Information
 Systems.....3
 Cis 1300 Web Design Software.....3
 Cis 1310 HTML and CSS.....3
 Cis 1400 Programming Logic and Technique.....4
 Cis 2320 JavaScript and Advanced HTML.....3

The **Visual C++ Language Proficiency certificate** requires 23 credits in the courses listed below. Code 4946

Cis 1150 Introduction to Computer Information
 Systems.....3
 Cis 1400 Programming Logic and Technique.....4
 Cis 2541 C++ Language Programming4
 Cis 2542 Advanced C++ with Data Structure
 Applications.....4
 Cis 2551 Introduction to MS Visual C++
 .NET Programming4
 Cis 2552 Object-oriented Program Development
 with VC++ .NET.....4

The **JAVA Language Proficiency certificate** requires 15 credits in the courses listed below. Code 4947

Cis 1150 Introduction to Computer Information
 Systems.....3
 Cis 1400 Programming Logic and Technique.....4
 Cis 2571 Introduction to Java4
 Cis 2572 Applications in Java.....4

The **LINUX certificate** requires 16 credits in the courses listed below. Code 4949

Cis 1150 Introduction to Computer Information
 Systems 3
 Cis 1400 Programming Logic and Technique.....4
 Cis 1450 Introduction to Linux/Unix Operating
 Systems 3
 Cis 2440 Shell Programming for UNIX/LINUX.....3
 Cis 2455 LINUX System Administration3

Computer and Internetworking Technologies (CIT)

AAS Degree, Four Certificates

The Computer and Internetworking Technologies program is designed to provide the student a broad exposure to electronic fundamentals with specialty training in the servicing and maintenance of digital and microprocessor-based equipment. Upon completion of the program, the student will possess the skills and educational background needed by electronic professionals employed in various microprocessor and computer-related fields.

This program consists of a minimum of 67 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements.

**AAS Degree
Program Requirements**
Code 3916

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1101	Electricity and Electronics Fundamentals.....	3
Elect	1102	Circuits II.....	4
Cit	1121	Networking Basics.....	3
Cit	1122	Routers and Routing Basics.....	3
Cit	1123	Switching Basics and Intermediate Routing.....	3
Cit1	124	WAN Technologies.....	3
Cit	1131	PC Maintenance and Upgrading.....	2
Cit	2231	Computer and Hardware Maintenance....	3
Cit	2233	Advanced System Maintenance	3
Cit	2235	Data Communications and Networks	3
Physi	1100	Physics.....	4
Math	1431	Precalculus I	5
Math	1432	Precalculus II: Trigonometry.....	3
Cis	1400	Programming Logic and Technique.....	4
			48

Program Electives

Select at least 7 credits from the following courses.

Cit	2241	Building Scalable Cisco Networks	4
Cit	2242	Building Cisco Remote Access Networks	4
Cit	2243	Building Cisco Multilayer Switched Networks.....	4
Cit	2244	Cisco Internetwork Troubleshooting.....	4
Elect	1120	Electronic Documentation.....	2
Elect	1130	Electronics Materials and Fabrication	2
Elect	1151	Electronic Devices and Applications I.....	4
Elmec	1300	Introduction to Fiber Optics.....	3
			7

General Education12
(In addition to courses listed above)

Total Credits Required.....67

Certificates

The **Microcomputer Servicing Technician certificate** requires a minimum of 18 credits in the courses listed below. Code 4914

Elect	1100	Electricity and Electronics Fundamentals.....	2
Cit	1131	PC Maintenance and Upgrading.....	2
Cit	2231	Computer and Hardware Maintenance....	3
Cit	2233	Advanced System Maintenance	3
Cit	2235	Data Communications and Networks	3
Math	1431	Precalculus I	5

The **Network Professional certificate** requires a minimum of 16 credits in the courses listed below. Code 4915

Cit	2241	Building Scalable Cisco Networks	4
Cit	2242	Building Cisco Remote Access Networks	4
Cit	2243	Building Cisco Multilayer Switched Networks	4
Cit	2244	Cisco Internetwork Troubleshooting.....	4

The **Computer and Internetworking Technologies certificate** requires a minimum of 44 credits in the courses listed below. Code 4916

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1101	Electricity and Electronics Fundamentals.....	3
Elect	1102	Circuits II.....	4
Cit	1121	Networking Basics.....	3
Cit	1122	Routers and Routing Basics.....	3
Cit	1123	Switching Basics and Intermediate Routing.....	3
Cit	1124	WAN Technologies.....	3
Cit	1131	PC Maintenance and Upgrading.....	2
Cit	2231	Computer and Hardware Maintenance....	3
Cit	2233	Advanced System Maintenance.....	3
Cit	2235	Data Communications and Networks	3
Math	1431	Precalculus I	5
AND			
Math	1432	Precalculus II: Trigonometry.....	3
Cis	1400	Programing Logic and Technique	4

The **Internetworking Technician certificate** requires a minimum of 12 credits in the courses listed below. Code 4918

Cit	1121	Networking Basics.....	3
Cit	1122	Routers and Routing Basics.....	3
Cit	1123	Switching Basics and Intermediate Routing.....	3
Cit	1124	WAN Technologies.....	3

Cosmetology

AAS Degree, Certificate

Students will learn professional level techniques in hair design, chemical processes, esthetics, and nail technology. Prepares students for state certification for the Illinois Cosmetology License from the Department of Professional and Financial Regulations.

The **Cosmetology degree option** consists of a minimum of 65 credits in program requirements and general education courses.

Program Requirements

Code 3528			
Cosme	1101	Salon Safety and Sanitation I.....	2
Cosme	1105	Introduction to Basic Hairstyling I.....	3
Cosme	1103	Cosmetic Chemical Services I.....	3
Cosme	1107	Introduction to Basic Thermal Styling I.....	2
Cosme	1111	Introduction to Hair Styling II	2
Cosme	1113	Introduction to Chemical Services II.....	3
Cosme	1115	Salon Operations I.....	3
Cosme	1117	Introduction to Esthetics and Nail Technology I.....	2
Cosme	1120	License Review I.....	2
Cosme	2223	Advanced Chemical Services I	3
Cosme	2201	Hairstyling III	3
Cosme	2203	Chemical Services III.....	3
Cosme	2205	Advanced Esthetics and Nail Technology	2

Cosme	2207	Salon Safety and Sanitation II.....	2
Cosme	2221	Advanced Hair Styling.....	2
Cosme	2225	Salon Operations II.....	3
Cosme	2227	Advanced Thermal Styling.....	2
Cosme	2253	Advanced Chemical Services II.....	2
Cosme	2250	License Review II.....	2
			<hr/>
			46

General Education19

Student must complete a total of 19 semester hours of general education requirements including Chemistry 1105 and Speech 1120.

Total Credits Required65

Certificate

The **Cosmetology certificate** requires 46 credits in the courses listed below. Code 4528

Cosme	1101	Salon Safety and Sanitation I.....	2
Cosme	1105	Introduction to Basic Hairstyling I.....	3
Cosme	1103	Cosmetic Chemical Services I.....	3
Cosme	1107	Introduction to Basic Thermal Styling I.....	2
Cosme	1111	Introduction to Hair Styling II.....	2
Cosme	1113	Introduction to Chemical Services II.....	3
Cosme	1115	Salon Operations I.....	3
Cosme	1117	Introduction to Esthetics and Nail Technology I.....	2
Cosme	1120	License Review I.....	2
Cosme	2223	Advanced Chemical Services I.....	3
Cosme	2201	Hairstyling III.....	3
Cosme	2203	Chemical Services III.....	3
Cosme	2205	Advanced Esthetics and Nail Technology.....	2
Cosme	2207	Salon Safety and Sanitation II.....	2
		AND	
Cosme	2221	Advanced Hair Styling.....	2
Cosme	2225	Salon Operations II.....	3
Cosme	2227	Advanced Thermal Styling.....	2
Cosme	2253	Advanced Chemical Services II.....	2
Cosme	2250	License Review II.....	2
			<hr/>
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Criminal Justice

AAS Degree, Certificate

The Criminal Justice program is designed to prepare students for career entry or career advancement in law enforcement and criminal justice agencies. This program is particularly useful for those pursuing careers with local and state law enforcement agencies and it can also prepare students for entry-level correctional and private security positions. Also, an Associate in Arts (AA) transfer option is available in Criminal Justice. This degree consists of a minimum of 64 credits in courses listed below.

Program Requirements

Code 3464

Crimj	1100	Introduction to Criminal Justice.....	3
Crimj	1151	Constitutional Law.....	3
			<hr/>
			6

Program Electives.....15
Select from any 1000- or 2000-level Criminal Justice courses (except Crmj 1100 and Crmj 1151).

Electives.....25
(Select from any 1000- or 2000-level courses.)

General Education.....18 to 22
(In addition to courses listed above)

Total Credits Required.....64

Certificate

The **Criminal Justice certificate** requires a minimum of 30 credits in the courses listed below. Code 4464

Crimj	1100	Introduction to Criminal Justice.....	3
Crimj	1151	Constitutional Law.....	3
Crimj	1152	Criminal Law.....	3
Crimj	1153	Rules of Evidence.....	3
Crimj	2230	Criminal Investigation.....	3
Crimj	2240	Juvenile Delinquency.....	3
Engli	1101	English Composition I.....	3
Pol S	1101	American Politics.....	3
Psych	1100	General Psychology.....	3
Socio	1100	Introduction to Sociology.....	3

Dental Hygiene

AAS Degree

The Dental Hygiene program prepares its graduates to provide comprehensive oral health care services in a variety of settings. Upon successful completion of the program and passing of the National Dental Hygiene Examination and Regional Board Examination, graduates will be eligible to apply for mandatory state licensure. This degree program consists of a minimum of 83 credits in general education and program requirements. The following list contains the required courses.

Program Requirements

Code 3117

Anat&	1551	Human Anatomy and Physiology I.....	4
		AND	
Anat&	1552	Human Anatomy and Physiology II.....	4
		OR	
Anat&	1571	Anatomy and Physiology with Cadaver I.....	4
		AND	
Anat&	1572	Anatomy and Physiology with Cadaver II.....	4
Chemi	1211	General Chemistry.....	5
		OR	
Chemi	1551	Principles of Chemistry I.....	5
Dehyg	1101	Principles in Dental Hygiene I.....	3
Dehyg	1102	Principles in Dental Hygiene II.....	2
Dehyg	1105	Dental Materials/Expanded Functions....	3
Dehyg	1112	Dental Radiology I.....	2
Dehyg	1115	Dental Tooth Anatomy and Morphology.....	2
Dehyg	1120	Preclinical Dental Hygiene I.....	1
Dehyg	1121	Clinical Dental Hygiene I.....	1
Dehyg	1125	Head and Neck Anatomy: Histology and Embryology.....	2

Dehyg	1135	Applied Nutrition and Biochemistry for the Dental Hygienist	2
Dehyg	1136	General and Oral Pathology	2
Dehyg	1145	Medical Emergencies in a Dental Office ..	1
Dehyg	2201	Dental Hygiene Theory I	2
Dehyg	2202	Dental Hygiene Theory II	2
Dehyg	2211	Periodontics I	2
Dehyg	2212	Periodontics II	2
Dehyg	2213	Dental Radiology II	2
Dehyg	2222	Clinical Dental Hygiene II	2
Dehyg	2223	Clinical Dental Hygiene III	2
Dehyg	2224	Clinical Dental Hygiene IV	2
Dehyg	2225	Review of Dental Literature	1
Dehyg	2232	Community Dental Health I	2
Dehyg	2233	Community Dental Health II	2
Dehyg	2235	Dental Pharmacology and Local Anesthetics	2
Dehyg	2245	Ethics and Jurisprudence: Practice Management for the Dental Hygienist	2
Engli	1101	English Composition I	3
Math	1102	Mathematics for Health Sciences	3
Micro	1420	Microbiology	4
Psych	1100	General Psychology	3
Socio	1100	Introduction to Sociology	3
Speec	1100	Fundamentals of Speech Communication	3
			78

General Education	5
2 credits in a Contemporary Life Skills course and 3 additional credits in English composition	
Total Credits Required	83

Diagnostic Medical Imaging Nuclear Medicine

(Formerly Nuclear Medicine Technology)

Certificate

The **Nuclear Medicine Technology certificate** is a 15-month program that involves day and evening classes and clinical education three to four days a week. Upon successful completion, graduates become eligible to sit for the American Registry of Radiologic Technologists (ARRT) and the Nuclear Medicine Technologist Certification Board (NMTCB). The certificate program consists of 40 credits in the required courses listed below. Code 4173

Dmin	1100	Basics of Nuclear Medicine	3
Dmin	1101	Physics and Instrumentation in Nuclear Medicine	6
Dmin	1102	Nuclear Medicine Radiopharmacy	6
Dmin	1103	Radiation Biology and Radiation Safety Bridge	2
Dmin	1111	Clinical Nuclear Medicine I	3
Dmin	2200	Nuclear Medicine Procedures II	5
Dmin	2202	Nuclear Medicine Procedures III	5
Dmin	2211	Clinical Nuclear Medicine II	3
Dmin	2212	Clinical Nuclear Medicine III	3

Dmin	2221	Positron Emission Tomography I	3
Dmin	2222	Nuclear Medicine Review Seminar	1

Diagnostic Medical Imaging Radiography

(Formerly Radiologic Technology)

AAS Degree, Two Certificates

Radiologic Technology is a 24-month program in diagnostic medical radiography (X-ray technology), including extensive clinical experience. The degree program consists of a total of 71 credits in general education, program requirements and program electives. The following list contains the required courses, some of which may be used to meet general education requirements. Fully accredited by the Joint Review Committee on Education in Radiologic Technology.

Program Requirements

Code 3172

Anat&	1500	Survey of Human Anatomy and Physiology	4
		OR	
Anat&	1551	Human Anatomy and Physiology I	4
		OR	
Anat&	1571	Anatomy and Physiology with Cadaver I ..	4
Cis	1110	Using Computers: An Introduction	2
Dmir	1111	Clinical Education I	2
Dmir	1112	Clinical Education II	2
Dmir	1113	Clinical Education III	2
Dmir	1121	Radiographic Equipment	4
Dmir	1122	Image Formation and Evaluation	4
Dmir	1131	Radiographic Procedures I	4
Dmir	1132	Radiographic Procedures II	3
Dmir	1133	Radiographic Procedures III	3
Dmir	1140	Ethics and Law in Diagnostic Medical Imaging	1
Dmir	1151	Basic Pharmacology	1
Dmir	2201	Radiation Physics, Biology and Protection	3
Dmir	2211	Clinical Education IV	3
Dmir	2212	Clinical Education V	3
Dmir	2213	Clinical Education VI	3
Dmir	2225	Basic Pathophysiology	3
Dmir	2235	Quality Management in Diagnostic Imaging	2
Dmir	2240	Critical Radiographic Image Evaluation ..	3
Engli	1101	English Composition I	3
Hlths	1110	Biomedical Terminology	4
Math	1102	Mathematics for Health Sciences	3
		OR	
Math	1115	Technical Mathematics I	3
Speec	1100	Fundamentals of Speech Communication	3
		OR	
Speec	1120	Small-Group Communication	3
		OR	
Speec	1150	Introduction to Business Communication	3
			65

General Education6
(In addition to courses listed above)

Total Credits Required.....71

Certificates

The **Diagnostic Medical Imaging Radio Technology (Dmir) program** at College of DuPage is a three-semester certificate program that will allow graduates to become certified by the American Registry of Radiologic Technologists and practice as Radiation Therapy Technologists. It requires 39 credits in the courses listed below. Code 4174

Program Requirements

Dmir	2310	Radiation Therapy Physics.....	3
Dmir	2311	Radiation Biology and Protection	4
Dmir	2312	Quality Management in Radiation Therapy	3
Dmir	2101	Cross-sectional Anatomy	2
Dmir	2102	Pathophysiology for Radiation Therapy ..	3
Dmir	2103	Operational Issues in Radiation Therapy ..	3
Dmir	2301	Principles and Practice of Radiation Therapy I	4
Dmir	2302	Principles & Practice of Radiation Therapy II	4
Dmir	2303	Principles and Practice of Radiation Therapy III.....	4
Dmir	2111	Clinical Practice I	3
Dmir	2112	Clinical Practice II	3
Dmir	2113	Clinical Practice III.....	3
			39

The **Mammography program** at College of DuPage is a one-semester advanced certificate program that is designed to provide students with the necessary skills to become certified by the American Registry of Radiologic Technologists and meet the Mammography Quality Standards Act guidelines. It requires eight credits in the courses listed below. Code 4177

Dmir	2200	Clinical Applications of Mammography ..	2
Dmir	2202	Breast Anatomy, Physiology and Pathology.....	2
Dmir	2203	Mammography Principles and Procedures.....	2
Dmir	2204	Mammography Quality Management and Instrumentation	2
			8

Diagnostic Medical Imaging Sonography

Two Certificates

Diagnostic Medical Imaging Sonography (Ultrasound) is a 15-month advanced certificate program designed for graduates of accredited Medical Imaging programs in Radiology, Nuclear Medicine, Nursing, etc. Classes are conducted on Tuesday, Wednesday and Thursday evenings and occasional Saturdays. Clinical education is provided on weekdays at assigned clinical affiliates. Upon

successful completion, graduates are eligible to take the American Registry of Diagnostic Medical Sonographers examination in OB/GYN, Abdomen, Superficial Structures and Physics. This certificate program consists of 63 credits in the required courses listed below.

Code 4142

Dmis	1100	Introduction to Diagnostic Medical Sonography.....	4
Dmis	1101	Sonographic Physics and Instrumentation I	4
Dmis	1102	Sonographic Physics and Instrumentation II	4
Dmis	1120	Sonographic Cross-Sectional Anatomy....	4
Dmis	1111	Clinical Education I	2
Dmis	1112	Clinical Education II	6
Dmis	1113	Clinical Education III.....	6
Dmis	1114	Clinical Education IV	6
Dmis	1121	Fundamentals of OB/GYN I	4
Dmis	1122	Fundamentals of OB/GYN II.....	4
Dmis	1131	Abdomen/Superficial Structures I	4
Dmis	1132	Abdomen/Superficial Structures II.....	4
Dmis	1141	Case Study Critique I	1
Dmis	1142	Case Study Critique II	1
Dmis	1151	Abdominal/Superficial Structures and Obstetrics/Gynecology/ Hands-on Scanning Lab — 1	1
Dmis	1152	Abdominal/Superficial Structures and Obstetrics/Gynecology/ Hands-on Scanning Lab — 2	2
Dmis	1153	Abdominal/Superficial Structures and Obstetrics/Gynecology/ Hands-on Scanning Lab — 3	2
Dmis	2280	Sonographic Physics Registry and Review	2
Dmis	2285	Clinical Sonographic Registry and Review	2

The Diagnostic Medical Vascular Sonography program

is an extension of the current Diagnostic Medical Imaging program designed to provide trained sonographers in the specialty of vascular imaging for the clinical institutions and clinics in the Chicago area. This certificate program consists of 27 credits in the required courses listed below.

Code 4143

Dmis	2200	Vascular Hemodynamics and Physics.....	3
Dmis	2201	Abdominal and Peripheral Arterial I.....	2
Dmis	2202	Abdominal and Peripheral Arterial II	2
Dmis	2203	Cerebrovascular Ultrasound	2
Dmis	2204	Abdominal and Peripheral Venous	2
Dmis	2212	Clinical Education I	6
Dmis	2213	Clinical Education II	6
Dmis	2221	Abdominal and Peripheral Art/ Hands-on Lab	1
Dmis	2222	Abdominal and Peripheral Art/ Hands-on Lab	1
Dmis	2223	Cerebrovascular Hands-on Lab.....	1
Dmis	2224	Abdominal and Peripheral Venous/ Hands-on Lab	1

Early Childhood Education and Care

AAS Degree, Six Certificates

The Early Childhood Education and Care program prepares students to enter the early childhood education and early childhood field. Students acquire the skills, knowledge and attitudes to work with infants, toddlers, preschool-age and school-age children. Jobs for degree and certificate graduates are widely available in child care centers, preschools, park districts and public schools. The degree program consists of a minimum of 64 credits in general education, program requirements and program electives. The following list contains the required courses.

Program Requirements

Code 3623

Ecec	1100	Introduction to the Early Childhood Profession	3
Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1102	Child Guidance Practices.....	3
Ecec	1130	Methods: Discovery and the Physical World.....	3
Ecec	1140	Methods: Self-Expression and the Social World	3
Ecec	1151	Language and Literacy Development of the Young Child	3
Ecec	2211	Child Health, Safety and Nutrition	3
Ecec	2220	Child Care Practicum.....	4
Ecec	2251	Curriculum Planning for the Young Child.....	3
Ecec	2252	Child/Family/Community Relations and Resources.....	3
Ecec	2260	Early Childhood Professional	3
			34

Program Electives.....4

Electives.....2 to 6
(Select from any 1000- or 2000- level courses.)

