ACCOUNTING

(Associate in Applied Science) • Plan 22AA
Business Division, Room T102, (847) 543-2041

Students are prepared to compile and analyze business records and prepare financial reports such as income statements, balance sheets, costs studies, tax returns. and other internal reports.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Requirements

Communication

CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3

English

ENG	121	English Composition and	
AOS	111	Business Communications ***or***	
ENG	126	Advanced Comp: Scientific and Technical Communication	6

Social Science

PSY	122	Psychology in Business and Industry ***or***	
PSY	121	Introduction to Psychology	3
ECO	110	Economics for Business and Industry ***or***	
ECO	221	Principles of Macroeconomics ***and***	
ECO	222	Principles of Microeconomics*	3-6

Humanities and Fine Arts

		Elective (recommended PHI 122 or PHI 125)	3

Mathematics

AOS	122	Business Mathematics ***or***	
MTH	222	Elementary Statistics ***or***	
MTH	127	Finite Mathematics ***or***	
MTH	224	Calculus for Business and Social Science	3-4
			21-25

Accounting Cores Courses Required:

ACC	121	Financial Accounting ***or***	
ACC	112	Accounting Procedures I ***and***	
ACC	113	Accounting Procedures II	4-6
ACC	122	Managerial Accounting	4
ACC	212	Federal Tax Accounting I	3
ACC	214	Cost Accounting I	3
ACC	221	Intermediate Accounting I	4
ACC	222	Intermediate Accounting II	4
			22-24

Business Courses Required:

CIS	120	Introduction to Computers ***or***	
CIS	119	Introduction to Office Software	3
BUS	221	Business Law I	3
BUS	121	Introduction to Business	3
			9

Business Electives (8 Hours)*:

ACC	114	Payroll Accounting	2
ACC	115	Spreadsheet Applications for Accounting	1
ACC	171	Accounting Information and Computer Systems	2
ACC	172	Capstone Experience	1
ACC	213	Federal Tax Accounting II	3
ACC	270	Advanced Accounting	4
ACC	271	Auditing	3
BUS	222	Business Law II	3
MTH	122	College Algebra ***or***	
MTH	222	Elementary Statistics ***or***	
MTH	127	Finite Mathematics ***or***	
MTH	224	Calculus for Business and Social Science	3-4
CIS		Electives	1-7
BUS		Electives	3-6
AOS		Electives	1-4
EWE	220	Cooperative Work Experience I	3

Minimum hours to complete A.A.S 60

* Students taking ECO 221 and ECO 222 to meet the social science requirement are required to complete only five hours of business electives.

Accounting Clerk

(Certificate) • Plan 22AI

This program prepares individuals for positions as accounting or financial services support personnel. Accounting clerk positions require excellent mathematical aptitude, computer data entry skills, good communication skills, and basic accounting knowledge. Most positions require a minimum typing speed and microcomputer software application skills.

ACC	112	Accounting Procedures I	3
ACC	113	Accounting Procedures II	3
ACC	114	Payroll Accounting	2
ACC	115	Spreadsheet Applications for Accounting	1
ACC	171	Accounting Information and Computer Systems	2
ACC	172	Capstone Experience - Accounting Clerk Certificate	1
AOS	111	Business Communications	3
AOS	122	Business Mathematics	3
CIS	119	Introduction to Office Software	3

Total Hours 21

Complete CPA Requirements at CLC
Effective in the year 2001, to apply for the CPA examination a candidate must have 150 semester hours of acceptable college level education, including at least a bachelor's degree. The total hours must include an accounting concentration or equivalent as determined by the Illinois Board of Examiners. A candidate will be deemed to have met the education requirement if, as part of the 150 semester hours the candidate meets any one of the following four conditions. Accounting hours do not include business law and no more than six semester hours of accounting may be internship or life experience.

1. Earned graduate degree with a concentration in accounting.

2. Earned graduate degree in business with at least 24 semester hours in accounting at the undergraduate level or 15 semester hours at the graduate level, including the subjects of financial accounting, auditing, taxation, and management accounting.

3. Earned baccalaureate degree in business with at least 24 hours in accounting including courses covering the subjects of financial accounting, auditing, taxation, and management accounting.

4. Earned baccalaureate degree with at least 24 hours in accounting with at least one course each in financial accounting, auditing, taxation, and management accounting and at least 24 hours in business courses (other than accounting courses).

At CLC it is recommended that the total accumulation of hours include ACC 121, 122, 212, 213, 214, 221, 222, 270, 271, BUS 221, 222, CIS 120, ECO 221, ECO 222 and MTH 222. Additional information and application can be obtained from the Illinois Board of Examiners, 100 Trade Center Drive, Suite 403, Champaign, Illinois 61820, telephone (217) 531-0950, fax (217) 531-0960. Illinois Board of Examiners Web site: www.illinois-cpa-exam.com .

Professional Accounting Certificate

(Certificate • Plan 22AB
This certificate covers the body of knowledge necessary to prepare for the accounting portions of the Certified Public Accounting Exam. It is designed for individuals who already possess a bachelor's degree. Please refer to the boxed information preceding this certificate for specific requirements. It is strongly recommended that you take a CPA Review course prior to sitting for the exam.