General Education.....20 to 24
(In addition to courses listed above)

Total Credits Required64 to 68

Certificates

The **Early Childhood Education and Care certificate** requires 34 credits in the courses listed below. Code 4623

Ecec	1100	Introduction to the Early Childhood Profession.....	3
Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1102	Child Guidance Practices.....	3
Ecec	1130	Methods: Discovery and the Physical World	3
Ecec	1140	Methods: Self-Expression and the Social World	3
Ecec	1151	Language and Literacy Development of the Young Child	3
Ecec	2211	Child Health, Safety and Nutrition	3

Ecec	2220	Child Care Practicum.....	4
Ecec	2251	Curriculum Planning for the Young Child.....	3
Ecec	2252	Child/Family/Community Relations and Resources.....	3
Ecec	2260	Early Childhood Professional	3

The **Infant, Toddler and 2-Year-Old Child Care**

certificate. Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students may have previously received an early childhood certificate or degree or may choose this certificate to begin their early childhood education. This certificate requires 15 credits in the courses listed below. Code 4624

Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1102	Child Guidance Practices.....	3
Ecec	1116	Care of the Infant, Toddler and Two-Year-Old Child I	3
Ecec	1117	Care of the Infant, Toddler and Two-Year-Old Child II	3
Ecec	2211	Child Health, Safety and Nutrition	3

The **Early Childhood Center Administration**

certificate. Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students should have completed an early childhood certificate or degree or some other course of college study. This certificate requires 21 credits in the courses listed below. Code 4625

Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1102	Child Guidance Practices.....	3
Ecec	2211	Child Health, Safety and Nutrition	3
Ecec	2251	Curriculum Planning for the Young Child.....	3
Ecec	2254	Administration of an Early Childhood Center — Program Operations.....	3
Ecec	2255	Administration of an Early Childhood Center — Practices and Procedures...3	
Ecec	2256	Administration of an Early Childhood Center — Staff, Families and Children	3

The **Family Child Care Provider certificate.** Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students may have previously received an early childhood certificate or degree or may choose this certificate to begin their early childhood education. This certificate requires 15 credits in the courses listed below. Code 4627

Program Requirements

Ecec	1101	Growth and Development of the Young Child.....	3
Ecec	1120	Family Child Care Management	2
Ecec	1121	Family Child Care Curriculum and Guidance	2
Ecec	2211	Child Health, Safety and Nutrition	3

Program Electives.....5

The **School-Age Child Care certificate**. Students choose this certificate to gain specific knowledge and skills in this early childhood specialty. Students may have previously received an early childhood certificate or degree or may choose this certificate to begin their early childhood education. This certificate requires 16 credits in the courses listed below. Code 4628

Program Requirements

Ecec	2211	Child Health, Safety and Nutrition	.....3
Ecec	2226	Development of the School-Age Child	....2
Ecec	2227	Guidance of the School-Age Child	.....2
Ecec	2228	Activities for School-Age Children	.....2
Ecec	2252	Child/Family/Community Relations and Resources	.....3
			12

Program Electives.....4

The **Multicultural Education and Care for the Young Child certificate**. Students choose this certificate to gain specific knowledge and skills working with diverse populations of children. Students will have previously received early childhood credits or may choose this certificate to begin their Early Childhood Education and Care studies. This certificate requires 14 credits in the courses listed below. Code 4629

Ecec	1101	Growth and Development of the Young Child	.....3
Ecec	1102	Child Guidance Practices	.....3
Ecec	1161	Multicultural Curriculum for the Young Child	.....2
Ecec	1162	Multicultural Perspectives in Child Development and Education	.....2
Ecec	1163	Practicum: At-Risk Early Childhood Programs	.....1
Ecec	2252	Child/Family/Community Relations and Resources	.....3

Electro-Mechanical Technology

Two AAS Degree, Three Certificates

This program prepares students to enter the industrial and manufacturing workplace with knowledge and skill levels in three areas: programmable controllers, process control instrumentation and mechanical maintenance. A certificate in programmable controllers involves programming and maintenance of various programmable controllers. The certificate in process control instrumentation trains the student to inspect, calibrate, troubleshoot and repair various temperature, pressure, flow and level measurement instruments. Students earning the mechanical maintenance certificate learns skills in power trains, drive components, mechanical alignment of couplings, pumps and motors, and troubleshooting and repair of industrial components. Degree program consists of skills training in all three areas to provide the student with meaningful learning

experiences to enter the workplace as a viable part of a plant engineering group, and/or maintenance or repair technician team. This program stresses both the electrical/electronic and mechanical aspect of industrial and manufacturing processes, it is also designed for those individuals who are presently employed in industrial maintenance or plant engineering and are seeking skills upgrading and/or cross training.

The Electro-Mechanical Technology degree program consists of a minimum of 64 credits in general education and program requirements. The following list contains the required courses.

Program Requirements

Code 3957

Elect	1100	Electricity and Electronics Fundamentals	.....2
Elect	1120	Electronic Documentation	.....2
Elmec	1101	Survey of Automation	.....3
Elmec	1110	Motor Fundamentals	.....3
Elmec	1130	Industrial Electricity	.....3
Elmec	1400	Maintenance Management Systems	.....3
Elmec	1420	Drive Components	.....2
Elmec	2410	Programmable Controller II (PLC II)	.....3
Elmec	2510	Process and Automation Controls	.....3
Manuf	1104	Technical Mechanics	.....2
Manuf	1141	Hydraulics and Pneumatics	.....3
Manuf	1171	Introduction to Robotic Technology	.....3
Manuf	1180	Quality Control	.....3
Manuf	1190	Introduction to Programmable Logic Controllers	.....3
			38

Program Electives.....9

Choose from the following courses.

Airc	1161	Introduction to Sheet Metal	.....2
Elect	1101	Circuits I	.....3
Elect	1102	Circuits II	.....4
Elect	1130	Electronics Materials and Fabrication	....2
Elect	1199	Cooperative Education/Internship I .1 to 6	
Elect	2220	Electronic Instruments, Measurements and Control	.....3
Elect	2255	Industrial Controls	.....3
Elect	2299	Cooperative Education/Internship II .1 to 6	
Elmec	1120	Residential Wiring	.....3
Elmec	1150	National Electrical Code	.....3
Elmec	1410	Preventive and Predictive Maintenance	...3
Elmec	2600	Motion Control: Servo and Stepper Motor Application and Control	.....2
Elmec	2610	Machine Vision and Artificial Intelligence	.....2
Elmec	2620	Critical Thinking in Technical Applications	.....2
Elmec	2630	Systems Troubleshooting	.....2
Manuf	1101	Industrial Design/CAD	.....3
Manuf	2251	Computer Numerical Control (CNC)	....3
Weld	1100	Welding I	.....3

Total Credits Required65 to 69

General Education18 to 22
(In addition to the courses listed above)

The **Electrician Apprenticeship degree program** consists of a total of 64 to 68 credits in program requirements, electives and general education. This program, in partnership with the Joint Apprenticeship and Training Committee (JATC) of the International Brotherhood of Electrical Workers (IBEW) Local Union, is open only to individuals admitted into the Electrician Apprenticeship Program of the IBEW. This degree will fulfill the classroom component of the IBEW/JATC apprenticeship experience.

Program Requirements
Code 3958

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1101	Circuits I.....	3
Elect	1120	Electronic Documentation.....	2
Elect	1130	Electronics Materials and Fabrication.....	2
Elect	1141	Digital Fundamentals.....	3
Elect	1151	Electronic Devices and Applications I.....	4
Elect	2220	Electronic Instruments, Measurements and Control.....	3
Elmec	1110	Motor Fundamentals.....	3
Elmec	1130	Industrial Electricity.....	3
Elmec	1150	National Electrical Code.....	3
Elmec	2630	Systems Troubleshooting.....	2
Manuf	1101	Industrial Design/CAD.....	3
Manuf	1190	Introduction to Programmable Logic Controllers.....	3
Manuf	2280	Industrial Safety.....	2
Co-op	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Co-op	2865	Cooperative Education/Internship — Advanced (Occupational).....	1 to 4
Co-op	2870	Cooperative Education/Internship (Transfer).....	1 to 4
			<u>41 to 50</u>

Electives.....0 to 6
(Select from any 1000- or 2000-level courses.)

General Education18 to 22
Students must complete all general education requirements (18 to 22 semester hours) and complete 2 semester hours in Global/Multicultural Studies or Contemporary Life Skills.

Total Credits Requiredz.....64 to 68

Certificates

The **Mechanical Maintenance certificate** requires 33 credits in the courses listed below. Code 4958

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elmec	1101	Survey of Automation.....	3
Elmec	1110	Motor Fundamentals.....	3
Elmec	1130	Industrial Electricity.....	3

Elmec	1150	National Electrical Code.....	3
Elmec	1420	Drive Components.....	2
Manuf	1104	Technical Mechanics.....	2
Manuf	1141	Hydraulics and Pneumatics.....	3
Manuf	1151	Machine Shop I.....	3
Manuf	1171	Introduction to Robotic Technology.....	3
Manuf	1190	Introduction to Programmable Logic Controllers.....	3
Weld	1100	Welding I.....	3

The **Process Control Instrumentation certificate** requires 39 credits in the courses listed below. Code 4959

Program Requirements

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1120	Electronic Documentation.....	2
Elect	2220	Electronic Instruments, Measurements and Control.....	3
Elect	2255	Industrial Controls.....	3
Elmec	1101	Survey of Automation.....	3
Elmec	1110	Motor Fundamentals.....	3
Elmec	1130	Industrial Electricity.....	3
Elmec	2510	Process and Automation Controls.....	3
Elmec	2520	Advanced Process and Automation Controls.....	3
Manuf	1141	Hydraulics and Pneumatics.....	3
Manuf	1171	Introduction to Robotic Technology.....	3
Manuf	1180	Quality Control.....	3
Manuf	1190	Introduction to Programmable Logic Controllers.....	3
			<u>37</u>

Program Electives.....2

The **Programmable Controllers certificate** requires 35 credits in the courses listed below. Code 4960

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1120	Electronic Documentation.....	2
Elect	2255	Industrial Controls.....	3
Elmec	1101	Survey of Automation.....	3
Elmec	1110	Motor Fundamentals.....	3
Elmec	1130	Industrial Electricity.....	3
Elmec	1150	National Electrical Code.....	3
Elmec	2600	Motion Control: Servo and Stepper Motor Application and Control.....	2
Elmec	2410	Programmable Controller II (PLC II).....	3
Manuf	1104	Technical Mechanics.....	2
Manuf	1171	Introduction to Robotic Technology.....	3
Manuf	1180	Quality Control.....	3
Manuf	1190	Introduction to Programmable Logic Controllers.....	3

Electronics Technology

AAS Degree, Three Certificates

The Electronics Technology program offers two-year degrees and one-year specialty certificates in the electronics field. The degree program is designed to provide the student with fundamentals of electricity and

electronics, including digital electronics and microcomputers, specialized manufacturing electronics, industrial automation and electronic communications. The program also includes an Electronics Engineering Technology degree for transferring students. To learn is to experience. This program emphasizes a hands-on approach to learning through projects to reinforce the theoretical material. This degree program requires a minimum of 71 credits in courses listed below.

**AAS Degree
Program Requirements**

Code 3912

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1101	Circuits I.....	3
Elect	1102	Circuits II.....	4
Elect	1118	Calculus for Electronics.....	2
Elect	1120	Electronic Documentation.....	2
Elect	1130	Electronics Materials and Fabrication.....	2
Elect	1141	Digital Fundamentals.....	3
Elect	1151	Electronic Devices and Applications I.....	4
Elect	1152	Electronic Devices and Applications II.....	4
Elect	1161	Electronic Communication I.....	4
Elect	1162	Electronic Communication II.....	4
Elect	2255	Industrial Controls.....	3
Cis	1400	Programming Logic and Technique.....	4
Physi	1201	General Physics I.....	5
Physi	1202	General Physics II.....	5
Math	1431	Precalculus I.....	5
Math	1432	Precalculus II: Trigonometry.....	3
Engli	1101	English Composition I.....	3
Speec	1100	Fundamentals of Speech Communication.....	3
			65

General Education.....6

(In addition to courses listed above, complete two credits from Global Studies/Multicultural or Contemporary Life Skills category.)

Total Credits Required.....71

Certificates

The **Electronics Manufacturing certificate** requires 32 credits as listed below. Code 4912

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1101	Circuits I.....	3
Elect	2112	Motor Control.....	3
Elect	1120	Electronic Documentation.....	2
Elect	1130	Electronics Materials and Fabrication.....	2
Elect	1141	Digital Fundamentals.....	3
Elect	1151	Electronic Devices and Applications I.....	4
Elect	1161	Electronic Communication I.....	4
Elect	2255	Industrial Controls.....	3
Elect	2273	Real-Time Systems and Programming.....	3
Math	1428	College Algebra with Applications.....	3

The **Controls and Automation certificate** requires 32 credits as listed below. Code 4913

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1101	Circuits I.....	3
Elect	2112	Motor Control.....	3
Elect	1120	Electronic Documentation.....	2
Elect	1130	Electronics Materials and Fabrication.....	2
Elect	1141	Digital Fundamentals.....	3
Elect	1151	Electronic Devices and Applications.....	4
Elect	1161	Electronic Communication I.....	4
Elect	2255	Industrial Controls.....	3
Elect	2273	Real-Time Systems and Programming.....	3
Math	1428	College Algebra with Applications.....	3

The **Electronics Technology certificate** requires 42 credits as listed below. Code 4925

Elect	1100	Electricity and Electronics Fundamentals.....	2
Elect	1101	Circuits I.....	3
Elect	1102	Circuits II.....	4
Elect	1120	Electronic Documentation.....	2
Elect	1130	Electronics Materials and Fabrication.....	2
Elect	1141	Digital Fundamentals.....	3
Elect	1151	Electronic Devices and Applications I.....	4
Elect	1152	Electronic Devices and Applications II.....	4
Elect	1161	Electronic Communication I.....	4
Elect	1162	Electronic Communication II.....	4
Elect	2255	Industrial Controls.....	3
Math	1428	College Algebra with Applications.....	3
Cis	1400	Programming Logic and Technique.....	4

English

Certificate

The **English Technical Communication certificate** addresses the need to communicate technical information to a variety of audiences. It offers students the opportunity to use their technical skills to work in a variety of fields including business, industry, government, health care and technology. This certificate requires 24 credit hours in the courses listed below.

Code 4630

Engli	1105	Introduction to Technical Writing.....	3
Engli	1110	Technical Writing.....	3
Engli	1115	Writing for the Web.....	3
Graph	1102	Introduction to Graphic Publishing Applications.....	3
Speec	1150	Introduction to Business Communication.....	3
Co-op	2863	Cooperative Education/Internship (Occupational).....	3
			18

Electives.....6

Choose six hours from the list below. Additional courses with coordinator approval.

Adsgn	1821	Selected Topics in Advertising, Design and Illustration.....	3
Adsgn	2203	Design for Advertising.....	3

Art	2266	Computer Art I.....	3
Cis	1150	Introduction to Computer Information Systems	3
Cis	1300	Web Design Software.....	3
Cis	1310	HTML and CSS.....	3
Cis	2320	JavaScript and Advanced HTML.....	3
Engli	2126	Modern English Grammar	3
Engli	2253	Creative Nonfiction Writing	3
Engli	2261	Writing for Publication	3
Graph	1101	Printing Methods and Processes	3
Journ	1105	News Reporting and Writing	3
Mptv	1011	Introduction to Motion Pictures and Television.....	3
Ofti	1130	Business Correspondence	3
Speec	1120	Small-Group Communication	3
Speec	1140	Public Relations.....	3

Facility Management

AAS Degree, Certificate

The Facility Management program is designed to provide the student a broad exposure to the business area with specialty training in the functions of facility management. Upon completion of this program, the student will possess the skills and educational background involved with managing facilities.

The program provides the student the entry-level job skills used by facilities managers. It provides for updating knowledge or learning new skills for those currently employed in the field.

This degree program consists of a minimum of 64 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements.

Program Requirements

Code 3228

[	Accou	1110	Accounting Procedures	4
			OR	
	Accou	1140	Financial Accounting.....	4
	Arch	1111	Building Materials	4
	Arch	1130	Blueprint Reading.....	2
	Arch	1211	Basic Computer-Aided Drafting — AutoCad	3
	Buslw	2211	Business Law I.....	3
	Facm	1100	Introduction to Facility Management.....	3
	Facm	2202	Facility Systems — Electrical.....	3
	Facm	2203	Facility Systems — Mechanical	3
	Facm	2204	Interior Space Planning.....	3
	Facm	2215	Facility and Property Management.....	3
	Manag	2210	Principles of Management.....	3
	Philo	1114	Business Ethics	3
	Cis	1150	Introduction to Computer Information Systems	3

40

Program Electives5 to 9

Select elective credits from the following list:

Accou	1150	Managerial Accounting	4
Airc	1180	Introduction to Heating	5
Airc	2232	Energy Audits/Economics.....	2
Arch	2240	Codes, Specifications and Contracts.....	3
Arch	2260	Construction Estimating	3
Art	1151	2-D Design.....	3
Art	1152	3-D Design.....	3
Busin	2210	Principles of Finance.....	3
Buslw	2205	Legal Environment of Business.....	3
Cadd	1110	Introduction to Computer-Aided Drafting — Microstation.....	3
Cadd	2220	Architectural Modeling	2
Chemi	1211	General Chemistry	5
Chemi	1212	Survey of Organic Chemistry.....	5
Cis	1221	Introduction to Spreadsheets	3
Econo	2201	Macroeconomics and the Global Economy.....	3
Elmec	1410	Preventive and Predictive Maintenance...3	
Engli	1101	English Composition I	3
Engli	1105	Introduction to Technical Writing	3
Fire	1100	Introduction to Fire Science.....	3
Fire	1111	Fire Prevention I.....	3
Fire	1120	Codes and Laws.....	3
Fire	2201	Extinguishing and Alarm Systems	3
Fire	2230	Hazardous Materials.....	3
Fire	2240	Industrial Safety.....	3
Foods	1110	Basic Nutrition	3
Foods	2220	Foodservice Sanitation.....	2
Hotel	1100	Introduction to the Hospitality Industry	3
Hotel	2212	Hotel Facilities Operations Management.....	3
Hotel	2230	Law for the Hospitality Industry.....	2
Manag	1100	Supervision.....	3
Manag	2230	Purchasing.....	3
Manag	2240	Human Resource Management	3
Manuf	2280	Industrial Safety.....	2
Marke	2210	Principles of Marketing.....	3
Math	1635	Statistics.....	4
Hort	1100	Introduction to Horticulture	3
Hort	1112	Landscape Maintenance and Construction	3
Hort	2231	Turf Growth and Maintenance	3
Physi	1100	Physics	4
Pol S	1101	American Politics	3
Psych	2210	Industrial and Organizational Psychology	3
Reale	1110	Real Estate Transactions.....	3
Reale	1128	Property Management	1
Speec	1150	Introduction to Business Communication	3

General Education15 to 19

(In addition to courses listed above)

The following mathematics course and one of the Social and Behavioral Science General Education courses are recommended:

Math	1100	Business Mathematics	3
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Psych	1100	General Psychology.....	3
Socio	1100	Introduction to Sociology.....	3
Total Credits Required			60 to 68

Certificates

Facility Management General Certificate

Allows professionals from related fields to increase knowledge related to a career in Facility Management. This certificate would also be useful for the technician moving up to a supervisory or entry level management position. Code 4228

Facm	1100	Introduction to Facility Management.....	3
Facm	2202	Facility Systems — Electrical.....	3
Facm	2203	Facility Systems — Mechanical.....	3
Facm	2215	Facility and Property Management.....	3
Busin	1111	Customer Service.....	3
			15

Facility Management Technician Certificate

Provides entry level Facility management technicians an opportunity to upgrade work place skills. This certificate could also be useful for entry level managers in the field to increase their understanding of maintaining and operating a variety of systems. Code 4229

Program Requirements

Facm	1100	Introduction to Facility Management.....	3
Facm	2215	Facility and Property Management.....	3
			6

Program Electives

Select 12 hours of electives from the Facility Management program or consult with program coordinator.

Total Credits Required			18
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Fashion Merchandising and Design

Two AAS Degree Options, Three Certificates

The Fashion Merchandising and Design program studies the entire fashion world. In the Fashion Design degree option, students study for positions in the creation or construction of fashions, such as designer, pattern maker, sample maker, seamstress, alterations specialist, theater costumer, and product development. In the Fashion Merchandising option, students study for positions in sales and management, such as showroom personnel, manufacturer's representative or visual merchandiser.

The **Fashion Merchandising degree program** consists of a minimum of 64 credits in program requirements, program electives and general education in the courses listed below.