ACC	221	Intermediate Accounting I	4
ACC	222	Intermediate Accounting II	4
ACC	212	Federal Tax Accounting I	3
ACC	213	Federal Tax Accounting II	3
ACC	214	Cost Accounting I	3
ACC	270	Advanced Accounting	4
ACC	271	Auditing	3
BUS	221	Business Law I	3
BUS	222	Business Law II	3
		Total Hours	30

If students have taken a year of accounting principles at the undergraduate level, the prerequisite for ACC 221, ACC 212, and ACC 214 will have been met. Contact one of the accounting faculty below for a prerequisite waiver. It is recommended that students have computer courses and statistics background as well.

For more information on this course of study students may contact either the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Jay Chittal	T211	(847) 543-2520	jchittal@clcillinois.edu
Scott Steinkamp	T213	(847) 543-2524	ssteinkamp@clcillinois.edu
Mary Zenner	T211	(847) 543-2522	mzenner@clcillinois.edu

ADMINISTRATIVE OFFICE SYSTEMS ADMINISTRATIVE ASSISTANT

(Associate in Applied Science) • Plan 22SM
Business Division, Room T102, (847) 543-2041

The Administrative Office Systems degree provides a blend of office automation skills including word processing and related computer applications leading to administrative assistant positions in an office environment. In addition, students establish essential skills in business communication and general business skills and practices.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

AOS	112	Automated Office Technologies	3
AOS	128	Intermediate Keyboarding	4
AOS	172	Business English	3
AOS	122	Business Mathematics	3
BUS	121	Introduction to Business	3
			16

Second Semester

AOS	111	Business Communications	3
AOS	223	Advanced Keyboarding* ***or*** AOS Elective	3
AOS	113	Comprehensive Word Processing	3
ACC	112	Accounting Procedures I ***or***	
ACC	121	Financial Accounting	3-4
CIS	111	Comprehensive Spreadsheets	3
			15-16

Third Semester

AOS	118	Advanced Word Processing/ Desktop Publishing	3
AOS	119	Records Management	2
AOS	215	Presentation Software	3
ENG	121	English Composition I	3
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices ***or***	
CMM	111	Communication Skills	3
			14

Fourth Semester

AOS	117	Machine Transcription	3
AOS	214	Administrative Office Procedures	3
AOS	216	Integrated Office Projects	3
PSY	121	Introduction to Psychology ***or***	
PSY	122	Psychology in Business	3
		Humanities & Fine Arts Elective**	3
			15

Total Hours 60-61

AOS Electives

AOS	175	Keyboarding Speed & Accuracy Bldg.	2
AOS	299	Selected Topics in AOS	1-4
CIS	230	Comprehensive Database	3
HIT	111	Medical Terminology	3
		BUS Electives	1-3
		CIS Electives	1-3
		EWE (Educational Work Experience)	2-4
		PLS Electives	1-3

Other electives may be chosen with consent of an AOS Advisor.

* AOS 223 will not be required of students completing AOS 128 with 50 wpm (5 min. timing w/5 or fewer errors) and a minimum grade of B.

** Courses that meet these requirements can be found in the Programs of Instruction and Graduation Requirements section of the CLC Catalog under Career Programs Degree Requirements.

General Office

(Certificate) • Plan 22SP

The General Office certificate prepares individuals for entry-level office positions with titles such as general office clerk, general office assistant, and clerk-typist. This certificate emphasizes general office skills and related skills needed for entry-level positions and career advancement.

Required Courses

AOS	170	Computer Keyboarding I	2
AOS	171	Computer Keyboarding II	2
AOS	128	Intermediate Keyboarding	4
AOS	112	Automated Office Technologies	3
AOS	113	Comprehensive Word Processing	3
AOS	172	Business English ***or***	
AOS	111	Business Communication	3
		Total Hours	17

Office Assistant

(Certificate) • Plan 22SO

The Office Assistant certificate prepares individuals to perform a variety of advanced tasks and assume responsibility in the general office environment in positions with titles such as general office assistant and word processor. This certificate emphasizes word processing and related office skills for both entry-level positions and career advancement.

Required Courses

AOS	112	Automated Office Technologies	3
AOS	128	Intermediate Keyboarding	4
AOS	113	Comprehensive Word Processing	3
AOS	118	Advanced Word Processing/ Desktop Publishing	3
AOS	215	Presentation Software	3
AOS	172	Business English	3
AOS	111	Business Communications	3
AOS	117	Machine Transcription	3
AOS	119	Records Management	2
CIS	111	Comprehensive Spreadsheet	3
		Total Hours	30

Information Processing Specialist

(Certificate) • Plan 22SN

The Information Processing Specialist certificate prepares individuals for positions using current industry software. Students complete word processing, presentation software, and spreadsheet courses.