Program Requirements

Code 3252			
Fashi	1130	History of Costume I.....	3
Fashi	1131	History of Costume II.....	3
Fashi	2231	Fashion Marketing and Merchandising ...	3
Fashi	2235	Apparel Quality Analysis.....	3
Fashi	2251	Fashion Motivation.....	3

Fashi	1151	Principles of Textiles.....	3
Fashi	1120	Fashion Promotion.....	3
OR			
Fashi	2220	Visual Merchandising.....	3
Busin	1100	Introduction to Business.....	3
Manag	1100	Supervision.....	3
Marke	2210	Principles of Marketing.....	3
Marke	2230	Retailing.....	3
			33

Program Electives.....13

Select credits from below and/or other Fashion, Business, Marketing or Management courses.

Co-op	2861	Cooperative Education/Internship I (Occupational).....	1
Fashi	1120	Fashion Promotion.....	3
Fashi	1180	Business Practices for the Fashion Entrepreneur.....	3
Fashi	1800	Experiential Special Topics in Fashion.....	1 to 3
Fashi	1820	Selected Topics in Fashion Merchandising.....	3
Fashi	1840	Independent Study in Fashion.....	1 to 4
Fashi	2220	Visual Merchandising.....	3

General Education.....18 to 22
(In addition to courses listed above)

Total Credits Required			64 to 68
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The **Fashion Design degree program** consists of a total of 64 to 68 credits in program requirements, program electives and general education in the courses listed below.

Program Requirements

Code 3527			
Fashi	1101	Flat Pattern Drafting I.....	3
Fashi	1102	Flat Pattern Drafting II.....	3
Fashi	1105	Design Principles in Apparel.....	3
Fashi	1130	History of Costume I.....	3
Fashi	1131	History of Costume II.....	3
Fashi	1151	Principles of Textiles.....	3
Fashi	1155	Clothing Construction I.....	3
Fashi	1156	Clothing Construction II.....	3
Fashi	1160	Tailoring.....	3
Fashi	2201	Draping.....	3
Fashi	2202	Design Studio: Apparel.....	3
Fashi	2211	Fashion Illustration.....	3
Fashi	2231	Fashion Marketing and Merchandising ...	3
			39

Program Electives.....5

Select at least five credits from courses listed below.

Co-op	2861	Cooperative Education/Internship I (Occupational).....	1
Fashi	1110	Machine Knitting I.....	3
Fashi	1112	Machine Knitting II.....	3
Fashi	1114	Weaving I.....	3
Fashi	1116	Weaving II.....	3

Fashi	1120	Fashion Promotion.....	3
Fashi	1165	Clothing Construction for the Apparel Industry	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
Fashi	1800	Experiential Special Topics in Fashion.....	1 to 3
Fashi	1820	Selected Topics in Fashion Merchandising.....	3
Fashi	1821	Selected Topics in Fashion Design	3
Fashi	1840	Independent Study in Fashion.....	1 to 4
Fashi	2212	Advanced Fashion Illustration	3
Fashi	2222	Computer-Aided Apparel Design I	3
Fashi	2223	Computer-Aided Apparel Design II	3
Fashi	2224	Production Pattern Grading.....	3
Fashi	2235	Apparel Quality Analysis.....	3
Fashi	2251	Fashion Motivation	3
Fashi	2261	Textile Design I.....	3
Fashi	2262	Textile Design II	3

Electives.....2
(Select any 1000- or 2000-level courses.)

General Education.....18 to 22
(In addition to courses listed above, complete two credits in Global/Multicultural Studies or Contemporary Life Skills category.)

Total Credits Required64 to 68

Certificates

The **Fashion Entrepreneurial certificate** requires 21 credits in the courses listed below. Code 4526

Program Requirements

Fashi	1155	Clothing Construction I.....	3
Fashi	1156	Clothing Construction II	3
Fashi	1101	Flat Pattern Drafting I	3
Fashi	1102	Flat Pattern Drafting II	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
			15

Program Electives.....6
Select six credits from below.

Busin	1100	Introduction to Business	3
Busin	1161	Entrepreneurship	3
Fashi	1120	Fashion Promotion.....	3
Fashi	1160	Tailoring	3
Fashi	1165	Clothing Construction for the Apparel Industry	3
Fashi	1821	Selected Topics in Fashion Design	3
Fashi	2201	Draping.....	3
Fashi	2202	Design Studio: Apparel.....	3
Fashi	2204	Bridal Couture: Bridal and Special Occasion	3
Fashi	2206	Bridal Couture II: Bridal and Special Occasion	3
Fashi	2208	Millinery Design I.....	3
Fashi	2210	Millinery Design II	3
Fashi	2211	Fashion Illustration.....	3
Fashi	2212	Advanced Fashion Illustration	3

For the **Fashion Design certificate** option, students study for positions in the creation or construction of fashions, such as designer, pattern maker, sample maker, seamstress, alterations specialist, theater costumer and product development. This certificate program consists of a total of 30 credits in program requirements and program electives. Code 4527

Program Requirements

Fashi	1101	Flat Pattern Drafting I	3
Fashi	1102	Flat Pattern Drafting II	3
Fashi	1151	Principles of Textiles	3
Fashi	1155	Clothing Construction I.....	3
Fashi	1156	Clothing Construction II	3
Fashi	2201	Draping.....	3
Fashi	2202	Design Studio: Apparel.....	3
Fashi	2211	Fashion Illustration.....	3
			24

Program Electives.....6
Select six credits from below.

Fashi	1105	Design Principles in Apparel.....	3
Fashi	1120	Fashion Promotion.....	3
Fashi	1130	History of Costume I.....	3
Fashi	1131	History of Costume II.....	3
Fashi	1160	Tailoring	3
Fashi	1800	Experiential Special Topics in Fashion.....	1 to 3
Fashi	1821	Selected Topics in Fashion Design	3
Fashi	1840	Independent Study in Fashion.....	1 to 4
Fashi	2231	Fashion Marketing and Merchandising ...	3
Fashi	2251	Fashion Motivation	3

In the **Fashion Merchandising certificate option**, students study for positions in sales and management, such as showroom personnel, manufacturer's representative or visual merchandiser. Certificate program consists of a total of 30 credits. Code 4252

Program Requirements

Fashi	1120	Fashion Promotion.....	3
		OR	
Fashi	2220	Visual Merchandising	3
Fashi	1151	Principles of Textiles	3
Fashi	2231	Fashion Marketing and Merchandising ...	3
Fashi	2235	Apparel Quality Analysis.....	3
Fashi	2251	Fashion Motivation	3
Busin	1100	Introduction to Business	3
Marke	2210	Principles of Marketing.....	3
			21

Program Electives

Select 9 additional credits from below and/or Business, Marketing, or Management course.

Fashi	1120	Fashion Promotion.....	3
Fashi	1130	History of Costume I.....	3
Fashi	1131	History of Costume II.....	3
Fashi	1180	Business Practices for the Fashion Entrepreneur	3
Fashi	2208	Millinery Design I.....	3
Fashi	2210	Millinery Design II	3

Fashi	2220	Visual Merchandising.....	3
Fashi	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Manag	1100	Supervision.....	3
Marke	2220	Sales.....	3
Marke	2230	Retailing.....	3
			9

Total Credits Required.....30

Fire Science Technology

Two Degree Options, Five Certificates

The Fire Science Technology program encompasses both fire fighting and emergency medical services. The Fire Science degree focuses on the theory and techniques of fire fighting, inclusive of the Emergency Medical Technician curriculum, required by most fire departments. The new Emergency Medical Services degree focuses on emergency medical services and the administration of those services in any setting. The certificate programs target specific aspects of fire fighting and emergency care. This degree program requires a minimum of 64 credits in courses below.

Fire Science Degree Option

Program Requirements

Code 3427

Fire	1100	Introduction to Fire Science.....	3
Fire	1111	Fire Prevention I.....	3
Fire	2201	Extinguishing and Alarm Systems.....	3
Fire	2210	Fire Apparatus.....	3
Fire	2215	Building Construction.....	3
			15

Program Electives14

Select from the following courses:

Fire	1101	Fire Fighter II-A.....	4
Fire	1102	Fire Fighter II-B.....	4
Fire	1103	Fire Fighter II-C.....	4
Fire	1104	Fire Fighter III.....	8
Fire	1112	Fire Prevention II.....	3
Fire	1120	Codes and Laws.....	3
Fire	2210	Fire Apparatus.....	3
Fire	2211	Fire Apparatus Engineer.....	3
Fire	2221	Tactics I.....	3
Fire	2222	Tactics II.....	3
Fire	2230	Hazardous Materials.....	3
Fire	2231	Hazardous Materials Operations.....	3
Fire	2232	Hazardous Materials Technician A.....	3
Fire	2233	Hazardous Materials Technician B.....	3
Fire	2240	Industrial Safety.....	3
Fire	2251	Fire Management I.....	3
Fire	2252	Fire Management II.....	3
Fire	2253	Fire Management III.....	3
Fire	2254	Fire Management IV.....	3
Fire	2255	Fire Service Instructor I.....	3
Fire	2256	Fire Service Instructor II.....	3
Fire	2260	Fire Investigation.....	3
Fire	2261	Fire/Arson Investigation I.....	3

Fire	2262	Fire/Arson Investigation II.....	3
Fire	2263	Fire/Arson Investigation III.....	3
Fire	2271	Emergency Med Technician — Basic.....	8
Fire	2272	Paramedic Transition.....	3
Fire	2273	Vehicle and Machinery Operations.....	3
Fire	2282	EMT Instructor Training.....	3
Fire	2285	Trauma Patient Assessment.....	2

Electives.....17

Select from any 1000- or 2000-level courses.

General Education18

(In addition to courses listed above)

Total Credits Required.....64

EMS (Emergency Medical Services) Degree Option

This degree program requires a minimum of 65 credits in courses listed below.

Program Requirements

Code 3428

Anat&	1500	Survey of Human Anatomy and Physiology.....	4
		OR	
Any Lab		Science Course.....	4
Fire	2274	Paramedic I.....	8
Fire	2275	Paramedic II.....	8
Fire	2276	Paramedic III.....	8
Fire	2277	Paramedic IV.....	8
Engli	1101	English Composition I.....	3
Psych	1100	General Psychology.....	3
Spec	1100	Fundamentals of Speech Communication.....	3
Manag	1100	Supervision.....	3
Manag	2210	Principles of Management.....	3
Manag	2220	Organizational Management.....	3
Manag	2240	Human Resource Management.....	3
Math	1102	Mathematics for Health Sciences (or higher level of math).....	3
			60

General Education5

Three hours in any Humanities course and two hours in any Global/Multicultural or Contemporary Life Skills course.

Total Credits Required.....65

Certificates

The **Paramedic certificate** requires 32 credits in the courses listed below. Code 4426

Fire	2274	Paramedic I.....	8
Fire	2275	Paramedic II.....	8
Fire	2276	Paramedic III.....	8
Fire	2277	Paramedic IV.....	8

The **Fire Fighter certificate** requires 18 credits in the courses listed below. Code 4427

Fire	1101	Fire Fighter II-A.....	4
Fire	1102	Fire Fighter II-B.....	4

Fire	1103	Fire Fighter II-C	4
Fire	2211	Fire Apparatus Engineer	3
Fire	2230	Hazardous Materials	3

The **Fire Prevention certificate** requires 27 credits in the courses listed below. Code 4428

Fire	1111	Fire Prevention I	3
Fire	1112	Fire Prevention II	3
Fire	2201	Extinguishing and Alarm Systems	3
Fire	2215	Building Construction	3
Fire	2230	Hazardous Materials	3
Fire	2251	Fire Management I	3
Fire	2260	Fire Investigation	3
Engli	1101	English Composition I	3
Speec	1100	Fundamentals of Speech Communication	3

The **Fire Officer certificate** requires a minimum of 33 credits in the courses listed below. Code 4429

Fire	1111	Fire Prevention I	3
Fire	2221	Tactics I	3
Fire	2222	Tactics II	3
Fire	2251	Fire Management I	3
Fire	2252	Fire Management II	3
Fire	2253	Fire Management III	3
Fire	2254	Fire Management IV	3
Fire	2255	Fire Service Instructor I	3
Fire	2256	Fire Service Instructor II	3
Engli	1101	English Composition I	3
Speec	1100	Fundamentals of Speech Communication	3

The **Emergency Medical Technician certificate** requires 8 credits in the course listed below. Code 4430

Fire	2271	Emergency Medical Technician	8
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Foodservice Administration

Three Degrees, Four Certificates

The Foodservice Administration program provides an opportunity for students to learn the necessary skills to begin or enhance a career in the hospitality industry, the nation's largest retail employer.

AAS Degrees

Culinary Arts Degree Option

The following degree program consists of a minimum of 65 credits in general education and program requirements. The following list contains the required courses.

Program Requirements

Code 3231

Foods	1101	Culinary Arts: Quantity Food Preparation I	5
Foods	1102	Culinary Arts: Quantity Food Preparation II	5
Foods	1109	Nutrition for the Foodservice Professional	2
Foods	1151	Food and Beverage Service and Sales	2

Foods	1152	Food, Beverage and Equipment Purchasing	3
Foods	1153	Culinary Arts — Garde Manger	3
Foods	2201	Culinary Arts — Classical Cuisine	4
Foods	2205	Culinary Arts: International Cuisine	3
Foods	2220	Foodservice Sanitation	2
Foods	2251	Techniques of Supervision	2
Foods	2271	Pastry Arts — Baking and Patisserie I	5
Foods	2272	Pastry Arts — Baking and Patisserie II	5
Co-op	2864	Cooperative Education/Internship (Occupational)	4
			45

Electives

Complete two credit hours from courses listed in the Global/Multicultural Studies or Contemporary Life Skills category.

(In addition to courses listed above select from any 1000- or 2000-level courses.)

General Education

Select at least two credits from any 1000- or 2000-level course.

Total Credits Required

Baking and Pastry Arts Degree Option

A minimum of 64 credits is required for this degree from courses listed below.

Program Requirements

Code 3232

Foods	2271	Pastry Arts — Baking and Patisserie I	5
Foods	2272	Pastry Arts — Baking and Patisserie II	5
Foods	2273	Pastry Arts — Baking and Patisserie III	5
Foods	2270	Fundamentals of the Baking Industry	3
Foods	1104	Cake Decorating and Confectionery	2
Foods	1107	Cake Decorating and Confectionery II	2
Foods	2220	Foodservice Sanitation	2
Foods	2251	Techniques of Supervision	2
Foods	1109	Nutrition for the Foodservice Professional	2
Foods	2202	Foodservice Merchandising	2
Foods	1152	Food, Beverage and Equipment Purchasing	3
Foods	1130	Hospitality Industry Accounting	3
Co-op	2864	Cooperative Education/Internship (Occupational)	4
			40

Program Electives

(Minimum additional Foodservice Administration or Culinary Arts credits to meet graduation requirements.)

General Education

(In addition to courses listed above complete at least two credits from the Contemporary Life Skills or Global/Multicultural Studies category.)

Total Credits Required

Foodservice Administration Degree Option

This degree program consists of a minimum of 64 credits in general education and program requirements. The following list contains the required courses.

Program Requirements

Code 3235

Foods	1100	Introduction to the Hospitality Industry	.3
Foods	1101	Culinary Arts: Quantity Food Preparation I	.....5
Foods	1102	Culinary Arts: Quantity Food Preparation II	.....5
Foods	1109	Nutrition for the Foodservice Professional	.....2
Foods	1130	Hospitality Industry Accounting	.....3
Foods	1151	Food and Beverage Service and Sales	.....2
Foods	1152	Food, Beverage and Equipment Purchasing	.....3
Foods	2201	Culinary Arts — Classical Cuisine	.....4
Foods	2202	Foodservice Merchandising	.....2
Foods	2220	Foodservice Sanitation	.....2
Foods	2230	Law for the Hospitality Industry	.....2
Foods	2251	Techniques of Supervision	.....2
Co-op	2863	Cooperative Education/Internship (Occupational)	.....3
			<u>38</u>

Program Electives.....8

Select eight credits from below. Other management and accounting courses may be taken as program electives. Consult with a faculty adviser for approval.

Foods	1104	Cake Decorating and Confectionary	.....2
Foods	1105	Restaurant Concept Development	.....2
Foods	2203	Professional Catering and Banquet Management	.....3
Foods	2204	Wines of the World	.....2
Foods	2261	Beverage Management Operation	.....2
Foods	2262	Restaurant Beverage Service — Mixology	.....2
Foods	2270	Fundamentals of the Baking Industry	.....3
Hotel	2212	Hotel Facilities Operations Management	.....3

General Education.....18

(In addition to courses listed above, complete at least two credits from the Global/Multicultural or Contemporary Life Skills category.)

Total Credits Required.....64

Certificates

The **Foodservice Administration Pastry Arts certificate** requires 40 credits in the courses below. Code 4232.

Program Requirements

Foods	1104	Cake Decorating and Confectionery	.....2
Foods	1107	Cake Decorating and Confectionery II	.....2
Foods	1109	Nutrition for the Foodservice Professional	.....2
Foods	1130	Hospitality Industry Accounting	.....3
Foods	1152	Food, Beverage and Equipment Purchasing	.....3

Foods	2202	Foodservice Merchandising	.....2
Foods	2220	Foodservice Sanitation	.....2
Foods	2251	Techniques of Supervision	.....2
Foods	2270	Fundamentals of the Baking Industry	.....3
Foods	2271	Pastry Arts — Baking and Patisserie I	.....5
Foods	2272	Pastry Arts — Baking and Patisserie II	.....5
Foods	2273	Pastry Arts-Baking and Patisserie III	.....5
Co-op	2864	Cooperative Education/Internship (Occupational)	.....4

The **Culinary Arts certificate** requires 45 hours in the courses listed below. Code 4233

Foods	1101	Culinary Arts: Quantity Food Preparation I	.....5
Foods	1102	Culinary Arts: Quantity Food Preparation II	.....5
Foods	1109	Nutrition for the Foodservice Professional	.....2
Foods	1151	Food and Beverage Service and Sales	.....2
Foods	1152	Food, Beverage and Equipment Purchasing	.....3
Foods	1153	Culinary Arts — Garde Manger	.....3
Foods	2201	Culinary Arts — Classical Cuisine	.....4
Foods	2205	Culinary Arts: International Cuisine	.....3
Foods	2220	Foodservice Sanitation	.....2
Foods	2251	Techniques of Supervision	.....2
Foods	2271	Pastry Arts — Baking and Patisserie I	.....5
Foods	2272	Pastry Arts — Baking and Patisserie II	.....5
Co-op	2864	Cooperative Education/Internship (Occupational)	.....4

The **Foodservice Administration certificate** requires 36 credits in the courses listed below. Code 4235

Foods	1100	Introduction to the Hospitality Industry	.....3
Foods	1101	Culinary Arts: Quantity Food Preparation I	.....5
Foods	1102	Culinary Arts: Quantity Food Preparation II	.....5
Foods	1109	Nutrition for the Foodservice Professional	.....2
Foods	1130	Hospitality Industry Accounting	.....3
Foods	1151	Food and Beverage Service and Sales	.....2
Foods	1152	Food, Beverage and Equipment Purchasing	.....3
Foods	2201	Culinary Arts — Classical Cuisine	.....4
Foods	2220	Foodservice Sanitation	.....2
Foods	2230	Law for the Hospitality Industry	.....2
Foods	2251	Techniques of Supervision	.....2
Co-op	2863	Cooperative Education/Internship (Occupational)	.....3

The **Beverage Management certificate** requires 10 credits in the courses listed below. Code 4237

Foods	2202	Foodservice Merchandising	.....2
Foods	2204	Wines of the World	.....2
Foods	2251	Techniques of Supervision	.....2
Foods	2261	Beverage Management Operation	.....2
Foods	2262	Restaurant Beverage Service — Mixology	.....2

Graphic Arts Technology

Two AAS Degrees, Two Certificates

The Graphic Arts Technology program prepares students for jobs in printing and publishing industries.

AAS Degree, Print Production Option

This degree program consists of a minimum of 64 credits in program requirements, program electives and general education. The following list contains the required courses.

Program Requirements

Code 3531

Graph	1101	Printing Methods and Processes	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Graph	1103	Press Operation	3
Graph	1104	Binding and Finishing	2
Graph	1160	Color Reproduction Techniques	3
Graph	1183	Digital Page Layout: QuarkXPress	3
Graph	1186	Production Illustration: Adobe Illustrator	3
Graph	2201	Advanced Press Operation	4
Graph	2220	Digital Workflow and Preflight	2
Graph	2230	Graphic Arts Business Practices	3
Graph	2245	Digital Prepress Imaging: Adobe Photoshop	3
Graph	2265	Web Publishing	3
Graph	2275	Capstone: Print Production	4
			<u>39</u>

Program Electives

Select three credits in any 1000- or 2000-level Graphic Arts Technology course in addition to the Program Requirements listed above. Select four credits co-op or internship.

General Education18
(In addition to courses listed above)

Total Credits Required.....64

AAS Degree, Digital Prepress Production Option

This degree program consists of a minimum of 64 credits in program requirements and general education. The following list contains the required courses.

Program Requirements

Code 3535

Graph	1101	Printing Methods and Processes	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Graph	1104	Binding and Finishing	2
Graph	1160	Color Reproduction Techniques	3
Graph	1183	Digital Page Layout: QuarkXPress	3
Graph	1186	Production Illustration: Adobe Illustrator	3
Graph	2220	Digital Workflow and Preflight	2
Graph	2230	Graphic Arts Business Practices	3
Graph	2240	Advanced Digital Page Layout: QuarkXPress	3

Graph	2245	Digital Prepress Imaging: Adobe Photoshop	3
Graph	2254	Advanced Digital Imaging: Adobe Photoshop	3
Graph	2265	Web Publishing	3
Graph	2266	Advanced Web Publishing	3
Graph	2270	Advanced Production Illustration: Adobe Illustrator	3
Graph	2280	Capstone: Digital Prepress Production	3
Adsgn	1102	Design I	3
			<u>46</u>

General Education18
(In addition to courses listed above)

Total Credits Required.....64

Certificates

The **Print Production certificate** requires a total of 36 credits in the courses listed below. Code 4531

Graph	1101	Printing Methods and Processes	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Graph	1103	Press Operation	3
Graph	1104	Binding and Finishing	2
Graph	1160	Color Reproduction Techniques	3
Graph	1183	Digital Page Layout: QuarkXPress	3
Graph	1186	Production Illustration: Adobe Illustrator	3
Graph	2201	Advanced Press Operation	4
Graph	2220	Digital Workflow and Preflight	2
Graph	2230	Graphic Arts Business Practices	3
Graph	2245	Digital Prepress Imaging: Adobe Photoshop	3
Graph	2275	Capstone: Print Production	4

The **Digital Prepress Production certificate** requires a total of 41 credits in the courses listed below.

Code 4532

Graph	1101	Printing Methods and Processes	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Graph	1160	Color Reproduction Techniques	3
Graph	1183	Digital Page Layout: QuarkXPress	3
Graph	1185	Digital Page Layout: Adobe InDesign	3
Graph	1186	Production Illustration: Adobe Illustrator	3
Graph	2220	Digital Workflow and Preflight	2
Graph	2230	Graphic Arts Business Practices	3
Graph	2240	Advanced Digital Page Layout: QuarkXPress	3
Graph	2245	Digital Prepress Imaging: Adobe Photoshop	3
Graph	2254	Advanced Digital Imaging: Adobe Photoshop	3
Graph	2270	Advanced Production Illustration: Adobe Illustrator	3
Graph	2280	Capstone: Digital Prepress Production	3
Adsgn	1102	Design I	3

Health Information Technology

AAS Degree, Four Certificates

A health information professional collects, analyzes and manages the information that steers the health care industry. At the heart of the profession's information responsibilities are records, both computer-based and paper, of an individual's health care. The health information professional orchestrates the collection of many kinds of documentation from a variety of sources, monitors the integrity of the information, and ensures appropriate access to the individual record. The professional also manages aggregate data based on the care of patients. The professional collects health care data by abstracting and encoding information, by using computer programs to interpret data, and by putting in place quality controls to ensure the data's validity. This program is accredited by the Commission on Accreditation of Health Informatics and Information Management Education (CAHIIM). This degree program consists of a total of 68 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements.

AAS Degree

Program Requirements

Code 3152

Anat&	1500	Survey of Human Anatomy and Physiology	4
Cis	1150	Introduction to Computer Information Systems	3
Engli	1101	English Composition I	3
Hlths	1110	Biomedical Terminology	4
Hit	1101	Fundamentals of Health Information Technology	4
Hit	1102	Clinical Classification Systems	5
Hit	1103	Computerized Health Data and Statistics	4
Hit	1107	CPT Coding	3
Hit	1125	Clinical Reimbursement Methodologies	3
Hit	2201	Legal and Qualitative Aspects of Health Information	5
Hit	2202	Management of Health Information	3
Hit	2203	Pharmacology for HIT Professionals	3
Hit	2211	Pathophysiology for Health Information	4
Hit	2221	Clinical I	3
Hit	2231	Clinical II	5
Math	1102	Mathematics for Health Sciences	3
Psych	1100	General Psychology	3
Speec	1100	Fundamentals of Speech Communication	3
		OR	
Speec	1120	Small-Group Communication	3
		OR	
Speec	1150	Introduction to Business Communication	3
			65

General Education3

(In addition to courses listed above) The following course is recommended:

Philo 1112 Biomedical Ethics3

Total Credits Required68

Certificates

The **Medical Transcription certificate** prepares students to transcribe medical reports, e.g., surgical reports, consultation reports and discharge summaries. Medical transcriptionists are medical word specialists and are employed in hospitals, clinics, doctors' offices, other health care facilities, and even out of the home.

Transcription students take courses in English, medical terminology, anatomy and physiology, pathophysiology, word processing and medical transcription. A medical transcriptionist must have above average typing skills and the ability to work with mechanical transcribing equipment. The program consists of 33 credits in courses in Health Information Technology, Office Technology Information, Health Sciences and English. The required courses are listed below. Code 4152

Program Requirements

Hlths	1110	Biomedical Terminology	4
Anat&	1500	Survey of Human Anatomy and Physiology	4
Hit	2223	Medical Transcription I	3
Ofiti	1210	Word Processing I	3
Engli	1101	English Composition I	3
Hit	2224	Medical Transcription II	3
Ofiti	2305	Word Processing Transcription	3
Hit	2203	Pharmacology for HIT Professionals	3
Hit	2211	Pathophysiology for Health Information	4
			30

Program Electives

Select one of the following:			
Hit	1107	CPT Coding	3
Hit	1120	ICD Coding for Physicians	3

The **Physician Office Coding and Billing certificate**

requires a total of 13 credit hours in the following courses. Code 4154

Hlths	1110	Biomedical Terminology	4
Hit	1107	CPT Coding	3
Hit	1120	Coding for Physicians	3
Hit	1121	Billing in Physician's Offices	3

The **Acute Healthcare Coding certificate** requires a total of 24 credit hours in the following courses. Code 4155

Hlths	1110	Biomedical Terminology	4
Hit	1101	Fundamentals of Health Information Technology	4
Anat&	1500	Survey of Human Anatomy and Physiology	4
Hit	2211	Pathophysiology for Health Information	4
Hit	1102	Clinical Classification Systems	5
Hit	1125	Clinical Reimbursement Methodologies	3

The **Ambulatory Coding certificate** requires a total of 24 credit hours in the following courses. Code 4156

Hlths	1110	Biomedical Terminology	4
Anat&	1500	Survey of Human Anatomy and Physiology	4

Hit	1101	Fundamentals of Health Information Technology	4
Hit	2211	Pathophysiology for Health Information ..	4
Hit	1102	Clinical Classification Systems	5
Hit	1107	CPT Coding.....	3

Health Sciences

AAS Degree, Three Certificates

The program in Health Science is designed to provide students with a broad background in health care. Students must earn a certificate in a Health Sciences Program at C.O.D. To pursue careers in Phlebotomy/EKG, Diagnostic Medical Imaging Nuclear Medicine (DMIN) or Diagnostic Medical Imaging Sonography (DMIS). Students working toward a certificate in Phlebotomy/ EKG should contact Nancy Feulner for degree information at (630) 942-2124. Students working toward a certificate in Diagnostic Medical Imaging Nuclear Medicine should contact Joanne Metler for degree information at (630) 942-3065. Students working towards a certificate in Diagnostic Medical Imaging Sonography should contact Terri Ciez for degree information at (630) 942-2436.

A.A.S. Degree

3163 Medical Assistant

The Medical Assistant is a health care professional who performs routine administrative and clinical tasks within a medical office. Duties may include but are not limited to: greeting patients, answering telephone, billing and coding, maintaining a medical record, completing patient medical history, completing basic clinical assessment, recording vital signs, preparing patients for examination, collecting blood specimens, performing basic laboratory tests, performing EKGs, preparing and administering medications and assisting physician with treatment and/or minor procedures. This degree program consists of a minimum of 64 credits in general education and program requirements from the courses listed below.

Program Requirements

Hit	1107	CPT Coding.....	3
Hit	1120	ICD Coding for Physicians.....	3
Hit	1121	Billing in Physician Offices	3
Hit	2203	Pharmacology for HIT Professionals	3
Hit	2211	Pathophysiology for Health Information.	4
Hlths	1110	Biomedical Terminology	4
Hlths	1120	Introduction to Clinical Lab Science	2
Hlths	1122	Basic Phlebotomy Techniques.....	4
Hlths	1124	Phlebotomy Clinical.....	2
Hlths	1126	Basic Electrocardiology (EKG)	2
Hlths	1127	EKG Clinical.....	1
Hlths	1130	Medical Assistant Administrative Procedures	2
Hlths	1131	Medical Assistant Clinical Procedures	2
Hlths	2211	Legal and Ethical Aspects of Healthcare ..	2
Hlths	2250	Medical Assistant Clinical Externship	3
Ofci	1200	MS Office for Professional Staff.....	2
Ofci	2600	Professional Development.....	3

Engli	1101	English Composition I	3
Speec	1100	Fundamentals of Speech Communication	3
Anat&	1500	Survey of Human Anatomy and Physiology	4
Math	1100	Business Mathematics	3
		OR	
Math	1102	Mathematics for Health Sciences	3
Philo	1114	Business Ethics	3
		OR	
Philo	1112	Biomedical Ethics	3
Psych	1100	General Psychology.....	3
			64

(optional)

Program Elective

Hit	2223	Medical Transcription	
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Certificates

Certified Nursing Assistant certificate

Certified Nursing Assistants are entry-level providers of direct patient care in today's health care environment, including long-term care, hospitals, home health agencies, rehabilitation and hospice. Routine care and treatment are administered by the nursing assistant under the direct supervision of a nurse. Nurse aide training is completed in one term of instruction that is comprised of lecture, lab, and clinical. Both day and evening classes are offered.

The Certified Nursing Assistant program meets the guidelines set by federal and state government. Successful completion of this approved program qualifies the individual to sit for the state competency evaluation and to be entered on the Illinois Department of Public Health Nurse Aide Registry.

The Certified Nursing Assistant certificate requires a total of six credits obtained by the course listed below.

Code 4158

Hlths	1105	Nurse Assistant.....	6
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Phlebotomy/EKG certificate

Phlebotomy is defined as the process of drawing blood for the purpose of evaluation, diagnosis and monitoring treatment of patients. Phlebotomists are presently employed in a variety of patient-care settings including hospitals, clinics, physician offices, and laboratories. Electrocardiography (EKG) provides the physician with information about the electrical activity in the heart.

There are four courses required to complete the Phlebotomy/EKG Certificate Program. Hlths 1122, Basic Phlebotomy provides the student with theory and instruction for all basic phlebotomy procedures. Hlths 1126, Basic Electrocardiography (EKG) is a highly specialized and technical tool for assessing cardiac function. Hlths 1124 includes 120 hours of clinical instruction in phlebotomy. Hlths 1127 includes clinical instruction in basic cardiology procedures. Day and evening classes are available for both Hlths 1122 and 1126 with clinical instruction available during the day. Open enrollment is available for Hlths 1122 and 1126.

The Phlebotomy/EKG Program meets the guidelines set by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) and entitles students who

complete the program to sit for the national exam to become a Certified Phlebotomist. The Phlebotomy/EKG certificate requires a total of nine credits in the courses listed below. Code 4162

Hlths	1122	Basic Phlebotomy Techniques.....	4
Hlths	1124	Phlebotomy Clinical.....	2
Hlths	1126	Basic Electrocardiology (EKG).....	2
Hlths	1127	EKG Clinical.....	1

Pharmacy Technician certificate

This certificate program includes pharmacy abbreviation, calculations, drug classes, basic physiology, disease states and prescription processing. Students also receive hands-on compounding experience and instruction for preparation of the Pharmacy Technician Certification Board (PTCB) national exam. The Pharmacy Technician certificate requires a total of five credits in the course listed below. Code 4164

Hlths	1115	Pharmacy Technician.....	5
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Horticulture

AAS Degree, Six Certificates

The Horticulture program meets the needs of students entering the horticulture industry as well as those presently employed who wish to continue their professional growth. Besides providing horticultural knowledge and skills, the program emphasizes the business and management proficiency necessary to compete successfully in the horticulture industry.

AAS Degree

The Horticulture degree program consists of a total of 64 credits in program requirements, program electives and general education. The following list contains the required courses, some of which may be used to meet general education requirements.

Program Requirements

Code 3336

Hort	1100	Introduction to Horticulture.....	3
Hort	1101	Soils and Fertilizers.....	3
Hort	1110	Applied Plant Taxonomy.....	3
Hort	1130	Horticulture Business (recommended)....	3
		OR	
Busin	1100	Introduction to Business.....	3
Hort	2221	Plant Propagation.....	3
Co-op	2861	Cooperative Education/Internship (Occupational).....	1
Biolo	1151	Principles of Biological Science.....	5
		OR	
Chem	1211	General Chemistry.....	5
Math	1104	Mathematics for Horticulture.....	3
			24

Program Electives24

Select a minimum of 24 credits from the courses listed below.

Hort	1105	Floral Design I.....	3
Hort	1111	Landscape Design I.....	3
Hort	1112	Landscape Maintenance and Construction.....	3

Hort	1115	Floral Design II.....	3
Hort	1140	Landscape Graphics.....	2
Hort	1185	Arboriculture.....	3
Hort	1820	Selected Topics in Horticulture.....	3
Hort	1821	Selected Topics in Horticulture.....	3
Hort	1824	Selected Topics in Horticulture.....	2
Hort	1826	Selected Topics in Horticulture.....	1
Hort	1827	Selected Topics in Horticulture.....	1
Hort	2225	Specialty Floral Design.....	3
Hort	2231	Turf Science and Management.....	3
Hort	2241	Landscape Plants I.....	3
Hort	2242	Landscape Plants II.....	3
Hort	2244	Herbaceous Perennials.....	3
Hort	2251	Diseases of Ornamental Plants.....	3
Hort	2253	Greenhouse Operations and Procedures.....	3
Hort	2255	Greenhouse Crop Production.....	3
Hort	2257	Bedding Plant Production.....	3
Hort	2261	Insects of Ornamental Plants.....	3
Hort	2271	Landscape Design II.....	3
Hort	2840	Experimental Pilot Class.....	1 to 6

When selecting program electives, students may include up to 8 credits in any combination from the additional courses listed below.

Arch	1211	Basic Computer-Aided Drafting — AutoCad.....	3
Hort	2867	Cooperative Education/Internship (Occupational).....	2
		OR	
Hort	2868	Cooperative Education/Internship (Occupational).....	3
Hort	1800	Experiential Special Topics.....	1 to 3

General Education	12
(In addition to courses listed above)	

Total Credits Required	64
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Certificates

The **Ornamental Horticulture certificate** requires 15 credits in the courses listed below. Code 4336

Hort	1100	Introduction to Horticulture.....	3
Hort	1101	Soils and Fertilizers.....	3
Hort	1110	Applied Plant Taxonomy.....	3
Hort	1130	Horticulture Business.....	3
Hort	2221	Plant Propagation.....	3

The **Floral Shop Management certificate** requires 24 credits in the courses listed below. Code 4337

Program Requirements

Hort	1100	Introduction to Horticulture.....	3
Hort	1130	Horticulture Business (recommended)....	3
		OR	
Busin	1100	Introduction to Business.....	3
Hort	1105	Floral Design I.....	3
Hort	1115	Floral Design II.....	3
Hort	2225	Specialty Floral Design.....	3
Hort	2244	Herbaceous Perennials.....	3
Co-op	2863	Cooperative Education/Internship (Occupational).....	3
			21

Electives.....3
 Select three credits from any 1000- or 2000-level courses.
 Suggested electives:

- Fashi 2220 Visual Merchandising.....3
- Hort 2257 Bedding Plant Production.....3

The **Landscape Design and Construction certificate** requires 35 credits in the courses listed below. Code 4338

- Hort 1100 Introduction to Horticulture.....3
- Hort 1101 Soils and Fertilizers.....3
- Hort 1111 Landscape Design I.....3
- Hort 1112 Landscape Maintenance and Construction.....3
- Hort 1140 Landscape Graphics.....2
- Hort 2241 Landscape Plants I.....3
- Hort 2242 Landscape Plants II.....3
- Hort 2244 Herbaceous Perennials.....3
- Hort 2271 Landscape Design II.....3
- Math 1104 Mathematics for Horticulture.....3
- Co-op 2861 Cooperative Education/Internship (Occupational).....1
- Arch 1211 Basic Computer-Aided Drafting — AutoCad.....3

The **Greenhouse Management certificate** requires 24 credits in the courses listed below. Code 4339

- Hort 1100 Introduction to Horticulture.....3
- Hort 1101 Soils and Fertilizers.....3
- Hort 1130 Horticulture Business (recommended)....3
OR
- Busin 1100 Introduction to Business.....3
- Hort 2221 Plant Propagation.....3
- Hort 2253 Greenhouse Operations and Procedures .3
- Hort 2255 Greenhouse Crop Production.....3
- Hort 2257 Bedding Plant Production.....3
- Co-op 2863 Cooperative Education/Internship (Occupational).....3

The **Landscape and Turf Maintenance certificate** requires a total of 33 credits in the courses listed below. Code 4341

Program Requirements

- Hort 1100 Introduction to Horticulture.....3
- Hort 1101 Soils and Fertilizers.....3
- Hort 1110 Applied Plant Taxonomy.....3
- Hort 1112 Landscape Maintenance and Construction.....3
- Hort 2231 Turf Science and Management.....3
- Hort 2251 Diseases of Ornamental Plants.....3
- Hort 2261 Insects of Ornamental Plants.....3
- Co-op 2863 Cooperative Education/Internship (Occupational).....3
- Math 1104 Mathematics for Horticulture.....3

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Program Electives.....6

Select any two of the following courses.

- Hort 1185 Arboriculture.....3
- Hort 2241 Landscape Plants I.....3
- Hort 2242 Landscape Plants II.....3
- Hort 2244 Herbaceous Perennials.....3

The **Nursery and Garden Center Management certificate** requires a total of 33 credits in the courses listed below. Code 4342

- Hort 1100 Introduction to Horticulture.....3
- Hort 1101 Soils and Fertilizers.....3
- Hort 1130 Horticulture Business (recommended)....3
OR
- Busin 1100 Introduction to Business.....3
- Hort 2221 Plant Propagation.....3
- Hort 2241 Landscape Plants I.....3
- Hort 2242 Landscape Plants II.....3
- Hort 2244 Herbaceous Perennials.....3
- Hort 2251 Diseases of Ornamental Plants.....3
- Hort 2261 Insects of Ornamental Plants.....3
- Co-op 2863 Cooperative Education/Internship (Occupational).....3
- Math 1104 Mathematics for Horticulture.....3

Hotel and Lodging Management

AAS Degree, Four Certificates

The Hotel and Lodging Management program and courses are designed to develop career-building skills important for success in the lodging industry. The degree program consists of a minimum of 64 credits in general education, program requirements and program electives. The following list contains the required courses.

AAS Degree Program Requirements

Code 3236

- Hotel 1100 Introduction to the Hospitality Industry...3
- Hotel 1130 Hospitality Industry Accounting.....3
- Hotel 2202 Hotel Marketing Management.....3
- Hotel 2211 Rooms Division Operations.....3
- Hotel 2212 Hotel Facilities Operations Management .3
- Hotel 2230 Law for the Hospitality Industry.....2
- Hotel 2240 Quality Management of Service in the Hospitality Industry.....3
- Hotel 2251 Techniques of Supervision.....2
- Hotel 2253 Professional Meeting and Event Management.....3
- Hotel 2285 Advanced Hospitality Operations.....3
- Foods 1101 Culinary Arts: Quantity Food Preparation I.....5
- Foods 1102 Culinary Arts: Quantity Food Preparation II.....5
- Foods 2220 Foodservice Sanitation.....2
- Co-op 2863 Cooperative Education/Internship (Occupational).....3

43

Program Electives.....3

Select three credits in Foodservice Administration or Hotel and Lodging Management or Travel and Tourism programs. Please see faculty adviser prior to class selection for approval.