Required Courses

AOS	113	Comprehensive Word Processing	3
AOS	118	Advanced Word Processing/ Desktop Publishing	3
AOS	215	Presentation Software	3
CIS	111	Comprehensive Spreadsheets	3
		Total Hours	12

For more information on these AOS courses of study, students may contact either the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Yvonne Block	T213	(847) 543-2819	yblock@clcillinois.edu
Joe Gehrke	T204	(847) 543-2528	jgehrke@clcillinois.edu
Lauren LoPresti	T214	(847) 543-2925	lopresti@clcillinois.edu
Lynn Steffen	T214	(847) 543-2817	steffen@clcillinois.edu

ARCHITECTURAL TECHNOLOGY

(Associate in Applied Science) • Plan 24CB
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program prepares graduates to assume a variety of duties in the architectural profession including drawing construction working drawings, design development drawings, renderings, cost estimating, specification writing, structural design and detailing, construction supervision, sales of materials and equipment, facilities engineering, building inspection and other building and zoning work. Graduates may be employed with architects, engineers, contractors, government agencies or others in the industry.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

CAD	117	Introduction to AutoCAD	3
CMT	110	Introduction to the Built Environment	1
ARC	121	Architectural Graphics	3
CMT	113	Construction Materials	3
MTH	117	Technical Mathematics I ***or***	
MTH	122	College Algebra	3-4
PHY	121	General Physics	5
			18-19

Second Semester

ARC	170	Architectural Design	3
ARC	228	History of Architecture	3
CAD	214	Architectural Applications	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking ***or***	
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
ENG	120	Technical Composition ***or***	
ENG	121	English Composition I	3
MTH	118	Technical Mathematics II ***or***	
MTH	123	Trigonometry	3-4
			18-19

Third Semester

ARC	171	Architectural Working Drawings	3
ARC	151	Advanced Concepts of Projects/ AutoCAD Management	3
CAD	179	CAD Animation and Rendering	3
ECO	110	Economics for Business and Industry ***or***	
PSY	122	Psychology in Business and Industry	3
EGR	216	Statics and Mechanics for Materials and Technology	5
			17

Fourth Semester

ARC	215	Architectural Project Planning	3
ARC	216	Architectural Illustrations	3
ARC	271	Commercial Working Drawings	3
CMT	118	Mechanical and Electrical Equipment	3
CMT	119	Specifications and Building Codes	3
			15

Total Hours 68-70

Architectural Technology

(Certificate) • Plan 24CF

Thirty-four semester hours credit must be completed for the certificate in Architectural Technology with courses selected from the following; other subjects may be taken as part of the program, with advisor approval.

ARC	121	Architectural Graphics	3
ARC	170	Architectural Design.	3
ARC	171	Architectural Working Drawings	3
ARC	215	Architectural Project Planning	3
ARC	216	Architectural Illustration	3
ARC	228	History of Architecture	3
ARC	271	Commercial Working Drawings	3
CMT	113	Construction Materials	3
CMT	117	Construction Methods	3
CMT	118	Mechanical & Electrical Equipment	3
CMT	119	Specifications & Building Codes	3
CMT	214	Construction Estimating	3
CAD	117	Introduction to AutoCAD	3
CAD	177	Site Planning & Drafting	3
CAD	179	CAD Animation & Rendering	3
CAD	214	Architectural Applications	3
CAD	217	AutoCAD II	3
CIV	111	Surveying I	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
IMR	115	Carpentry I	3
MTH	117	Technical Mathematics I	3
			Total Hours 34

For more information on this course of study students may contact either the division office listed or the following faculty member.

Name	Office	Phone Number	E-mail Address
David Petrulis	T113	(847) 543-2496	dpetrulis@clcillinois.edu

AUTOMOTIVE COLLISION REPAIR

(Certificate) • Plans 24AE, 24AK, 24AL, 24AM
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program prepares the student for employment in the auto body repair and painting industry.

The Automotive Collision Repair program offers courses leading to four certificates. These programs will provide students with the entry-level skills needed to enter the collision repair industry. The certificates allow students to specialize in one or more areas of collision repair. The courses use the I-Car curriculum and students have the opportunity to earn I-Car course credit. The program is certified in all four areas by NATEF (National Automotive Technicians Educations Foundation, Inc.).

Automotive Collision Repair

(Certificate) • Plan 24AE

ABR	110	Non-Structural Repair I	5
ABR	111	Non-Structural Repair II	5
ABR	115	Automotive Welding	3
ABR	118	Automotive Plastic Repair	2
			Total Hours 15

Automotive Damage Estimator

(Certificate) • Plan 24AK

ABR	110	Non-Structural Repair I	5
ABR	235	Estimating and Shop Procedures	3
ABR	230	Structural Repair I	3
ABR	130	Automotive Refinishing I	3
			Total Hours 14

Automotive Refinishing Technician

(Certificate) • Plan 24AM

ABR	130	Automotive Refinishing I	3
ABR	131	Automotive Refinishing II	5
ABR	133	Automotive Refinishing III	5
ABR	215	Automotive Detailing	3
			Total Hours 16

Automotive Structural Repair Technician

(Certificate) • Plan 24AL

ABR	230	Structural Repair I	3
ABR	231	Structural Repair II	5
ABR	115	Automotive Welding	3
ABR	137	Mechanical and Electrical Systems I	5
ABR	138	Mechanical and Electrical Systems II	5

Total Hours 21

For more information on this course of study students may contact the division office.