General Education18
 (In addition to courses listed above)

Total Credits Required.....64

Certificates

The **Hotel Foundations certificate** requires 11 credits in the courses listed below. Code 4234

Hotel	1100	Introduction to the Hospitality Industry	.3
Hotel	2211	Rooms Division Operations	.....3
Hotel	2240	Quality Management of Service in the Hospitality Industry	.....3
Hotel	2251	Techniques of Supervision	.....2

The **Hotel Operations certificate** requires 31 credits in the courses listed below. Code 4236

Hotel	1100	Introduction to the Hospitality Industry	.3
Hotel	2202	Hotel Marketing Management	.....3
Hotel	2211	Rooms Division Operations	.....3
Hotel	2212	Hotel Facilities Operations Management	..3
Hotel	2240	Quality Management of Service in the Hospitality Industry	.....3
Hotel	2251	Techniques of Supervision	.....2
Hotel	2253	Professional Meeting and Event Management	.....3
Hotel	2285	Advanced Hospitality Operations	.....3
Foods	1101	Culinary Arts: Quantity Food Preparation I	.....5
Co-op	2863	Cooperative Education/Internship III (Occupational)	.....3

The **Hotel Food and Beverage certificate** requires 30 to 31 credits in the courses listed below. Code 4238

Hotel	2202	Hotel Marketing Management	.....3
Hotel	2240	Quality Management of Service in the Hospitality Industry	.....3
Hotel	2251	Techniques of Supervision	.....2
Foods	1101	Culinary Arts: Quantity Food Preparation I	.....5
Foods	1102	Culinary Arts: Quantity Food Preparation II	.....5
Foods	1151	Food and Beverage Service and Sales	.....2
Foods	2203	Professional Catering and Banquet Management	.....3
Foods	1152	Food, Beverage and Equipment Purchasing	.....3
OR			
Foods	2261	Beverage Management Operation	.....2
Foods	2220	Foodservice Sanitation	.....2
Co-op	2863	Cooperative Education/Internship III (Occupational)	.....3

The **Hotel Sales and Marketing certificate** requires 26 credits in the courses listed below. Code 4239

Hotel	1100	Introduction to the Hospitality Industry	.3
Hotel	2202	Hotel Marketing Management	.....3
Hotel	2211	Rooms Division Operations	.....3
Hotel	2240	Quality Management of Service in the Hospitality Industry	.....3
Hotel	2253	Professional Meeting and Event Management	.....3
Foods	1101	Culinary Arts: Quantity Food Preparation I	.....5
Foods	2203	Professional Catering and Banquet Management3

Co-op	2863	Cooperative Education/Internship III (Occupational)3
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Human Services

Seven AAS Degree Options, Four Certificates

The Human Services program provides beginning professional training for human service agency jobs. In addition to degree options in Applied Gerontology, Addictions Counseling, Corrections Counseling, Developmental Disability, Domestic/Family Violence, Residential Child Care and Human Services Generalist, students may complete certificates in Human Services, Addictions Counseling, Applied Gerontology and Psychiatric Rehabilitation.

AAS Degrees

The Human Services Generalist degree program consists of a minimum of 69 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

Program Requirements

Code 3467	
Human	1100 Introduction to Human Services.....4
Human	1113 Interpersonal Dynamics .....4
Human	1114 Contemporary Treatment Approaches.....3
Human	1115 Behavior Modification .....4
Human	1121 Cross-Cultural Communications.....3
Human	1125 Introduction to Addictions .....4
Human	2212 Group Dynamics .....5
Human	2279 Ethics in Counseling .....2
Human	2240 Family Education and Treatment Models .3
Human	2223 Generalist Practice I .....2
Human	2251 Fieldwork I .....4
Human	1170 Role of Advocacy in Human Services .....2
Human	1175 Crisis Intervention .....2
Human	1180 Domestic/Family Violence .....4
Human	1141 Psychiatric Rehabilitation .....4
OR	
Human	1165 Dynamics of Child Abuse.....3
49 to 50	

General Education20
(In addition to courses listed above)	

Total Credits Required69
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The **Applied Gerontology degree program** consists of a minimum of 70 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

Program Requirements

Code 3468	
Human	1100 Introduction to Human Services.....4
Human	1113 Interpersonal Dynamics .....4

Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions	4
Human	2212	Group Dynamics	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models..	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	2213	Grief Counseling.....	3
Human	2214	Older Adult Care Management.....	4
Human	1170	Role of Advocacy in Human Services	2
Psych	2237	Developmental Psychology: The Life Span.....	3
			50

General Education20
(In addition to courses listed above)

Total Credits Required.....70

The **Addictions Counseling degree program** consists of a minimum of 68 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

Program Requirements

Code 3469

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions	4
Human	2212	Group Dynamics	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models..	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	1126	Psychopharmacology for Addictions Counselors	3
Human	2225	Addictions Counseling I.....	4
Human	2226	Addictions Counseling II	3
			48

General Education20
(In addition to courses listed above)

(optional)

Program Electives

Advanced degree requirements could include:

Human	2252	Fieldwork II.....	4
Human	2280	Addictions Counseling III.....	3

Total Credits Required.....68

The **Corrections Counseling degree program** consists of a minimum of 70 credits in general education and program requirements. The following list contains the required

courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

Program Requirements

Code 3470

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions	4
Human	2212	Group Dynamics	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models..	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	2200	Introduction to the Juvenile Justice System.....	4
Human	1170	Role of Advocacy in Human Services	2
Crimj	1100	Introduction to Criminal Justice.....	3
Psych	2237	Developmental Psychology: The Life Span.....	3
			50

General Education20
(In addition to courses listed above)

Total Credits Required.....70

The **Developmental Disability degree program** consists of a minimum of 70 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

Program Requirements

Code 3471

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions	4
Human	2212	Group Dynamics	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models..	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	1190	Introduction to Developmental Disabilities	5
Human	1170	Role of Advocacy in Human Services	2
Human	1175	Crisis Intervention	2
Psych	2237	Developmental Psychology: The Life Span.....	3
			50

General Education20
(In addition to courses listed above)

Total Credits Required.....70

The **Residential Child Care degree program** consists of a total of 67 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

Program Requirements

Code 3473

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions.....	4
Human	2212	Group Dynamics.....	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models..	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	1160	Residential Child Care.....	2
Human	1165	Dynamics of Child Abuse.....	3
Human	1170	Role of Advocacy in Human Services.....	2
Human	1175	Crisis Intervention.....	2
			<u>47</u>

General Education.....20
(In addition to courses listed above)

Total Credits Required.....67

The **Domestic/Family Violence degree program** consists of a total of 72 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements. This program is approved by the Council on Standards in Human Service Education.

Program Requirements

Code 3474

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions.....	4
Human	2212	Group Dynamics.....	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	1165	Dynamics of Child Abuse.....	3
Human	1170	Role of Advocacy in Human Services.....	2
Human	1175	Crisis Intervention.....	2
Human	1180	Domestic/Family Violence.....	4
Psych	2237	Developmental Psychology: The Life Span.....	3
			<u>52</u>

General Education.....20
(In addition to courses listed above)

Total Credits Required.....72

Certificates

The **Applied Gerontology certificate** requires 50 credits in the courses listed below. Code 4468

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions.....	4
Human	2212	Group Dynamics.....	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	2213	Grief Counseling.....	3
Human	2214	Older Adult Care Management.....	4
Human	1170	Role of Advocacy in Human Services.....	2
Psych	2237	Developmental Psychology: The Life Span.....	3

The **Addictions Counseling certificate** requires 48 credits in the courses listed below. Code 4469

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions.....	4
Human	1126	Psychopharmacology for Addictions Counselors.....	3
Human	2212	Group Dynamics.....	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models.....	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	2225	Addictions Counseling I.....	4
Human	2226	Addictions Counseling II.....	3

Program Electives

Advanced Certificate Standing (optional)

Complete the following additional seven credit hours.

Human	2252	Fieldwork II.....	4
Human	2280	Addictions Counseling III.....	3

The **Human Services Domestic/Family Violence certificate** requires a minimum of 49 credits in the courses listed below. Code 4474

Human	1100	Introduction to Human Services.....	4
Human	1113	Interpersonal Dynamics.....	4
Human	1114	Contemporary Treatment Approaches.....	3
Human	1115	Behavior Modification.....	4
Human	1121	Cross-Cultural Communications.....	3
Human	1125	Introduction to Addictions.....	4
Human	2212	Group Dynamics.....	5
Human	2279	Ethics in Counseling.....	2
Human	2240	Family Education and Treatment Models..	3
Human	2223	Generalist Practice I.....	2
Human	2251	Fieldwork I.....	4
Human	1170	Role of Advocacy in Human Services.....	2

Human	1175	Crisis Intervention	2
Human	1180	Domestic/Family Violence	4
Human	1141	Psychiatric Rehabilitation	4
		OR	
Human	1165	Dynamics of Child Abuse.....	3

The **Psychiatric Rehabilitation certificate** requires 20 credits in the courses listed below. Code 4476

Human	1141	Psychiatric Rehabilitation	4
Human	1142	Psychiatric Rehabilitation Skills.....	4
Human	1143	Health Skills for Psychiatric Rehabilitation	4
Human	1144	Vocational and Community Living Skills...	4
Human	2251	Fieldwork I.....	4

Integrated Engineering Technology (InET)

AAS Degree

3914 Integrated Engineering Technology (InET)

Integrated Engineering Technology, (InET) is a two-year program that leads to an AAS degree. It is an innovative program designed to meet industry needs for multifunctional technicians competent in mechanics, computers, telecommunications and electronics technology. As InET engineering technicians, students may work individually or as members of a professional team, applying aspects of scientific and engineering concepts to the implementation of existing technologies and the creation of new technologies. After completion of the program, students may work in an engineering technology field in an area such as wireless telecommunications, or transfer to a four-year institution. This new and innovative program is an activity-based approach to learning. Students work in teams on real industrial projects. Mathematics, speech, English and technical subject components are applied and integrated into a common context.

Program Requirements

Elect	1101	Circuits I.....	3
Elect	1141	Digital Fundamentals.....	3
Elect	1151	Electronic Devices and Applications I.....	4
Elect	1161	Electronic Communication I.....	4
Elect	2241	Wireless Telecommunications I	3
Elect	2242	Wireless Telecommunications II.....	3
Elect	2273	Real-Time Systems and Programming	3
Elect	2255	Industrial Controls	3
Physi	1100	Physics.....	4
Physi	1201	General Physics I.....	5
Manuf	1101	Industrial Design/CAD.....	3
Manuf	1104	Technical Mechanics	2
Manuf	1180	Quality Control	3
Manuf	1190	Introduction to Programmable Logic Controllers	3
Engli	1101	English Composition I	3
Engli	1102	English Composition II.....	3
Speec	1100	Fundamentals of Speech Communication	3
Math	1115	Technical Mathematics I.....	3
Math	1116	Technical Mathematics II	5

General Education	6
additional credits	
Humanities: 3 semester hours	
Social and Behavioral Sciences: 3 semester hours	
<hr/> Total Credits Required	69

Interior Design

AAS Degree, Three Certificates

Interior designers are responsible for the health, safety and welfare of the public by improving the quality of life related to interior spaces and the design of functional environments. The professional interior designer is qualified by education, experience and examination (NCIDQ) to perform a variety of tasks including: analyzing the client's needs, goals and life/safety requirements; formulating preliminary design concepts that are appropriate, functional and aesthetic; developing and presenting working drawings (for non-load bearing walls) floor plans, lighting plans and furniture plans; specifying furniture surface materials and finishes; and preparing and administering bids, contracts and professional services necessary to successful implementation of final design solution. The Interior Design AAS degree consists of a minimum of 69 credits. This total combines Interior Design courses and general education requirements.

Program Requirements

Code 3539

Inter	1110	Drafting Interiors.....	3
Inter	1120	Interior Systems.....	2
Inter	1130	Perspective Techniques	2
Inter	1140	Color Rendering	2
Inter	1151	Architecture and Design History I	3
Inter	1152	Architecture and Design History II	3
Inter	1160	Environmental Textiles	2
Inter	1170	Environmental Materials and Applications	3
Inter	1180	Professional Practice and Ethics	2
Inter	1190	Barrier-Free and Life-Safety Codes.....	3
Inter	2211	Computer Applications I.....	3
Inter	2220	Interior Architectural Details	2
Inter	2311	Lighting I	3
Inter	2410	Residential Design Studio	3
Inter	2420	Universal Design Studio	3
Inter	2430	Contract Design Studio	3
Inter	2440	Office Design Studio.....	3
Inter	2610	Portfolio Review	3
Psych	1100	General Psychology	3
Art	1151	2-D Design.....	3
Math	1100	Business Mathematics	3
			<hr/> 57

Program Electives.....

Select three credits from courses listed below.

Co-op	2870	Cooperative Education/Internship (Transfer)	1 to 4
Co-op	2871	Cooperative Education/Internship Advanced (Transfer)	1 to 4

Inter	1153	Architecture and Design History: Non-Western Cultures	3
Inter	1821	Selected Topics I	3
Inter	1840	Independent Study — Individualized	1 to 4
Inter	2212	Computer Applications II	3
Inter	2213	Computer Applications III	3
Inter	2312	Lighting II	3
Inter	2450	Senior Design Studio	3
Inter	2511	Kitchen and Bath Design I	3
Inter	2512	Kitchen and Bath Design II	3
Inter	2515	Kitchen and Bath Computer Applications	3
Inter	2520	Furniture Design	3
Inter	2821	Advanced Selected Topics I	3

General Education	9
(In addition to courses listed above)	
Total Credits Required	69

Certificates

The **Advanced Kitchen and Bath Design certificate** requires 44 to 47 credits. Any required courses or prerequisite courses may be transferred from Interior Design AAS degree credits or may be met through review of Interior Design professional portfolio skills and consent of coordinator. Code 4535

Inter	1110	Drafting Interiors.....	3
Inter	1120	Interior Systems.....	2
Inter	1130	Perspective Techniques	2
Inter	1151	Architecture and Design History I	3
Inter	1152	Architecture and Design History II	3
Inter	1160	Environmental Textiles	2
Inter	1170	Environmental Materials and Applications	3
Inter	1180	Professional Practice and Ethics	2
Inter	1190	Barrier-Free and Life-Safety Codes.....	3
Inter	2211	Computer Applications I.....	3
Inter	2220	Interior Architectural Details	2
Inter	2311	Lighting I	3
Inter	2410	Residential Design Studio	3
Inter	2511	Kitchen and Bath Design I	3
Inter	2512	Kitchen and Bath Design II	3
Inter	2515	Kitchen and Bath Computer Applications	3
Co-op	2870	Cooperative Education/Internship (Transfer)	1 to 4

The **Advanced Computer Applications certificate** requires 21 credits. Any required courses or prerequisite courses may be transferred from Interior Design AAS degree credits or may be met through review of Interior Design professional portfolio skills and consent of coordinator. Code 4536

Inter	1110	Drafting Interiors.....	3
Inter	1120	Interior Systems.....	2
Inter	1130	Perspective Techniques	2
Inter	1190	Barrier-Free and Life-Safety Codes.....	3
Inter	2211	Computer Applications I.....	3
Inter	2212	Computer Applications II	3

Inter	2213	Computer Applications III	3
Inter	2220	Interior Architectural Details	2

The **Advanced Lighting certificate** requires 27 credits. Any required courses or prerequisite courses may be transferred from Interior Design AAS degree credits or may be met through review of Interior Design professional portfolio skills and consent of coordinator. Code 4540

Inter	1110	Drafting Interiors.....	3
Inter	1120	Interior Systems.....	2
Inter	1130	Perspective Techniques	2
Inter	1190	Barrier-Free and Life-Safety Codes.....	3
Inter	2211	Computer Applications I.....	3
Inter	2212	Computer Applications II	3
Inter	2213	Computer Applications III	3
Inter	2220	Interior Architectural Details	2
Inter	2311	Lighting I	3
Inter	2312	Lighting II.....	3

Library and Information Technology

AAS Degree, Certificate

The Library and Information Technology program prepares students for paraprofessional levels of library service. Courses are designed for beginning students with no previous experience, for those returning to the work force, or those upgrading skills. The degree program consists of a minimum of 64 credits in general education and program requirements, and a test. The following list contains the required courses.

AAS Degree Program Requirements

Code 3651		
Libra	1101 Introduction to Libraries and the Information Age	3
Libra	1102 Introduction to Reference and Information Services	4
Libra	1103 Acquisition of Library Materials	3
Libra	1820 Selected Topics in Librarianship	3
Libra	2100 Introduction to Cataloging and Classification	4
Libra	1104 Essential Library Workplace Skills.....	3
Libra	2200 Serving the Public in Today's Libraries	4
Libra	2300 Multimedia Services and Equipment in Today's Library.....	3
Libra	2600 Library Practicum.....	4
Manag	2220 Organizational Behavior.....	3
Cis	1150 Introduction to Computer Information Systems.....	3

37

Electives.....9
Select nine credits from any 1000- or 2000-level courses.

General Education18
(In addition to courses listed above)

Total Credits Required64

Certificate

The **Library Technical Assistant certificate** requires 31 credits in the courses listed below, and a keyboarding proficiency exam. Code 4651

Libra	1101	Introduction to Libraries and the Information Age	3
Libra	1102	Introduction to Reference and Information Services	4
Libra	1103	Acquisition of Library Materials	3
Libra	1820	Selected Topics in Librarianship	3
Libra	2100	Introduction to Cataloging and Classification	4
Libra	1104	Essential Library Workplace Skills	3
Libra	2200	Serving the Public in Today's Libraries	4
Libra	2300	Multimedia Services and Equipment in Today's Library.....	3
Libra	2600	Library Practicum.....	4

Long-Term Care Administration

Certificate

The **Long-Term Care Administration certificate** requires 13 credits in the courses listed below. Code 4197

Ltc	1140	Introduction to Long-Term Care Administration	3
Ltc	1151	Nursing Home Administrative Practices I	3
Ltc	1152	Nursing Home Administrative Practices II	3
Ltc	1161	Aging and Long-term Care I	2
Ltc	1162	Aging and Long-term Care II	2

Management

AAS Degree, Five Certificates

The Management program prepares students for management and supervisory careers in business and industry. Graduates may enter lower- to middle-management positions directly from college or may elect to establish their own businesses. Employment opportunities include positions as production managers or supervisors.

This degree program consists of a minimum of 64 credits in program requirements, general education and program electives. The following list contains the required courses, some of which may be used to meet general education requirements.

AAS Degree

Program Requirements

Code 3202

Busin	1100	Introduction to Business	3
Accou	1140	Financial Accounting	4
Manag	2210	Principles of Management.....	3
Manag	2220	Organizational Behavior.....	3
Manag	2240	Human Resource Management	3
Cis	1221	Introduction to Spreadsheets	3
Marke	2210	Principles of Marketing.....	3
Buslw	2211	Business Law I.....	3
Philo	1114	Business Ethics	3

Econo	2201	Macroeconomics and the Global Economy	3
		OR	
Psych	1100	General Psychology.....	3
Cis	1150	Introduction to Computer Information Systems.....	3
			<hr/> 34

Program Electives.....18

Select from the courses listed below.

Busin	1120	Fundamentals of Personal Investing.....	3
Busin	1161	Entrepreneurship	3
Busin	2200	Business Budgeting.....	3
Busin	2210	Principles of Finance.....	3
Busin	2255	International Business.....	3
Busin	2260	International Finance.....	3
Manag	1100	Supervision.....	3
Manag	1161	Small Business Management	3
Manag	1820	Selected Topics in Management	3
Manag	2170	Project Management.....	3
Manag	2215	Leadership	3
Manag	2230	Purchasing	3
Manag	2250	Operation/Production Management	3
Manag	2260	International Management.....	3

General Education12

(In addition to courses listed above)

Total Credits Required.....64

Certificates

The **E-Commerce certificate** requires 17 to 18 credits in the courses listed below. Code 4201

Program Requirements

Busin	1100	Introduction to Business	3
		OR	
Manag	1100	Supervision.....	3
		OR	
Marke	1100	Consumer Marketing	3
Marke	1175	Customer Relationship Management	3
Busin	1170	Electronic Business/Commerce.....	3
			<hr/> 9

Program Electives8 to 9

I. Select two of the courses below:

Manag	2170	Project Management.....	3
Marke	1170	E-Marketing.....	3
Marke	1171	Database Marketing.....	3

II. In addition to (I) above, select one of the following courses:

Adsgn	2202	Web/Interactive Design I.....	3
Cis	1120	The Internet.....	2
Cis	1230	Microcomputer Database Application	3
Cis	1300	Web Design Software.....	3
Cis	1310	HTML and CSS.....	3
Graph	1102	Introduction to Graphic Publishing Applications	3
Photo	1201	Tools and Techniques for Digital Photography	3

The **Management certificate** requires 31 credits in the courses listed below. Code 4202

Program Requirements

Busin	1100	Introduction to Business	3
Accou	1140	Financial Accounting	4
Manag	2210	Principles of Management	3
Manag	2220	Organizational Behavior	3
Manag	2240	Human Resource Management	3
Marke	2210	Principles of Marketing	3
Buslw	2211	Business Law I	3
Cis	1150	Introduction to Computer Information Systems	3
			<u>25</u>

Program Electives.....6

Select from the courses listed below:

Busin	2200	Business Budgeting	3
Busin	2255	International Business	3
Cis	1221	Introduction to Spreadsheets	3
Manag	1100	Supervision	3
Manag	1161	Small Business Management	3
Manag	2170	Project Management	3
Manag	2215	Leadership	3
Manag	2230	Purchasing	3
Manag	2250	Operation/Production Management	3
Manag	2260	International Management	3

The **Supervision certificate** requires 12 credits in the courses listed below. Code 4208

Manag	1100	Supervision	3
Busin	1100	Introduction to Business	3
Manag	2220	Organizational Behavior	3
Cis	1150	Introduction to Computer Information Systems	3

The **Entrepreneurship certificate** requires 12 credits in the courses listed below. Code 4210

Program Requirements

Busin	1161	Entrepreneurship	3
Manag	1161	Small Business Management	3
			<u>6</u>

Program Electives.....6

Select from the following courses:

Accou	1110	Accounting Procedures	4
Accou	1175	Microcomputer Accounting	2
Buslw	2211	Business Law I	3
Manag	1100	Supervision	3
Marke	1100	Consumer Marketing	3

The **Business Environment and Concepts certificate** is designed for CPA Examination candidates who have a non-business baccalaureate degree. It requires 18 credits in the courses listed below. Code 4213

Program Requirements

Busin	1100	Introduction to Business	3
Busin	2210	Principles of Finance	3
Econo	2201	Microeconomics and the Global Economy	3

Econo	2202	Microeconomics and the Global Economy	3
			<u>12</u>

Program Electives.....