AUTOMOTIVE TECHNOLOGY

(Associate in Applied Science) • Plans 24AH, 24AI, 24AJ
(Certificates) • Plans 24AV, 24AX, 24AY
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

The Automotive Technology programs offer courses leading to three Associate in Applied Science degrees: Under Hood Technician, Transmission Technician and Under the Car Technician. These programs will provide students with a solid foundation and a variety of skills to enter the automotive industry, or to pursue further undergraduate study. The certificate programs have been designed to give students an opportunity to specialize and concentrate their efforts in related areas of automotive repair. The program is certified in all eight areas by ASEs National Automotive Technicians Education Foundation, Inc. (NATEF). This is the highest level of certification that ASE awards.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Under Hood Technician

(A.A.S. Specialty & Certificate) Codes 24AH & 24AV

Phase I

AUT	171	Engine Rebuilding	5
AUT	172	Auto Electrical I	5
AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto)	4
MTH	114	Applied Mathematics I	3

17

Phase II

AUT	173	Auto Electrical II	5
AUT	215	Automotive Management	3
AUT	271	Fuel Systems I	5
AUT	275	Air Conditioning & Heating	5

18

Phase III

AUT	272	Fuel Systems II	5
AUT	276	Engine Systems Diagnosis	5
AUT	277	Advanced Specialization	5

15

Total Hours for Certificate 50

For A.A.S. Degree add the following:
• general education courses listed on page 105.*

Total Hours for A.A.S. degree 65

Transmission Technician

(A.A.S. & Certificate) Codes 24AI & 24AX

Completion of these programs prepares the student for employment in diagnosing, testing, and repairing transmissions and drivelines.

Phase I

AUT	171	Engine Rebuilding	5
AUT	172	Auto Electrical I	5
AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto)	4
AUT	273	Transmissions I	5

19

Phase II

AUT	215	Automotive Management	3
AUT	274	Transmissions II	5
AUT	277	Advanced Specialization	5
MTH	114	Applied Mathematics I	3

16

Total Hours for Certificate 35

Automotive courses:

AUT	175	Braking Systems	5
AUT	176	Suspension & Alignment	5
AUT		Elective ***or*** EWE 220	3-5

13-15

For A.A.S. Degree add the following:
• general education courses listed on page 105.*

Total Hours for A.A.S. degree 63-65

Under The Car Technician

(A.A.S. & Certificate) Codes 24AJ & 24AY

These programs prepare the student for employment in diagnosing, testing, and repairing brakes, suspension and alignment, and driveline systems.

Phase I

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto)	4
AUT	175	Braking Systems	5
AUT	273	Transmissions I	5
MTH	114	Applied Mathematics I	3
			17

Phase II

AUT	176	Suspension & Alignment	5
AUT	215	Automotive Management	3
AUT	277	Advanced Specialization	5
			13

Total Hours for Certificate 30

Automotive courses:

AUT	171	Engine Rebuilding	5
AUT	172	Auto Electrical I	5
AUT	274	Transmissions II	5
AUT		Elective ***or*** EWE 220	3-5
			18-20

For A.A.S. Degree add the following:
• general education courses listed below.*

Total Hours for A.A.S. degree 63-65

*** General Education Courses** 15

Communication Arts 6
Choose either: ENG 120 or ENG 121 and CMM 111 or CMM 121

Social & Behavioral Science 6
Suggestions: SOC 121, ECO 110, PSY 121, PSY 122, PSC 121, HST 221

Humanities & Fine Arts 3

Automotive Air Conditioning and Heating Specialist

(Certificate)
Code 24UG

This Mini Certificate would prepare a student for initial employment diagnosing and repairing automotive heating and air conditioning systems.

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto)	4
AUT	172	Auto Electrical I	5
AUT	275	Air Conditioning and Heating	5

Total Hours 14

Automotive Electrical Specialist

(Certificate)
Code 24UH

This Mini Certificate would prepare a student for employment diagnosing and repairing chassis and body electrical and electronic circuits.

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto)	4
AUT	172	Auto Electrical I	5
AUT	173	Auto Electrical II	5

Total Hours 14

Automotive Fuel Systems Specialist

(Certificate)
Code 24UI

This Mini Certificate would prepare a student for initial employment diagnosing and repairing automotive engine fuel system problems.

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto)	4
AUT	271	Fuel Systems I	5
AUT	272	Fuel Systems II	5

Total Hours 14

Automotive Service Specialist

(Certificate)
Code 24UJ

This Mini Certificate would prepare a student for initial employment in the automotive service industry.

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto).....	4
AUT	171	Engine Rebuilding	5
AUT	172	Auto Electrical I.....	5
		Total Hours	14

Automotive Brakes and Suspension Specialist

(Certificate)
Code 24UK

This Mini Certificate would prepare a student for initial employment diagnosing and repairing automotive braking, suspension and alignment problems.

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto).....	4
AUT	175	Braking Systems	5
AUT	176	Suspension and Alignment.....	5
		Total Hours	14

Automotive Oil Change Specialist

(Certificate) • Code 24UL

This Mini Certificate would prepare a student for employment in the oil change business.

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto).....	4
AUT	171	Engine Rebuilding	5
AUT	273	Transmissions I	5
		Total Hours	14

Automotive Transmission Specialist

(Certificate)Code 24UM

This Mini Certificate would prepare a student for initial employment diagnosing and repairing manual transmission, automatic transmission and driveline problems.

AUT	170	General Automotive ***or***	
AUT	174	Applied Mechanics (Auto).....	4
AUT	273	Transmissions I	5
AUT	274	Transmissions II.....	5
		Total Hours	14

For more information on this course of study students may contact either the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Lance David	T015	(847) 543-2509	ldavid@clcillinois.edu
Chris Hadfield	T015	(847) 543-2501	chadfield@clcillinois.edu
Derrek Keesling	T015	(847) 543-2058	dkeesling@clcillinois.edu

BUILDING CONSTRUCTION TECHNOLOGY

See Construction Management Technology on page 118.

BUSINESS MANAGEMENT

(Associate in Applied Science) • Plans 22BC, 22BD
Business Division, Room T102, (847) 543-2041

This program is designed for students interested in entry and middle level management positions. It uses the umbrella concept with a common core of 39 semester hours. Associate in Applied Science degree and/or certificate options are available in Marketing and Supervision.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Requirements

English Communications:

ENG	121	English Composition I	3
AOS	111	Business Communications ***or***	
ENG	126	Advanced Composition: Scientific and Technical Communications	3

Social Science

ECO	110	Economics for Business and Industry ***or***	
ECO	221	Principles of Macroeconomics	3
PSY	122	Psychology in Business and Industry ***or***	
PSY	121	Introduction to Psychology	3

Communication

CMM	128	Interviewing Practices ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	111	Communication Skills	3

Mathematics

AOS	122	Business Mathematics ***or***	
MTH	122	College Algebra ***or*** higher level math	3-4

Humanities

		Elective	3
		(HUM 127 or PHI 125 recommended)	
			21-22

General Business Required Courses

BUS	121	Introduction to Business	3
ACC	112	Accounting Procedures I ***or***	
ACC	121	Financial Accounting	3-4
BUS	111	Fundamentals of Finance ***or***	
ACC	122	Managerial Accounting	3-4
BUS	221	Business Law I	3
BUS	223	Principles of Management	3
CIS	120	Introduction to Computers ***or***	
CIS	119	Introduction to Office Software	3
			18-20

		Specialty Option: Supervision or Marketing	15
		Electives: (ACC, BUS, CIS, MCD, MFG, CMM, EWE 220 - 4-credit limit)	6
		Total Hours	60-63

Specialty Options - Marketing (Plan 22BC)

BUS	122	Principles of Marketing	3
BUS	212	Industrial Marketing	3
BUS	214	Advertising	3
BUS	213	Principles of Salesmanship	3
BUS	299	Selected Topics in Business ***or***	
BUS	114	Training Principles and Practices	3
			15

Specialty Options - Supervision (Plan 22BD)

BUS	115	Elements of Supervision	3
BUS	113	Human Resource Management	3
BUS	114	Training Principles and Practices	3
BUS	215	Production and Inventory Control	3
BUS	219	Small Business Management	3
			15

Small Business Management Certificate

The small business management certificate provides the student with the skills and knowledge needed to start and operate a small business.

Small Business Management • Plan 22BE

BUS	121	Introduction to Business	3
BUS	219	Small Business Management	3
BUS	122	Principles of Marketing	3
ACC	112	Accounting Procedures ***or***	
ACC	121	Financial Accounting	3-4
BUS	290	Business Plan Development	3
		Electives	6
		Total Hours	21-22

Electives

BUS	113	Human Resource Management	3
BUS	115	Elements of Supervision	3
BUS	213	Principles of Professional Spelling	3
BUS	214	Advertising	3
BUS	221	Business Law I	3
BUS	223	Principles of Management	3
CIS	119	Introduction to Office Software	3
AOS	122	Business Mathematics	3
		Any career course(s) approved by the Business Management Coordinator	3-6

Marketing Certificate

The Marketing certificate prepares students for marketing positions such as sales, promotion, and marketing management.

Marketing • Plan 22BG

BUS	121	Introduction to Business	3
BUS	122	Principles of Marketing	3
BUS	212	Industrial Marketing	3
BUS	213	Principles of Salesmanship	3
BUS	214	Advertising	3
BUS	299	Selected Topics in Business ***or***	
BUS	114	Training Principles and Practices	3
BUS	223	Principles of Management	3
		Total Hours	21

Supervision Certificate

The Supervision certificate prepares students for various areas of management which require skills in communication, interpersonal relations, and general business operations.