Select two of the following courses:

Busin	2200	Business Budgeting	3
Busin	2255	International Business	3
Busin	2260	International Finance	3
Manag	2210	Principles of Management	3
Manag	2220	Organizational Behavior	3
Marke	2210	Principles of Marketing	3
Philo	1114	Business Ethics	3
			<u>6</u>

Total Credits Required.....18

Manufacturing Technology

Four AAS Degree Options, Six Certificates

The Manufacturing Technology program provides training in a wide variety of skill areas of product manufacturing and services. The four degree options in the program are Automated Manufacturing Systems, Drafting/Design, Manufacturing Technology and Manufacturing Engineering Technology. Automated Manufacturing is designed to prepare the student for careers in computer-aided manufacturing, robotics and numerical control. Drafting/Design prepares the student for careers in the drafting and computer-aided design areas. Manufacturing Technology provides the student with a broad background in the areas of machining, drafting and fluid systems so as to prepare them for entry level positions as machine operators, machine maintenance personnel and quality control personnel. The Manufacturing Engineering Technology degree prepares students for entry-level engineering technician positions in manufacturing.

AAS Degree Options

The **Manufacturing Technology degree** requires a minimum of 64 credits in program requirements, program electives and general education in the courses listed below.

Program Requirements

Code 3940

Manuf	1101	Industrial Design/CAD	3
Manuf	1104	Technical Mechanics	2
Manuf	1180	Quality Control	3
Manuf	1141	Hydraulics and Pneumatics	3
Manuf	1151	Machine Shop I	3
Manuf	1153	Advanced Machine Processes	3
Manuf	2251	Computer Numerical Control (CNC)	3
Elect	1100	Electricity and Electronics Fundamentals	2
Weld	1100	Welding I	3
Manuf	1110	Metrology	3
			<u>28</u>

Program Electives.....16

Select from the courses listed below:

Manuf	1121	Physical Metallurgy	3
Manuf	1171	Introduction to Robotic Technology	3
Manuf	2201	Geometric Dimensioning and Tolerancing.....	3
Manuf	2202	Solid Modeling and Design	3
Weld	1112	Oxy-Fuel,Welding, Plasma Cutting and Brazing.....	3
Weld	1122	Shielded Metal Arc (SMAW)	3
Weld	1132	Gas Metal Arc (MIG).....	3
Weld	1142	Gas Tungsten Arc (TIG)	3

General Education20
(In addition to courses listed above)

Total Credits Required.....64

The Automated Manufacturing Systems degree

requires a minimum of 65 credits in program requirements, program electives and general education in the courses listed below.

Program Requirements

Code 3941

Manuf	1101	Industrial Design/CAD.....	3
Manuf	1104	Technical Mechanics	2
Manuf	1121	Physical Metallurgy	3
Manuf	1180	Quality Control	3
Elect	1100	Electricity and Electronics Fundamentals.....	2
Manuf	1190	Introduction to Programmable Logic Controllers	3
Manuf	1141	Hydraulics and Pneumatics	3
Manuf	1110	Metrology	3
Manuf	1171	Introduction to Robotic Technology	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-Aided Manufacturing (CAM).....	3
Manuf	1151	Machine Shop I	3
Manuf	2280	Industrial Safety.....	2
			39

Program Electives.....6

Select from courses below.

Manuf	1153	Advanced Machine Processes	3
Manuf	1160	Technical Static and Strength of Material	4
Manuf	2201	Geometric Dimensioning and Tolerancing.....	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design.....	3
Manuf	2271	Robotic Application	3
Manuf	2280	Industrial Safety.....	2

General Education20
(In addition to courses listed above)

Total Credits Required.....65

The **Drafting/Design degree** requires a minimum of 64 credits in program requirements, program electives and general education from the courses listed below.

Program Requirements

Code 3942

Manuf	1101	Industrial Design/CAD.....	3
Elect	1100	Electricity and Electronics Fundamentals.....	2
Manuf	1104	Technical Mechanics	2
Manuf	1180	Quality Control	3
Manuf	1151	Machine Shop I.....	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design.....	3
Manuf	2208	Mechanical Design Portfolio	3
Manuf	1121	Physical Metallurgy	3
			31

Program Electives.....12

Select credits from courses below.

Manuf	1110	Metrology	3
Manuf	1141	Hydraulics and Pneumatics.....	3
Manuf	1171	Introduction to Robotic Technology	3
Manuf	1190	Introduction to Programmable Logic Controllers.....	3
Manuf	2201	Geometric Dimensioning and Tolerancing.....	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2280	Industrial Safety.....	2
Manuf	2281	Cost Analysis	2
Weld	1100	Welding I	3

General Education20
(In addition to courses listed above)

Elective1
(any 1000- or 2000-level course)

Total Credits Required.....64

The Manufacturing Engineering Technology degree

requires a minimum of 64 credits in program requirements and general education from the courses below.

Program Requirements

Code 3943

Manuf	1101	Industrial Design/CAD.....	3
Manuf	1121	Physical Metallurgy	3
Manuf	1141	Hydraulics and Pneumatics.....	3
Manuf	1151	Machine Shop I.....	3
Manuf	1160	Technical Static and Strength of Material.....	4
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-Aided Manufacturing (CAM).....	3
Manuf	2281	Cost Analysis	2
Elect	1100	Electricity and Electronics Fundamentals.....	2
Math	1431	Precalculus I	5
Math	1432	Precalculus II: Trigonometry.....	3
Math	1635	Statistics.....	4

Physi	1201	General Physics I.....	5
Manuf	1180	Quality Control	3
			52

General Education12
 (In addition to courses listed above)

Total Credits Required.....64

Certificates

The **Manufacturing Technology certificate** requires 34 credits in program requirements and program electives from the courses listed below. Code 4940

Program Requirements

Manuf	1101	Industrial Design/CAD.....	3
Manuf	1104	Technical Mechanics	2
Manuf	1110	Metrology	3
Manuf	1121	Physical Metallurgy	3
Manuf	1141	Hydraulics and Pneumatics	3
Manuf	1151	Machine Shop I	3
Manuf	1153	Advanced Machine Processes	3
Manuf	1180	Quality Control	3
Elect	1100	Electricity and Electronics Fundamentals.....	2
Weld	1100	Welding I	3
		OR	
Math	1115	Technical Mathematics I.....	3
			28

Program Electives.....6

Select from the courses below.

Manuf	1171	Introduction to Robotic Technology.....	3
Manuf	2201	Geometric Dimensioning and Tolerancing.....	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-Aided Manufacturing (CAM).3	
Weld	1122	Shielded Metal Arc (SMAW)	3
Weld	1132	Gas Metal Arc (MIG).....	3
Weld	1142	Gas Tungsten Arc (TIG)	3

The **Automated Manufacturing Systems certificate**

requires 34 credits in the courses listed below.

Code 4941

Manuf	1101	Industrial Design/CAD.....	3
Manuf	1104	Technical Mechanics	2
Manuf	1141	Hydraulics and Pneumatics	3
Manuf	1151	Machine Shop I	3
Manuf	1171	Introduction to Robotic Technology.....	3
Manuf	1180	Quality Control	3
Manuf	1190	Introduction to Programmable Logic Controllers	3
Manuf	2251	Computer Numerical Control (CNC)	3
Manuf	2253	Computer-aided Manufacturing (CAM).3	
Elect	1100	Electricity and Electronics Fundamentals.....	2
Weld	1100	Welding I	3
Math	1115	Technical Mathematics I.....	3

The **Drafting/Design certificate** requires 37 credits in

the courses listed below. Code 4942

Manuf	1101	Industrial Design/CAD.....	3
Manuf	1104	Technical Mechanics	2
Manuf	1141	Hydraulics and Pneumatics.....	3
Elect	1100	Electricity and Electronics Fundamentals.....	2
Manuf	1151	Machine Shop I.....	3
Manuf	1180	Quality Control	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design.....	3
Manuf	2208	Mechanical Design Portfolio	3
Manuf	2201	Geometric Dimensioning and Tolerancing.....	3
Math	1115	Technical Mathematics I.....	3

The **Computer-Aided Design certificate** requires 24

credits in program requirements and program electives from the courses listed below. Code 4944

Program Requirements

Manuf	1101	Industrial Design/CAD.....	3
Manuf	2202	Solid Modeling and Design	3
Manuf	2203	Manufacturing Processes and Design	3
Manuf	2206	Mechanical Computer-Aided Drafting/Design	3
Manuf	2207	Tool Design.....	3
Manuf	2208	Mechanical Design Portfolio	3
			18

Program Electives.....6

Select credits from courses below.

Elect	1100	Electricity and Electronics Fundamentals.....	2
Manuf	1110	Metrology	3
Manuf	1121	Physical Metallurgy	3
Manuf	1141	Hydraulics and Pneumatics.....	3
Manuf	2201	Geometric Dimensioning and Tolerancing.....	3
Manuf	2280	Industrial Safety.....	2
Manuf	2281	Cost Analysis	2
Plast	1101	Introduction to Plastics Industry	3

The **Tool and Die Making certificate** requires 31 credits from the courses listed below. Code 4984

Math	1115	Technical Mathematics I.....	3
Math	1116	Technical Mathematics II	5
Manuf	1127	Engineering Materials of Industry	3
Manuf	2200	Machine Tool Technology	4
Manuf	2261	Basic Die Making I.....	4
Manuf	2262	Basic Die Making II	4
Manuf	2272	Advanced Die Making and Engineering I.....	4
Manuf	2274	Advanced Die Making and Engineering II.....	4

The **Mold Making certificate** requires 31 credits from the courses listed below. Code 4986

Math	1115	Technical Mathematics I.....	3
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Manuf	1127	Engineering Materials of Industry	3
Manuf	2200	Machine Tool Technology	4
Math	1116	Technical Mathematics II	5
Manuf	2265	Mold Making I.....	4
Manuf	2267	Mold Making II	4
Manuf	2276	Advanced Mold Making and Engineering I.....	4
Manuf	2277	Advanced Mold Making and Engineering II.....	4

Marketing

AAS Degree, Two Certificates

The Marketing program provides the academic and practical background for a successful career in this dynamic field. Graduates have many employment opportunities including inside and outside sales, customer services, consumer marketing, business-to-business marketing, e-commerce and promotions. The Marketing degree requires a minimum of 64 credits in program requirements, program electives and general education from the courses listed below.

Program Requirements

Code 3204

Busin	1100	Introduction to Business	3
Accou	1140	Financial Accounting	4
Marke	1170	E-Marketing.....	3
Marke	2210	Principles of Marketing.....	3
Marke	2220	Sales	3
Marke	2230	Retailing.....	3
Marke	2240	Advertising	3
Manag	2210	Principles of Management.....	3
Buslw	2211	Business Law I.....	3
Cis	1150	Introduction to Computer Information Systems	3
Cis	1221	Introduction to Spreadsheets	3
Philo	1114	Business Ethics	3
Econo	2201	Macroeconomics and the Global Economy	3
		OR	
Psych	1100	General Psychology.....	3
			40

Program Electives12

Select credits from the courses below.

Busin	1111	Customer Service	3
Busin	1170	Electronic Business/Commerce.....	3
Busin	2255	International Business.....	3
Marke	1100	Consumer Marketing	3
Marke	1171	Database Marketing.....	3
Marke	1175	Customer Relationship Management	3
Marke	2215	Domestic Distribution Channels	3
Marke	2250	Business to Business.....	3
Marke	2255	International Logistics.....	3
Marke	2260	International Marketing.....	3

General Education12

(In addition to courses listed above)

Total Credits Required.....64

Certificates

The **Marketing certificate** requires 31 credits in program requirements and program electives from the courses listed below. Code 4204

Program Requirements

Busin	1100	Introduction to Business	3
Accou	1140	Financial Accounting	4
Marke	1170	E-Marketing.....	3
Manag	2210	Principles of Management.....	3
Marke	2210	Principles of Marketing.....	3
Cis	1150	Introduction to Computer Information Systems.....	3
			19

Program Electives.....12

Select credits from the courses below.

Busin	1111	Customer Service	3
Busin	1170	Electronic Business/Commerce.....	3
Marke	1100	Consumer Marketing	3
Marke	1171	Database Marketing.....	3
Marke	1175	Customer Relationship Management	3
Marke	2215	Domestic Distribution Channels	3
Marke	2220	Sales	3
Marke	2230	Retailing.....	3
Marke	2240	Advertising	3
Marke	2250	Business to Business.....	3
Marke	2255	International Logistics.....	3
Marke	2260	International Marketing.....	3

The **Consumer Marketing certificate** requires 12 credits in program requirements and program electives from the courses listed below. Code 4216

Program Requirements

Busin	1100	Introduction to Business	3
Marke	1100	Consumer Marketing	3
Marke	2210	Principles of Marketing.....	3
			9

Program Electives.....3

Select one of the following courses.

Busin	1111	Customer Service	3
Cis	1150	Introduction to Computer Information Systems.....	3
Marke	2215	Domestic Distribution Channels	3
Marke	2220	Sales	3
Marke	2240	Advertising	3
Marke	2255	International Logistics.....	3

Motion Picture/Television

Two AAS Degree Options, Certificate

The Motion Picture/Television program specializes in preparing students for employment and/or transfer in the fields of film, video, television, animation and audio production. Graduates find jobs in industry, education and government, although a knowledge of motion picture or television production is also helpful for those seeking careers in advertising, public relations and other related fields. A hands-on approach to learning is emphasized.

Several courses are transfer oriented.

AAS Degrees

The **Television Production degree program** requires a minimum of 64 credits, including 30 hours of program requirements, 15 hours of program electives and 19 hours of general education requirements in the five following categories: Communications, Physical and Life Sciences, Mathematics, Humanities and Fine Arts and Social and Behavioral Sciences. Motion Picture/Television 1011 fulfills the Contemporary Life Skills requirement. The following list contains the required courses.

Program Requirements

Code 3695

Mptv	1011	Introduction to Motion Pictures and Television.....	3
Mptv	1020	Editing for Motion Pictures and Television.....	3
Mptv	1022	Audio for Motion Pictures and Television.....	3
Mptv	1220	Introduction to Television Production.....	3
Mptv	1311	Two-Dimensional Animation I.....	3
Mptv	2031	Pre-Production for Motion Pictures and Television.....	3
Mptv	2231	Photojournalism for Television.....	3
Mptv	2233	Documentary Production.....	3
Mptv	2240	Advanced Television Production	3
Journ	1120	Introduction to Broadcasting	3
			30

Program Electives15

Select from the courses below.

Mptv	1111	Film/Video Production Aesthetics	2
Mptv	1113	Film/Video Production History.....	2
Mptv	1120	Cinematography.....	3
Mptv	1122	Screenwriting for Short Film Production	3
Mptv	1320	Two-Dimensional Animation II	3
Mptv	1822	Selected Topics	3
Mptv	2131	Film/Video Production.....	3
Mptv	2133	Directing for Film/Video	3
Mptv	2140	Advanced Film/Video Production.....	3
Mptv	2331	Three-Dimensional Animation I.....	3
Mptv	2340	Three-Dimensional Animation II.....	3
Mptv	2822	Advanced Selected Topics	3

General Education19

(In addition to courses listed above)

Total Credits Required.....64

The **Film/Video Production degree program** requires a minimum of 64 credits, including 31 hours of program requirements, 14 hours of program electives and 19 hours of general education requirements in the five following categories: Communications, Physical and Life Sciences, Mathematics, Humanities and Fine Arts and Social and Behavioral Sciences. Motion Picture/Television 1011 fulfills the Contemporary Life Skills requirement. The following list contains the required courses.

Program Requirements

Code 3696

Mptv	1011	Introduction to Motion Pictures and Television.....	3
Mptv	1020	Editing for Motion Pictures and Television.....	3
Mptv	1022	Audio for Motion Pictures and Television.....	3
Mptv	1111	Film/Video Production Aesthetics	2
Mptv	1113	Film/Video Production History.....	2
Mptv	1120	Cinematography.....	3
Mptv	1122	Screenwriting for Short Film Production.....	3
Mptv	2031	Pre-Production for Motion Pictures and Television.....	3
Mptv	2131	Film/Video Production.....	3
Mptv	2133	Directing for Film/Video	3
Mptv	2140	Advanced Film/Video Production.....	3
			31

Program Electives.....14

Select from the courses below.

Mptv	1220	Introduction to Television Production.....	3
Mptv	1311	Two-Dimensional Animation I.....	3
Mptv	1320	Two-Dimensional Animation II	3
Mptv	1822	Selected Topics	3
Mptv	2231	Photojournalism for Television.....	3
Mptv	2233	Documentary Production.....	3
Mptv	2240	Advanced Television Production	3
Mptv	2331	Three-Dimensional Animation I.....	3
Mptv	2340	Three-Dimensional Animation II.....	3
Mptv	2822	Advanced Selected Topics	3

General Education19

(In addition to courses listed above)

Total Credits Required.....64

Certificate

The **Motion Picture/Television certificate** requires 44 credits, 29 in program requirements plus 15 in program electives. Code 4695

Program Requirements

Mptv	1011	Introduction to Motion Pictures and Television.....	3
Mptv	1020	Editing for Motion Pictures and Television.....	3
Mptv	1022	Audio for Motion Pictures and Television.....	3
Mptv	1111	Film/Video Production Aesthetics	2
Mptv	1120	Cinematography.....	3
Mptv	1122	Screenwriting for Short Film Production.....	3
Mptv	1220	Introduction to Television Production.....	3
Mptv	2031	Pre-Production for Motion Pictures and Television.....	3
Mptv	2133	Directing for Film/Video	3
AND			
Mptv	2140	Advanced Film/Video Production.....	3
OR			
Mptv	2231	Photojournalism for Television.....	3
AND			
Mptv	2240	Advanced Television Production	3

Program Electives15
 Select from the courses below.

Mptv	1113	Film/Video Production History.....	2
Mptv	1311	Two-Dimensional Animation I.....	3
Mptv	1320	Two-Dimensional Animation II.....	3
Mptv	1822	Selected Topics.....	3
Mptv	2233	Documentary Production.....	3
Mptv	2331	Three-Dimensional Animation I.....	3
Mptv	2340	Three-Dimensional Animation II.....	3
Mptv	2822	Advanced Selected Topics.....	3

Nursing (ADN)

AAS Degree

3156 Nursing: Associate Degree Nursing (ADN)
 The Associate Degree Nursing program prepares its graduates to deliver nursing care in various health care environments. The graduates are eligible to take the state licensure examination for registered nurses. This program requires 69 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements.

Program Requirements

Anat&	1551	Human Anatomy and Physiology I.....	4
		AND	
Anat&	1552	Human Anatomy and Physiology II.....	4
		OR	
Anat&	1571	Anatomy and Physiology with	
		Cadaver I.....	4
		AND	
Anat&	1572	Anatomy and Physiology with	
		Cadaver II.....	4
Micro	1420	Microbiology.....	4
Engl	1101	English Composition I.....	3
Speec	1100	Fundamentals of Speech	
		Communication.....	3
		OR	
Speec	1120	Small-Group Communication.....	3
Foods	1110	Basic Nutrition.....	3
Psych	2237	Developmental Psychology:	
		The Life Span.....	3
Nursi	1104	Introduction to Physical Assessment.....	1
Nursi	1105	Medical-Surgical I.....	7
Nursi	1206	Medical-Surgical II.....	3
Nursi	1207	Childbearing Family.....	5
Nursi	1208	Neuropsychiatric Nursing.....	5
Nursi	2109	Medical-Surgical III.....	5
Nursi	2110	Contemporary Issues in Nursing.....	2
Nursi	2201	Medical-Surgical IV.....	10
Nursi	2202	Clinical Decision Making.....	1
			<hr/>
			63

General Education6
 (In addition to courses listed above)

Total Credits Required.....69

Office Technology Information

Three AAS Degree Options, Six Certificates

The Office Technology Information program prepares students by developing and enhancing their skills using current technologies in today's office. Courses are designed for students entering the Office Technology Information curriculum for the first time and for students preparing for a return to the work force.