Supervision • Plan 22BK

BUS	115	Elements of Supervision	3
BUS	121	Introduction to Business	3
BUS	113	Human Resource Management	3
BUS	114	Training Principles and Practices	3
BUS	215	Production and Inventory Control	3
BUS	219	Small Business Management	3
BUS	223	Principles of Management	3
		Total Hours	21

For more information on this course of study students may contact either the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Kent Donewald	T207	(847) 543-2821	kdonewald@clcillinois.edu
Venkat Krishnamurthy	T204	(847) 543-2523	vkrishnamurthy@clcillinois.edu
James Paradiso	T209	(847) 543-2525	paradiso@clcillinois.edu
Litsa Press	T212	(847) 543-2921	litsapress@clcillinois.edu

CAD-DRAFTING TECHNOLOGY

(Associate in Applied Science) • Plans 24DC, 24DJ, 24DR
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program prepares students for employment and advancement in Computer Aided Design (CAD). CAD Drafters work under the supervision of an engineer or designer creating drawings. With additional education and experience the graduate may advance to designer, checker, or supervisor. Drawings are produced using a variety of CAD/CAM software. Students must choose an area of concentration within the program and follow the courses listed for that option. The options include Architectural/Civil, Mechanical, and Graphics Animation & Presentation. See Architectural, Civil, and Multimedia programs for related fields of study.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Architectural/Civil Option (Plan 24DR)

First Semester			
CAD	110	CAD/CAM Concepts	3
CAD	117	Introduction to AutoCAD	3
MTH	115	Applied Mathematics II	3
CIV	111	Surveying ***or***	
CMT	111	Construction Layout	3
CMT	113	Construction Materials	3
			15
Second Semester			
CMT	117	Construction Methods	3
ARC	121	Architectural Graphics	3
ARC	170	Architectural Design	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking ***or***	
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
			15
Third Semester			
CAD	179	CAD Animation and Rendering I	3
CAD	217	AutoCad II	3
ARC	171	Architectural Working Drawings	3
CAD	214	Architectural Applications	3
ARC	228	History of Architecture ***or***	
		Humanities & Fine Arts Elective	3
ECO	110	Economics for Business and Industry ***or***	
ECO	221	Principles of Macroeconomics ***or***	
PSC	122	State & Local Politics ***or***	
		Social & Behavioral Sciences Elective	3
			18

Fourth Semester

CAD	177	Site Planning and Drafting	3
ARC	271	Commercial Working Drawings	3
CIV	213	Subdivision Planning and Design	3
ARC	216	Architectural Illustrations	3
CAD	279	CAD Animation and Rendering II	3
CAD	273	CAD Specialization ***or***	
EWE	220	Cooperative Work Experience II	3
			18

Total Hours 66

Mechanical Option (24DC)

First Semester

CAD	110	CAD/CAM Concepts	3
CAD	117	Introduction to AutoCAD	3
DFT	111	Drafting I	5
MTH	115	Applied Mathematics II	3
MTT	112	Machining Principles	3
			17

Second Semester

DFT	112	Drafting II	5
MCD	111	Manufacturing Processes	3
CAD	173	Introduction to SolidWorks	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
ECO	110	Economics for Business and Industry ***or***	
ECO	221	Principles of Macroeconomics ***or***	
PSC	122	State & Local Politics ***or***	
		Social & Behavioral Sciences Elective	3
			17

Third Semester

CNC	218	CAD/CAM Numerical Control	3
CAD	217	AutoCAD II	3
CAD	171	Introduction to Inventor	3
CAD	174	SolidWorks II	3
CAD	176	Introduction to ProEngineer	3
		Humanities & Fine Arts Elective	3
			18

Fourth Semester

CAD	271	Inventor II	3
CAD	211	Mechanical Detailing with GD & T	3
CAD	276	ProEngineer II ***or***	
		Technical Elective*	3
MCD	214	Mechanical Design and Drafting	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking ***or***	
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
			15

Total Hours 67

Graphics Animation, and Presentation Option (24DJ)

First Semester

CAD	110	CAD/CAM Concepts	3
CAD	117	Introduction to AutoCAD	3
DFT	111	Drafting I	5
ARC	121	Architectural Graphics	3
COM	111	Introduction to Multimedia	3
			17

Second Semester

DFT	112	Drafting II	5
MTH	115	Applied Mathematics II	3
CAD	171	Introduction to Inventor ***or***	
CAD	173	Introduction to SolidWords ***or***	
CAD	176	Introduction to ProEngineer	3
ART	222	Introduction to Computer Art	3
			14

Third Semester

CAD	214	Architectural Applications ***or***	
		Technical Elective*	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CAD	179	CAD Animation and Rendering	3
ART	263	2D Computer Animation	3
		Social & Behavioral Sciences Elective	3
			15

Fourth Semester

ARC	216	Architectural Illustration ***or***	
CAD	217	AutoCAD	3
CAD	279	Animation and Rendering II	3
ARC	228	History of Architecture ***or***	
		Humanities & Fine Arts Elective	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking ***or***	
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
CAD	273	CAD Specialization ***or***	
EWE	220	Cooperative Work Experience I	3
			15

Total Hours 61

*** Technical Electives**

ARC	121	Architectural Graphics	3
CAD	110	CAD-CAM Concepts	3
CAD	117	Introduction to AutoCAD	3
CAD	171	Introduction to Inventor	3
CAD	173	Introduction to SolidWorks	3
CAD	174	SolidWorks II	3
CAD	175	AutoCAD 3D	3
CAD	176	Introduction to ProEngineer	3
CAD	177	Site Planning and Drafting	3
CAD	179	CAD Animation & Rendering	3
CAD	217	AutoCAD II	3
CAD	276	ProEngineer II	3
CAD	279	Animation & Rendering II	3
CNC	218	Introduction to MasterCam	3
ELT	111	Electronic Drafting	2
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
EGR	122	Descriptive Geometry	3
EWE	220	Cooperative Work Experience I.	2-4
MCD	111	Manufacturing Processes	3
MCD	112	Basic Metallurgy I	3
MCD	214	Mechanical Design & Drafting	3
MTH	115	Applied Mathematics II	3
MTT	111	Machine Shop I	3
MTT	112	Machining Principles	3

* Technical Electives: A broad choice of technical electives is available including EWE 220-Cooperative Work Experience. See an advisor in the CAD department for approval of electives.