AAS Degrees

The **Administrative Assistant degree program** requires a minimum of 64 to 68 credits in program requirements, electives and general education. The following list contains the required courses.

Program Requirements

Code 3276

Ofti	1110	Keyboarding and Document Formatting..	4
Ofti	1120	Speed Development Keyboarding.....	2
Ofti	1130	Business Correspondence.....	3
Ofti	1200	MS Office for Professional Staff.....	3
Ofti	1203	Microsoft Outlook.....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business	
		Professionals.....	2
Ofti	2205	Keyboarding and Integrated	
		Applications.....	3
Ofti	2305	Word Processing Transcription.....	3
Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures.....	4
			<hr/>
			36

Electives.....13
 Select 13 credits from any 1000- or 2000-level courses.

General Education18
 (In addition to courses listed above)

Total Credits Required.....64

The **Executive Assistant degree program** consists of a total of 64 credits in general education and program requirements. The following list contains the required courses.

Program Requirements

Code 3291

Ofti	1110	Keyboarding and Document Formatting..	4
Ofti	1120	Speed Development Keyboarding.....	2
Ofti	1130	Business Correspondence.....	3
Ofti	1200	MS Office for Professional Staff.....	3
Ofti	1203	Microsoft Outlook.....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business	
		Professionals.....	2
Ofti	2305	Word Processing Transcription.....	3

Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures.....	4
Accou	1140	Financial Accounting.....	4
Busin	1100	Introduction to Business.....	3
Buslw	2211	Business Law I.....	3
Manag	2210	Principles of Management.....	3
			46

General Education18
(In addition to courses listed above)

Total Credits Required.....64

3294 Administrative Assistant and Meeting/Event Planning

Prepares the student for an administrative support position with a focus on meeting and event planning.

Program Requirements

Ofti	1110	Keyboarding and Document Formatting...	4
Ofti	1120	Speed Development Keyboarding.....	2
Ofti	1130	Business Correspondence.....	3
Ofti	1200	MS Office for Professional Staff.....	3
Ofti	1203	Microsoft Outlook.....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business Professionals.....	2
Ofti	2305	Word Processing Transcription.....	3
Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures.....	4
Trav	2201	Fundamentals of Meeting and Event Planning.....	3
Trav	2203	Incentive Travel and Planning.....	3
Trav	2205	Advanced Meeting and Event Planning...	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3
			45

General Education18
Student must complete 18 hours in general education courses.

Program Electives.....1
One credit hour in Travel and Tourism program required.

Total Credits Required.....64

Certificates

The **Executive Assistant certificate** requires 46 credits in the courses listed below. Code 4275

Ofti	1110	Keyboarding and Document Formatting...	3
Ofti	1120	Speed Development Keyboarding.....	2
Ofti	1130	Business Correspondence.....	3
Ofti	1200	MS Office for Professional Staff.....	2
Ofti	1203	Microsoft Outlook.....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business Professionals.....	2

Ofti	2205	Keyboarding and Integrated Applications.....	3
Ofti	2305	Word Processing Transcription.....	3
Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures.....	3
Accou	1140	Financial Accounting.....	4
Busin	1100	Introduction to Business.....	3
Buslw	2211	Business Law I.....	3
Manag	2210	Principles of Management.....	3

The **Administrative Assistant certificate** requires 33 credits in the courses listed below. Code 4276

Ofti	1110	Keyboarding and Document Formatting...	4
Ofti	1120	Speed Development Keyboarding.....	2
Ofti	1130	Business Correspondence.....	3
Ofti	1200	MS Office for Professional Staff.....	3
Ofti	1203	Microsoft Outlook.....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2
Ofti	1250	Electronic Presentations for Business Professionals.....	2
Ofti	2305	Word Processing Transcription.....	3
Ofti	2600	Professional Development.....	3
Ofti	2605	Professional Office Procedures.....	4

The **Office Technology Information Essentials certificate** requires 22 credits in the courses listed below. Code 4277

Ofti	1100	Introduction to Computer Keyboarding..	2
		OR	
Ofti	1120	Speed Development Keyboarding.....	2
Ofti	1110	Keyboarding and Document Formatting...	4
Ofti	1130	Business Correspondence.....	3
Ofti	1200	MS Office for Professional Staff.....	3
Ofti	1203	Microsoft Outlook.....	2
Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	2600	Professional Development.....	3

The **Word Specialist certificate** requires 7 credits in the courses listed below. Code 4290

Ofti	1210	Word Processing I.....	3
Ofti	1215	Word Processing II.....	2
Ofti	1218	MS Word Desktop Publishing.....	2

The **Medical Office certificate** requires 21 credits in the courses listed below. It prepares the student for an entry level administrative support position into the medical office environment. Code 4291

Ofti	1110	Keyboarding and Document Formatting...	4
Ofti	1130	Business Correspondence.....	3
Ofti	1200	MS Office for Professional Staff.....	3
Ofti	2600	Professional Development.....	3
Hlths	1110	Biomedical Terminology.....	4
Hlths	1130	Medical Assistant Administrative Procedures.....	2
Hlths	2211	Legal and Ethical Aspects of Healthcare..	2

4294 **The Administrative Assistant and Meeting/Event Planning certificate** requires 46 credits in the courses listed below. The curriculum prepares the student for an administrative support position with a focus on meeting and event planning.

Program Requirements

Ofti	1110	Keyboarding and Document Formatting	4
Ofti	1120	Speed Development Keyboarding	2
Ofti	1130	Business Correspondence	3
Ofti	1200	MS Office for Professional Staff	3
Ofti	1203	Microsoft Outlook	2
Ofti	1210	Word Processing I	3
Ofti	1215	Word Processing II	2
Ofti	1218	MS Word Desktop Publishing	2
Ofti	1250	Electronic Presentations for Business Professionals	2
Ofti	2305	Word Processing Transcription	3
Ofti	2600	Professional Development	3
Ofti	2605	Professional Office Procedures	4
Trave	2201	Fundamentals of Meeting and Event Planning	3
Trav	2203	Incentive Travel and Planning	3
Trav	2205	Advanced Meeting and Event Planning	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries	3
			45

Program Electives.....1
One credit hour in Travel and Tourism program required

Total Credits Required.....46

Paralegal Studies

AAS Degree, Certificate

The Paralegal program prepares its graduates to perform substantive legal work under the supervision of an attorney. Although paralegals cannot provide legal services directly to the public, except as permitted by law, paralegals assist attorneys in a variety of legal environments by performing tasks such as drafting legal documents, performing legal research, maintaining corporate records and minutes books, interviewing witnesses and clients, and assisting in trial preparation. This degree program consists of a minimum of 67 credits in general education and program requirements.

AAS Degree

Program Requirements

Code 3270

Plgl	1100	Introduction to Paralegal Studies	3
Plgl	1150	Drafting Legal Documents	3
Plgl	1200	Litigation	3
Plgl	1500	Legal Research and Writing	3
Plgl	1250	Law Office Organizations	3
Plgl	2100	Advanced Legal Research and Writing	3
Plgl	2550	Paralegal Practicum	3
Buslw	2211	Business Law I	3
Biolo	1110	Environmental Biology	4
OR			
Chem	1105	Contemporary Chemistry	4

Cis	1150	Introduction to Computer Information Systems	3
Engli	1101	English Composition I	3
Speec	1100	Fundamentals of Speech Communication	3
Math	1218	General Education Mathematics	3
Ofti	1200	MS Office for Professional Staff	3
Ofti	2600	Professional Development	3
Philo	1110	Ethics	3
Pols	1101	American Politics	3
			52

Program Electives.....15

Choose 15 hours from the following courses:

Plgl	2200	Criminal Law and Procedure	3
Plgl	2250	Corporations and Other Business Organizations	3
Plgl	2300	Estate Planning and Probate Law	3
Plgl	2350	Family Law	3
Plgl	2400	Intellectual Property Law	3
Plgl	2450	Real Property Law	3
Plgl	2500	Tort and Insurance Law	3

Total Credits Required.....67

Certificate

The **Paralegal Studies certificate** requires a minimum of 27 credits in the courses listed below. Code 4270

Program Requirements

Buslw	2211	Business Law I	3
Plgl	1100	Introduction to Paralegal Studies	3
Plgl	1200	Litigation	3
Plgl	1500	Legal Research and Writing	3
Plgl	1250	Law Office Organizations	3
Plgl	2100	Advanced Legal Research and Writing	3
Plgl	2550	Paralegal Practicum	3
			21

Program Electives

Two program electives must be selected.

Plgl	2200	Criminal Law and Procedure	3
Plgl	2250	Corporations and Other Business Organizations	3
Plgl	2300	Estate Planning and Probate Law	3
Plgl	2350	Family Law	3
Plgl	2400	Intellectual Property Law	3
Plgl	2450	Real Property Law	3
Plgl	2500	Tort and Insurance Law	3
			6

Total Credits Required.....27

Photography

AAS Degree, Certificate

The Photography program is designed to provide the student with a broad working knowledge and the fundamental skills to create and produce high quality black-and-white, color, and digital images. The degree program consists of a minimum of 64 credits in program requirements, program electives and general education. The following list contains the required courses.

**AAS Degree
Program Requirements**
Code 3564

Photo	1100	Fundamentals of Photography.....	3
Photo	1101	Foundations of Digital Photography	3
Photo	1102	Foundations of Film Photography.....	3
Photo	1105	History of Photography.....	3
Photo	1200	Intermediate Photography	3
Photo	1201	Tools and Techniques for Digital Photography	3
		OR	
Photo	1202	Tools and Techniques for Film Photography	3
Photo	1300	Studio Photography I	3
Photo	1400	Color Photography I	3
Photo	2100	Extended Photographic Project	3
Photo	2400	Color Photography II	3
Photo	2700	Professional Photographic Practices.....	3
Photo	2750	Portfolio Presentation.....	3
			36

Program Electives10

Select from the courses below.

Co-op	2861	Cooperative Education/Internship (Occupational)	1
Co-op	2862	Cooperative Education/Internship (Occupational)	2
Photo	1170	Underwater Photography.....	3
Photo	1201	Tools and Techniques for Digital Photography	3
Photo	1202	Tools and Techniques for Film Photography	3
Photo	1250	Advanced Digital Imaging.....	3
Photo	1260	Alternative Photographic Processes.....	3
Photo	1450	Nature Photography.....	3
Photo	1500	Photojournalism.....	3
Photo	1820	Selected Topics I.....	1
Photo	1821	Selected Topics II.....	2
Photo	1840	Independent Study — Individualized	1 to 4
Photo	2200	Portrait Photography.....	3
Photo	2300	Studio Photography II	3
Photo	2350	Studio Photography III.....	3
Photo	2375	Studio Digital Capture.....	3

General Education18

(In addition to courses listed above)

Total Credits Required.....64

Certificate

The **Photography Technology certificate** requires 46 credits in the courses listed below. Code 4564

Program Requirements

Photo	1100	Fundamentals of Photography.....	3
Photo	1101	Foundations of Digital Photography	3
Photo	1105	History of Photography.....	3
Photo	1102	Foundations of Film Photography.....	3
Photo	1200	Intermediate Photography	3

Photo	1201	Tools and Techniques for Digital Photography	3
		OR	
Photo	1202	Tools and Techniques for Film Photography	3
Photo	1300	Studio Photography I	3
Photo	1400	Color Photography I.....	3
Photo	2100	Extended Photographic Project	3
Photo	2400	Color Photography II	3
Photo	2700	Professional Photographic Practices.....	3
Photo	2750	Portfolio Presentation.....	3
			36

Program Electives.....10

Select from the following courses.

Co-op	2861	Cooperative Education/Internship (Occupational)	1
Co-op	2862	Cooperative Education/Internship (Occupational)	2
Photo	1170	Underwater Photography.....	3
Photo	1201	Tools and Techniques for Digital Photography	3
Photo	1202	Tools and Techniques for Film Photography	3
Photo	1250	Advanced Digital Imaging.....	3
Photo	1260	Alternative Photographic Processes.....	3
Photo	1450	Nature Photography.....	3
Photo	1500	Photojournalism.....	3
Photo	1820	Selected Topics I.....	1
Photo	1821	Selected Topics II.....	2
Photo	1840	Independent Study — Individualized	1 to 4
Photo	2200	Portrait Photography.....	3
Photo	2300	Studio Photography II	3
Photo	2350	Studio Photography III.....	3
Photo	2375	Studio Digital Capture.....	3

Physical Therapist Assistant

AAS Degree

The Physical Therapist Assistant program prepares its graduates to provide skilled direct patient care under the direction and supervision of a licensed physical therapist. Goals of treatment include relieving pain, improving strength and mobility, and helping patients to attain maximum function. Physical therapist assistants are employed in a variety of settings, including hospitals, rehabilitation centers, long-term care facilities, sports medicine clinics and home health care agencies. Graduates must take the state licensure examination for physical therapist assistants.

This degree program requires a minimum of 72 credits in general education and program requirements. The Physical Therapist Assistant program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

**AAS Degree
Program Requirements**

Code 3186

[	Anat&	1551	Human Anatomy and Physiology I.....4
		AND	
[	Anat&	1552	Human Anatomy and Physiology II.....4
		OR	
[	Anat&	1571	Anatomy and Physiology with Cadaver I .....4
		AND	
[	Anat&	1572	Anatomy and Physiology with Cadaver II.....4
	Hlths	1110	Biomedical Terminology .....4
	Phyta	1100	Introduction to Physical Therapy .....2
	Phyta	1107	PTA Pathophysiology .....2
	Phyta	1109	Basic Health Care Skills and Principles of Soft Tissue Techniques.....3
	Phyta	1110	PTA Documentation.....1
	Phyta	1114	PTA Total Patient Care .....1
	Phyta	1111	PTA Kinesiology I.....2
	Phyta	1112	PTA Kinesiology II .....3
	Phyta	1201	PTA Therapeutic Modalities.....5
	Phyta	1211	PTA Therapeutic Assessment and Basic Intervention.....5
	Phyta	1202	PTA Therapeutic Exercise .....2
	Phyta	1221	PTA Clinical Practicum I.....1
	Phyta	2203	PTA Neuromuscular and Cardiopulmonary Rehabilitation.....3
	Phyta	2204	PTA Special Patient Populations .....2
	Phyta	2212	PTA Advanced Orthopedic Rehabilitation .....4
	Phyta	2222	PTA Clinical Practicum II .....2
	Phyta	2223	PTA Clinical Practicum III .....6
	Phyta	2214	PTA Professional Issues.....1
			57

General Education15
(In addition to courses listed above)

Total Credits Required.....72

Real Estate

AAS Degree, Certificate

The Real Estate program meets the needs of students entering the real estate business as well as those already employed in the field who wish to continue their professional growth. In addition, the program fulfills the academic requirements for students taking the Illinois Real Estate Salesperson and Broker License Examinations.

AAS Degree

The **Real Estate degree program** consists of a minimum of 64 credits in program requirements, program electives and general education. The following list contains the required courses.

Program Requirements

Code 3272

Reale	1110	Real Estate Transactions.....3
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Reale	1120	Advanced Principles 2000.....1
Reale	1122	Contracts and Conveyances.....1
Reale	1124	Brokerage Administration .....1
Reale	1126	Financing.....1
Reale	1128	Property Management .....1
Accou	1140	Financial Accounting .....4
Busin	1100	Introduction to Business .....3
Busin	1161	Entrepreneurship .....3
Buslsw	2211	Business Law I .....3
Cis	1150	Introduction to Computer Information Systems .....3
Manag	1100	Supervision.....3
Manag	1161	Small Business Management .....3
Marke	2210	Principles of Marketing.....3
Ofiti	1130	Business Correspondence .....3
		36

Program Electives.....10

Select a minimum of 10 credit hours from the courses below.

Busin	1120	Fundamentals of Personal Investing.....3
Buslsw	2212	Business Law II.....3
Econo	1110	Consumer Economics and Personal Finance .....3
Marke	1100	Consumer Marketing .....3
Marke	1175	Customer Relationship Management .....3
Marke	2240	Advertising .....3
Ofiti	1200	MS Office for Professional Staff.....2
Reale	1152	Foundations of Real Estate Appraisal .....2
Reale	1820	Selected Topics I.....3

General Education18
(In addition to courses listed above)

Total Credits Required.....64

Certificate

The **Real Estate Appraisal certificate** requires eight credits in the courses listed below. Code 4273

Reale	1110	Real Estate Transactions.....3
Reale	1151	Appraisal Standards.....1
Reale	1152	Foundations of Real Estate Appraisal .....2
Reale	1153	Appraising the Single Family Residence ..2

Respiratory Care

AAS Degree

Respiratory Care health professionals are responsible for life support and related systems as applied to the management of patients with cardiopulmonary disease. The Respiratory Care program prepares eligible students to provide entry-level and advanced level management of respiratory care to patients primarily seen in hospitals, intensive care units, emergency rooms and diagnostic laboratories. Classroom, laboratory and clinical instruction train the student in diagnostic, therapeutic, technologic and administrative arts as applied to the critically ill adult, neonatal and pediatric patient. The Associate in Applied Science degree consists of a minimum of 73 credits, 55 in Respiratory Care and a minimum of 18 in General Education.

AAS Degree

Program Requirements

Code 3182

Resp	1101	Basic Respiratory Care.....	3
Resp	1102	Intermediate Respiratory Care.....	3
Resp	1103	Advanced Respiratory Care.....	3
Resp	1105	Respiratory Assessment and Procedures..	4
Resp	1111	Clinical Practice I.....	4
Resp	1112	Clinical Practice II.....	4
Resp	1113	Intensive Respiratory Care Clinical Practice	3
Resp	1120	Applied Cardiopulmonary Anatomy and Physiology	4
Resp	1121	Applied Science for Respiratory Care	4
Resp	2201	Advanced Life Support, Monitoring and Trends.....	3
Resp	2202	Pulmonary Function Testing.....	3
Resp	2205	Neonatal and Pediatric Intensive Respiratory Care.....	3
Resp	2206	Advanced Intensive Respiratory Care — Adult.....	4
Resp	2207	Advanced Intensive Respiratory Care — Neonatal-Pediatric.....	3
Resp	2250	Respiratory Care Board Review.....	3
Resp	2280	Advanced Clinical Assessment and Protocol	4
			55

General Education 18
(Select a minimum of 18 credits in addition to those courses listed above.)

Total Credits Required..... 73

Speech-Language Pathology Assistant

AAS Degree

The Speech Language Pathology Assistant (SLPA) program prepares students for employment as support personnel under the supervision of a certified Speech Language Pathologist in acute hospitals, subacute physical rehabilitation units, inpatient and outpatient physical rehabilitation clinics, long-term care settings, and schools. Graduates of the SLPA program will be eligible to apply for licensure through Illinois Department of Professional Regulations.

This degree program consists of a minimum of 64 credits in program requirements, program electives and general education. The following list contains the required courses, some of which may be used to meet general education requirements.

Program Requirements

Code 3132

Slpa	1101	Introduction to Speech Language Pathology.....	4
Slpa	1105	Phonetics	3
Slpa	1106	Speech Disorders and Intervention Across the Lifespan I	4

Slpa	1107	Speech Disorders and Intervention Across the Lifespan II.....	2
Slpa	1109	Language Development.....	3
Slpa	1110	Language Disorders and Intervention across the Lifespan	4
Slpa	1112	Introduction to Audiology	2
Slpa	2101	Clinical Methods and Documentation.....	4
Slpa	2102	Professional Issues and the SLPA	4
Slpa	2104	Augmentative and Alternative Communication	3
Slpa	2112	Clinical Practicum.....	6
			39

Program Electives..... 7

Select a minimum of seven credits from the following courses or other related courses in different disciplines.

Slpa	1301	Sign Language I	3
Slpa	1821	Selected Topics I	1
Slpa	1822	Selected Topics II.....	2
Slpa	2301	Sign Language II.....	3

General Education 18
(In addition to courses listed above)

Total Credits Required..... 64

Surgical Technology

AAS Degree, Certificate

The Surgical Technology program teaches students to set up the operating room, prepare surgical instruments and assist in their use, prepare patients for surgery and perform other tasks that ensure a safe surgical environment and contribute to and support the operating team's efficiency. Surgical technologists (STs) are employed in hospital operating rooms, delivery rooms, emergency departments and ambulatory care areas.

AAS Degree

This degree program requires a minimum of 71 credits in general education and program requirements. The following list contains the required courses, some of which may be used to meet general education requirements.