Graphics, Animation and Presentations

(Certificate) • Plan 24DK

This advanced certificate is designed for the individual who possesses education or experience in computer aided design (CAD) or graphic arts. The certificate fills the gap between CAD and computer-generated art and provides the graduate with the skills to create sophisticated computer enhanced presentations for use in a variety of applications. Most courses require prerequisites before enrollment.

CAD	110	CAD/CAM Concepts	3
DFT	111	Drafting I ***or***	
CAD	117	Introduction to AutoCAD	3
ARC	121	Architectural Graphics	3-5
CAD	179	CAD Animation and Rendering	3
COM	111	Introduction to Multimedia	3
ART	222	Introduction to Computer Art	3
ART	263	2D Computer Animation	3
CAD	279	Animation and Rendering II	3
			24-26

CAD - Drafting Technology - General

(Certificate) • Plan 24DM

CAD	110	CAD/CAM Concepts	3
DFT	111	Drafting I	5
MTH	115	Applied Mathematics II	3
MCD	111	Manufacturing Processes	3
CIV	111	Surveying I	3
ELT	111	Electronic Drafting	2
CAD	117	Introduction to AutoCAD	3
ARC	121	Architectural Graphics	3
CAD	179	CAD Animation and Rendering	3
CAD	177	Site Planning and Drafting	3
			31

CAD - Drafting Technology - Architectural Certificate

(Certificate) • Plan 24DN

CAD	110	CAD-CAM Concepts	3
CAD	117	Introduction to AutoCAD	3
ARC	121	Architectural Graphics	3
CAD	217	AutoCAD II	3
CAD	179	CAD Animation and Rendering	3
CAD	214	Architectural Applications	3
ARC	216	Architectural Illustrations	3
			21

CAD - Drafting Technology - Civil Certificate

(Certificate) • Plan 24DO

CAD	110	CAD/CAM Concepts	3
CAD	117	Introduction to AutoCAD	3
ARC	121	Architectural Graphics	3
CIV	111	Surveying I ***or***	
CMT	111	Construction Layout	3
CAD	217	AutoCAD II	3
CAD	177	Site Planning and Drafting	3
CIV	213	Subdivision Planning and Design	3
			21

CAD - Drafting Technology - ProEngineer Certificate

(Certificate) • Plan 24DT

CAD	176	Introduction to ProEngineer	3
CAD	276	ProEngineer II	3
CAD	211	Mechanical Detailing with GD&T	3
			9

CAD - Drafting Technology - 3D Parametric Certificate

(Certificate) • Plan 24DP

CAD	171	Introduction to Inventor	3
CAD	173	Introduction to SolidWorks	3
CAD	176	Introduction to ProEngineer	3
CAD	271	Inventor II	3
CAD	174	SolidWorks II	3
CAD	276	ProEngineer II	3
CAD	211	Mechanical Detailing with GD&T	3
			21

CAD - Drafting Technology - AutoCAD Certificate

(Certificate) • Plan 24DQ

CAD	110	CAD/CAM Concepts	3
CAD	117	Introduction to AutoCAD	3
DFT	111	Drafting I	5
DFT	112	Drafting II	5
CAD	217	AutoCAD II	3
CAD	211	Mechanical Detailing with GD&T	3
			22

CAD - Drafting Technology - SolidWorks Certificate

(Certificate) • Plan 24DS

CAD	173	Introduction to SolidWorks	3
CAD	174	SolidWorks II	3
CAD	211	Mechanical Detailing with GD&T	3
			9

For more information on this course of study students may contact either the division office listed or one of the following faculty member.

Name	Office	Phone Number	E-mail Address
Steve Dulmes	T126	(847) 543-2330	sdulmes@clcillinois.edu
Tina Ye	T126	(847) 543-2625	tye@clcillinois.edu

CISCO NETWORKING

(Certificate) Plan 24CI, 24CJ
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

Cisco Networking

(Certificate) • Plan 24CI

This program is intended to prepare individuals for the Cisco Certified Network Associate exam (CCNA). The program consists of four courses each taught in an eight week format which will allow a student to finish the program in two semesters and begin the sequence in any semester. Material is presented by CBE (Computer Based Education) written by Cisco and supplemented by laboratory practical experience.

CNA	111	Cisco Networking I	3
CNA	112	Cisco Networking II	3
CNA	113	Cisco Networking III	3
CNA	114	Cisco Networking IV	3
		Total Hours	12

Cisco Networking Professional

(Certificate) • Plan 24CJ

This program will prepare students to take the CCNP certification exam(s). CCNP certification indicates advanced knowledge of networks. A network professional can install, configure, and troubleshoot local and wide area networks for enterprise organizations.