Program Requirements

Code 3192

Anat&	1551	Human Anatomy and Physiology I.....	4
AND			
Anat&	1552	Human Anatomy and Physiology II.....	4
OR			
Anat&	1571	Anatomy and Physiology with Cadaver I	4
AND			
Anat&	1572	Anatomy and Physiology with Cadaver II.....	4
Surgt	1100	Introduction to Surgical Technology and the Environment	13
Surgt	1120	Surgical Terminology.....	3
Surgt	1130	Patient Care Concepts.....	6
Surgt	1140	Clinical Practicum I.....	3
Surgt	1150	Biomedical Sciences with Clinical Review	2

Surgt	1160	Microbiology, Asepsis, Infection Control and Instrumentation.....	2
Surgt	1170	Personal and Professional Relations with Clinical Review	2
Surgt	1180	Clinical Practicum II	3
Surgt	1190	Surgical Specialty.....	14
			<u>56</u>

General Education15
(In addition to courses listed above)

Total Credits Required.....71

Certificate

The **Surgical Technology certificate** requires 56 credits in the courses listed below. Code 4192

[	Anat&	1551	Human Anatomy and Physiology I.....	4
			AND	
[	Anat&	1552	Human Anatomy and Physiology II.....	4
			OR	
[	Anat&	1571	Anatomy and Physiology with Cadaver I	4
			AND	
[	Anat&	1572	Anatomy and Physiology with Cadaver II	4
	Surgt	1100	Introduction to Surgical Technology and the Environment	13
	Surgt	1120	Surgical Terminology.....	3
	Surgt	1130	Patient Care Concepts.....	6
	Surgt	1140	Clinical Practicum I.....	3
	Surgt	1150	Biomedical Sciences with Clinical Review	2
	Surgt	1160	Microbiology, Asepsis, Infection Control and Instrumentation	2
	Surgt	1170	Personal and Professional Relations with Clinical Review.....	2
	Surgt	1180	Clinical Practicum II	3
	Surgt	1190	Surgical Specialty.....	14

Therapeutic Massage

AAS Degree, Certificate

Massage therapists use massage techniques, strokes and therapies to relax muscles, improve blood circulation, reduce stress and avoid injuries. Massage therapy is being integrated into the mainstream of medical practice and health maintenance. Massage therapists get referrals from health care providers and/or are employed directly by chiropractic, osteopathic and orthopedic physicians, sports medicine clinics and physical therapists. Massage therapists also work in hospitals and nursing homes. The degree program requires a minimum of 66 credits in program requirements, program electives and general education. The following list contains the required courses, some of which may be used to meet general education requirements.

AAS Degree

Program Requirements

Code 3168

Tmass	1100	Introduction to Palpation and Superficial Anatomy	1
Tmass	1101	Introduction to Massage Therapy and Bodywork	1
Tmass	1102	Fundamental Massage Techniques	4
Tmass	1103	Physiological Basis of Massage.....	4
Tmass	1104	Major Muscles and Movement.....	5
Tmass	1105	Concepts of Holistic Health	1
Tmass	1107	Range of Motion in Massage	1
Tmass	1108	Professional Practice in Massage Therapy	1
Tmass	1111	Documentation for Massage Therapists...2	
Tmass	1112	Myofascial Massage	3
Tmass	1120	Clinical Experience in Massage Therapy I	1
Tmass	1121	Clinical Experience in Massage Therapy II.....	1
Tmass	2106	Body/Mind Connection in Health.....	2
Tmass	2109	Deep Tissue Massage Techniques.....	4
Tmass	2110	Somatic Techniques.....	0.5
Tmass	2111	Case Studies in Massage Therapy	1
Tmass	2112	Survey of Bodywork Styles.....	1
			<u>33.5</u>

Program Electives10.5

Completion of the **Therapeutic Massage certificate** is required for the AAS degree. Select 10.5 Therapeutic Massage elective credits in addition to courses listed as program requirements.

General Education22
(In addition to courses listed above)

Total Credits Required.....66

Certificate

The **Therapeutic Massage certificate** requires 27 credits in the courses listed below. Code 4168

Program Requirements

Tmass	1100	Introduction to Palpation and Superficial Anatomy	1
Tmass	1101	Introduction to Massage Therapy and Bodywork	1
Tmass	1102	Fundamental Massage Techniques	4
Tmass	1103	Physiological Basis of Massage.....	4
Tmass	1104	Major Muscles and Movement.....	5
Tmass	1105	Concepts of Holistic Health	1
Tmass	1107	Range of Motion in Massage	1
Tmass	1108	Professional Practice in Massage Therapy	1
Tmass	1111	Documentation for Massage Therapists...2	
Tmass	1112	Myofascial Massage	3
Tmass	1120	Clinical Experience in Massage Therapy I	1
Tmass	1121	Clinical Experience in Massage Therapy II.....	1

Program Electives.....2
 Select from the courses listed below.

Tmass 1136 Prenatal Massage Techniques.....1
 Tmass 1138 Geriatric Massage Techniques.....0.5
 Tmass 1139 Introduction to Skin Diseases0.5
 Tmass 1140 Basic Seated Massage Techniques0.5
 Tmass 1141 Introduction to Sports Massage
 Techniques.....2
 Tmass 1142 Positional Release and Massage1
 Tmass 1143 Active Isolated Stretching0.5
 Tmass 1144 Art of Intuitive Massage0.5
 Tmass 1148 Pressure Sensitivity Techniques0.5
 Tmass 1152 Introduction to Ortho-Bionomy1
 Tmass 1153 Introduction to Jin Shin Do Bodymind
 Accupressure1
 Tmass 1154 Introduction to Shiatsu1
 Tmass 1155 Intro to Cranio-Sacral1
 Tmass 1158 Presence, Energy and Intention0.5
 Tmass 1161 Introduction to Reflexology1
 Tmass 2124 Spa Massage Techniques I.....2
 Tmass 2125 Spa Massage Techniques II.....1
 Tmass 2126 Spa Massage Techniques III.....1
 Tmass 2131 Spiral Synergy I.....1
 Tmass 2132 Spiral Synergy II1
 Tmass 2133 Spiral Synergy III.....1
 Tmass 2134 Spiral Synergy IV1
 Tmass 2140 Advanced Seated Massage.....3
 Tmass 2141 Clinical Experience in Seated Massage ..0.5
 Tmass 2147 Advanced Sports Massage1
 Tmass 2149 Pathological Conditions & Massage
 Therapy3
 Tmass 2152 Advanced Ortho-Bionomy1
 Tmass 2153 Intermediate Jin Shin Do Bodymind
 Acupressure.....2
 Tmass 2154 Advanced Jin Shin Do Bodymind
 Acupressure.....2
 Tmass 2161 Advanced Reflexolog.....3
 Tmass 2162 Clinical Experience in Reflexology..0.5

Travel and Tourism

Two AAS Degrees, Six Certificates

The Travel and Tourism program is designed for individuals who plan to enter the travel, tourism or meetings industries or professionals who desire to update their skills. Career opportunities are available in an exciting variety of areas including meeting planning, tourist boards, convention and visitors bureaus, hoteliers, airlines, rental car companies, travel agencies, receptive tourism, destination management companies, consolidators, cruise lines, tour operators and as home-based/outside sales independent contractors.

AAS Degrees

The **Travel and Tourism Professional degree** requires a minimum of 64 hours in program requirements and program electives.

Program Requirements

Code 3281

Trav 1121 Introduction to the Travel, Tourism and
 Meetings Industries.....3

Trav 1122 Introduction to World Destinations.....3
 Trav 1123 Introduction to Travel Documentation...3
 Trav 1124 Introduction to Travel Communication
 and Business Etiquette2
 Trav 1202 Business Management for the Travel
 Professional3
 Trav 2207 Marketing for the Travel, Tourism and
 Meetings Industries.....3
 Trav 2220 Internet Navigation Skills for the Travel
 Professional3
 Trav 2221 World Cultures and International
 Tourism Issues.....3
 Trav 2229 Advanced Travel Documentation.....3
 Trav 2230 Travel Sales and Customer Service.....2
 28

Program Electives.....12

Select courses from below.

Co-op 2860 Cooperative Education/Internship
 (Occupational).....1 to 4
 Hotel 1100 Introduction to the Hospitality Industry .3
 Hotel 2253 Professional Meeting and Event
 Management.....3
 Trav 1126 North American Destinations1
 Trav 1127 European Destinations1
 Trav 1128 Asian and South Pacific Destinations1
 Trav 1129 Central and South American
 Destinations.....1
 Trav 1130 African Destinations.....1
 Trav 1150 Outside Sales for the Home-Based and
 Independent Contractor2
 Trav 1210 Introduction to Global Distribution
 Systems.....3
 Trav 1820 Selected Topics3
 Trav 2130 Airline Operations and Security
 Procedures.....2
 Trav 2201 Fundamentals of Meeting and Event
 Planning3
 Trav 2203 Incentive Travel and Planning.....3
 Trav 2205 Advanced Meeting and Event Planning...3
 Trav 2210 Advanced Global Distribution Systems ...3
 Trav 2236 Cruise Industry Sales Specialization3
 Trav 2240 Tour Escorting, Planning, and
 Operations.....3
 Trav 2820 Advanced Selected Topics3

General Education24

The following are required General Education courses.

Busin 1100 Introduction to Business3
 Cis 1110 Using Computers: An Introduction2
 Earth 1140 Fundamentals of Earth Science.....4
 Engli 1101 English Composition I3
 Math 1100 Business Mathematics3
 Philo 1114 Business Ethics3
 Psych 1150 Adjustment.....3
 Speec 1100 Fundamentals of Speech
 Communication3

Total Credits Required.....64

The **Meeting and Event Planning degree** can benefit all levels of meeting and event professionals by focusing on management issues critical to the meeting industry. The Meeting and Event Planning degree requires a minimum of 64 hours in program requirements and program electives.

Program Requirements

Code 3282

Trav	1121	Introduction to the Travel, Tourism and Meetings Industries.....	3
Trav	1124	Introduction to Travel Communication and Business Etiquette	2
Trav	2201	Fundamentals of Meeting and Event Planning	3
Trav	2203	Incentive Travel and Planning	3
Trav	2205	Advanced Meeting and Event Planning.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3
Trav	2221	World Cultures and International Tourism Issues.....	3
Hotel	1100	Introduction to the Hospitality Industry ..	3
Foods	2203	Professional Catering and Banquet Management.....	3
Hotel	2253	Professional Meeting and Event Management.....	3
Busin	1100	Introduction to Business	3
Cis	1110	Using Computers: An Introduction.....	2
			<u>34</u>

Program Electives11

Select courses from below.

Co-op	2861	Cooperative Education/Internship (Occupational)	1
Hotel	2211	Rooms Division Operations	3
Hotel	2240	Quality Management of Service in the Hospitality Industry	3
Trav	1122	Introduction to World Destinations.....	3
Trav	1123	Introduction to Travel Documentation.....	3
Trav	1126	North American Destinations	1
Trav	1127	European Destinations.....	1
Trav	1128	Asian and South Pacific Destinations	1
Trav	1129	Central and South American Destinations.....	1
Trav	1130	African Destinations.....	1
Trav	1202	Business Management for the Travel Professional	3
Trav	1210	Introduction to Global Distribution Systems.....	3
Trav	1820	Selected Topics	3
Trav	2130	Airline Operations and Security Procedures.....	2
Trav	2220	Internet Navigation Skills for the Travel Professional	3
Trav	2229	Advanced Travel Documentation.....	3
Trav	2230	Travel Sales and Customer Service.....	2
Trav	2236	Cruise Industry Sales Specialization	3
Trav	2240	Tour Escorting, Planning and Operations.....	3
Trav	2820	Advanced Selected Topics	3

General Education19

Complete the following 19 semester hours. Program Requirements include Busin 1100 and Cis 1110, which fulfill the Contemporary Life Skills requirement.

Earth	1140	Fundamentals of Earth Science.....	4
Engli	1101	English Composition I	3
Math	1100	Business Mathematics	3
Philo	1114	Business Ethics	3
Psych	1150	Adjustment.....	3
Speec	1100	Fundamentals of Speech Communication	3

Total Credits Required.....64

Certificates

The **Meeting and Event Planning certificate** requires a total of 23 credit hours from the list below. Code 4279

Program Requirements

Trav	1121	Introduction to the Travel, Tourism and Meetings Industries.....	3
Trav	1122	Introduction to World Destinations.....	3
Trav	2201	Fundamentals of Meeting and Event Planning	3
Trav	2203	Incentive Travel and Planning.....	3
Trav	2205	Advanced Meeting and Event Planning.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3

Program Electives.....5

Students must choose 5 credits of electives from the list below:

Co-op	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Foods	2203	Professional Catering and Banquet Management.....	3
Hotel	1100	Introduction to the Hospitality Industry ..	3
Hotel	2211	Rooms Division Operations	3
Hotel	2240	Quality Management of Service in the Hospitality Industry	3
Hotel	2253	Professional Meeting and Event Management.....	3
Trav	1123	Introduction to Travel Documentation.....	3
Trav	1124	Introduction to Travel Documentation and Business Etiquette	2
Trav	1126	North American Destinations	1
Trav	1127	European Destinations.....	1
Trav	1128	Asian and South Pacific Destinations	1
Trav	1129	Central and South American Destinations.....	1
Trav	1130	African Destinations.....	1
Trav	1202	Business Management for the Travel Professional	3
Trav	1210	Introduction to Global Distribution Systems.....	3
Trav	1820	Selected Topics	3
Trav	2130	Airline Operations and Security Procedures.....	2
Trav	2220	Internet Navigation Skills for the Travel Professional	3

Trav	2221	World Cultures and International Tourism Issues.....	3
Trav	2229	Advanced Travel Documentation.....	3
Trav	2230	Travel Sales and Customer Service.....	2
Trav	2236	Cruise Industry Sales Specialization	3
Trav	2240	Tour Escorting, Planning and Operations	3
Trav	2820	Advanced Selected Topics	3

The **Travel and Tourism Professional certificate** requires 20 credits in the courses listed below. Code 4281

Program Requirements

Trav	1202	Business Management for the Travel Professional	3
Trav	1210	Introduction to Global Distribution Systems	3
Trav	2220	Internet Navigation Skills for the Travel Professional	3
Trav	2221	World Cultures and International Tourism Issues.....	3
Trav	2230	Travel Sales and Customer Service.....	2
			<u>14</u>

Program Electives.....6

Select from the list below.

Co-op	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Hotel	1100	Introduction to the Hospitality Industry	3
Hotel	2253	Professional Meeting and Event Management.....	3
Trav	1126	North American Destinations	1
Trav	1127	European Destinations	1
Trav	1128	Asian and South Pacific Destinations	1
Trav	1129	Central and South American Destinations.....	1
Trav	1130	African Destinations.....	1
Trav	1150	Outside Sales for the Home-Based and Independent Contractor	2
Trav	1820	Selected Topics	3
Trav	2130	Airline Operations and Security Procedures	2
Trav	2201	Fundamentals of Meeting and Event Planning	3
Trav	2203	Incentive Travel and Planning	3
Trav	2205	Advanced Meeting and Event Planning.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3
Trav	2210	Advanced Global Distribution Systems	3
Trav	2229	Advanced Travel Documentation.....	3
Trav	2236	Cruise Industry Sales Specialization	3
Trav	2240	Tour Escorting, Planning, and Operations	3
Trav	2820	Advanced Selected Topics	3

The **E-Travel and Tourism certificate** requires 16 credits in the courses listed below. Code 4282

Program Requirements

Trav	1210	Introduction to Global Distribution Systems.....	3
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Trav	2210	Advanced Global Distribution Systems	3
Trav	2220	Internet Navigation Skills for the Travel Professional	3
			<u>9</u>

Program Electives.....7

Select from the list below.

Co-op	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Trav	1150	Outside Sales for the Home-Based and Independent Contractor	2
Trav	1202	Business Management for the Travel Professional	3
Trav	1820	Selected Topics	3
Trav	2130	Airline Operations and Security Procedures	2
Trav	2201	Fundamentals of Meeting and Event Planning	3
Trav	2203	Incentive Travel and Planning.....	3
Trav	2205	Advanced Meeting and Event Planning.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3
Trav	2221	World Cultures and International Tourism Issues.....	3
Trav	2229	Advanced Travel Documentation.....	3
Trav	2230	Travel Sales and Customer Service.....	2
Trav	2236	Cruise Industry Sales Specialization	3
Trav	2240	Tour Escorting, Planning and Operations	3
Trav	2820	Advanced Selected Topics	3

The **Tour Escort certificate** requires a total of 16 credits in the courses listed below. Code 4286

Program Requirements

Trav	1122	Introduction to World Destinations.....	3
Trav	1124	Introduction to Travel Communication and Business Etiquette	2
Trav	2240	Tour Escorting, Planning and Operations.....	3
			<u>8</u>

Program Electives.....8

Select courses from the list below.

Co-op	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Trav	1123	Introduction to Travel Documentation.....	3
Trav	1126	North American Destinations	1
Trav	1127	European Destinations	1
Trav	1128	Asian and South Pacific Destinations	1
Trav	1129	Central and South American Destinations.....	1
Trav	1130	African Destinations.....	1
Trav	1150	Outside Sales for the Home-Based and Independent Contractor	2
Trav	1202	Business Management for the Travel Professional	3
Trav	1210	Introduction to Global Distribution Systems	3
Trav	1820	Selected Topics	3

Trav	2130	Airline Operations and Security Procedures.....	2
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3
Trav	2210	Advanced Global Distribution Systems ...	3
Trav	2220	Internet Navigation Skills for the Travel Professional	3
Trav	2221	World Cultures and International Tourism Issues.....	3
Trav	2229	Advanced Travel Documentation.....	3
Trav	2230	Travel Sales and Customer Service.....	2
Trav	2236	Cruise Industry Sales Specialization	3
Trav	2820	Advanced Selected Topics	3

The **Fundamentals of Travel and Tourism certificate** requires 16 credits in the courses listed below. Code 4289

Program Requirements

Trav	1121	Introduction to the Travel, Tourism and Meetings Industries.....	3
Trav	1122	Introduction to World Destinations.....	3
Trav	1123	Introduction to Travel Documentation....	3
Trav	1124	Introduction to Travel Communication and Business Etiquette	2
			11

Program Electives.....5

Select courses from the list below.

Co-op	2860	Cooperative Education/Internship (Occupational).....	1 to 4
Trav	1126	North American Destinations	1
Trav	1127	European Destinations.....	1
Trav	1128	Asian and South Pacific Destinations	1
Trav	1129	Central and South American Destinations.....	1
Trav	1130	African Destinations.....	1
Trav	1150	Outside Sales for the Home-Based and Independent Contractor	2
Trav	1202	Business Management for the Travel Professional	3
Trav	1210	Introduction to Global Distribution Systems.....	3
Trav	1820	Selected Topics	3
Trav	2130	Airline Operations and Security Procedures.....	2
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3
Trav	2210	Advanced Global Distribution Systems ...	3
Trav	2220	Internet Navigation Skills for the Travel Professional	3
Trav	2221	World Cultures and International Tourism Issues.....	3
Trav	2229	Advanced Travel Documentation.....	3
Trav	2230	Travel Sales and Customer Service.....	2
Trav	2236	Cruise Industry Sales Specialization	3
Trav	2240	Tour Escorting, Planning and Operations	3
Trav	2820	Advanced Selected Topics	3

The **Travel Geography Specialist certificate** requires a total of 18 credit hours in the courses listed below. Code 4292

Program Requirements

Trav	1122	Introduction to World Destinations.....	3
Trav	2207	Marketing for the Travel, Tourism and Meetings Industries.....	3
Trav	2220	Internet Navigation Skills for the Travel Professional	3
Trav	2221	World Cultures and International Tourism Issues.....	3
			12

Program Electives.....6

Select three credits from the list below:

Trav	1126	North American Destinations	1
Trav	1127	European Destinations.....	1
Trav	1128	Asian and South Pacific Destinations	1
Trav	1129	Central and South American Destinations.....	1
Trav	1130	African Destinations.....	1

Select three credits from the list below:

Trav	1150	Outside Sales for the Home-Based and Independent Contractor	2
Trav	1202	Business Management for the Travel Professional	3
Trav	1820	Selected Topics	3
Trav	2130	Airline Operations and Security Procedures.....	2
Trav	2230	Travel Sales and Customer Service.....	2
Trav	2236	Cruise Industry Sales Specialization	3
Trav	2820	Advanced Selected Topics	3

Welding

Certificate

The Welding program provides a competency-based, individualized method of instruction. This program provides training at various levels of competency in the four most common methods of metal joining: shielded metal arc (stick), gas tungsten arc (TIG), oxyacetylene (gas) and gas metal arc (MIG). Plasma welding and cutting, both manual and semi-automatic are included in various courses. This certificate requires 30 credits in the courses listed below. Code 4995

Weld	1100	Welding I.....	3
Weld	1112	Oxy-Fuel, Welding, Plasma Cutting and Brazing.....	3
Weld	1122	Shielded Metal Arc (SMAW)	3
Weld	1132	Gas Metal Arc (MIG).....	3
Manuf	1101	Industrial Design/CAD.....	3
Weld	1142	Gas Tungsten Arc (TIG)	3
Manuf	1151	Machine Shop I.....	3
Weld	1151	Pipe Welding and Fabrication.....	3
Weld	1160	Skill Assessment	3
Math	1115	Technical Mathematics I.....	3