CNA	211	Advanced Routing	3
CNA	212	Remote Access	3
CNA	213	Multilayer Switching	3
CNA	214	Internetwork Troubleshooting	3
		Total Hours	12

For more information on this course of study, students may contact the division office listed or one of the following faculty member. Faculty are available during scheduled office hours to advise students about program and career opportunities.

Name	Office	Phone Number	E-mail Address
Greg Morris	T203	(847) 543-2905	gemorris@clcillinois.edu

CIVIL AND ENVIRONMENTAL TECHNOLOGY

(Associate in Applied Science) • Plan 24VA
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program prepares students to work as entry-level technicians in the civil/environmental technology industry. Job opportunities include technician–level positions in surveying, construction inspection and testing, site layout design and drafting, water/wastewater plant operators, and environmental site assessment. Employers include municipalities, water/wastewater treatment agencies, private civil/surveying firms, heavy construction material suppliers, and construction firms.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Core Courses

MTH	117	Technical Math I ***and***	
MTH	118	Technical Math II ***or***	
MTH	122*	College Algebra ***and***	
MTH	123*	Trigonometry ***or***	
MTH	144*	Pre-Calculus	5-7
PHY	121	General Physics I ***or***	
PHY	123	Physics for Science and Engineering I*	5
ENG	121*	English Composition ***or***	
ENG	120	Technical Composition	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech	3
ECO	110	Economics for Business and Industry ***or***	
GEG	240*	Geographic Information Systems ***or***	
		Social Science Elective	3
ARC	228	History of Architecture ***or***	
		Humanities & Fine Arts Elective	3

Technical Core Courses

CMT	110	Introduction to the Built Environment	1
CIV	111*	Surveying I	3
CIS	119	Introduction to Office Software	3
CMT	113	Construction Materials	3
CIV	113	Construction Inspection	3
CMT	117	Construction Methods	3
EGR	121*	Engineering Graphics ***or***	
ARC	121	Architectural Graphics	3
CIV	131	GIS/GPS Applications for Civil and Surveying Technology	3
CAD	177	Site Planning and Drafting	3
CIV	211*	Surveying II	3
CIV	213	Subdivision Planning and Design	3
CIV	214	Civil Materials and Testing	3
EGR	216	Statics and Mechanics of Materials for Technology	5
		Technical Electives	3
		Total	64-66

* Courses that may transfer to Bachelors of Science in engineering or surveying.

Technical Electives (3 hours)

CMT	119	Specifications and Building Codes	3
CMT	211	Job Scheduling and Control	3
CMT	213	Construction Law and Documents	3
CMT	214	Construction Estimating	3
CMT	215	Construction Management	3
BIO	120	Environmental Biology	3
CAD	217	AutoCAD II	3
CIV	215	Special Problems	3
GEO	126	Geology of Illinois	3
GEO	224	Environmental Geology	3
EWE	220	Cooperative Work Experience I	1-4
EWE	270	Cooperative Work Experience II	3
HRT	216	Natural Areas Management	3
WWW	111	Mechanical and Electrical Equipment	3
WWW	112	Fundamentals of Wastewater Treatment	3
WWW	113	Basic Waterworks Operations	3
WWW	114	Introduction to Water & Wastewater Analysis	3

Surveying and Civil Technology

(Certificate) • Plan 24VF

This certificate is intended for students desiring technician level work primarily in surveying technology and civil drafting. Potential employers include civil engineering firms, surveyors, public works agencies, and construction firms. Graduates are qualified to work in surveying crews and/or working on site plans in CAD using surveying data collected from fieldwork. Graduate from this program are qualified to sit for the American Congress of Surveying and Mapping (ACSM) Level I Survey Technician certification exam.

Summer

CIS	119	Introduction to Office Software	3
CMT	111	Construction Layout	3

Fall

MTH	117	Technical Math I	3
CAD	117	Introduction to AutoCAD	3
CIV	111	Surveying I	3

Spring

CIV	211	Surveying II	3
CAD	177	Site Planning and Drafting	3
CIV	131	GIS/GPS for Civil Engineering and Surveying Applications	3
		Total	24

Note: Co-Op work experience may be substituted for one course upon approval of the program coordinator.

For more information on this program, students may contact the division office listed or one of the following faculty member:

Name	Office	Phone Number	E-mail Address
Rob Twardock	T113	(847) 543-2903	rtwardock@clcillinois.edu

COMPUTER INFORMATION SYSTEMS

(Associate in Applied Science)
Plans 22CB, 22CR, 22CD, 22CJ, 22CL, 22CM, 22CU
Business Division, Room T102, (847) 543-2041

The Computer Information Systems degree program provides four specialty options with a common core of general education, business and introductory computer courses. Three specialty options with unique core requirements are also offered.

The computer technology emphasis of this degree program is a Windows-based programming and software applications environment.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Degree requirements for Java Programmer, C++ Programmer, Visual Basic Programmer, Web Programmer

General Education Requirements

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
PSY	122	Psychology in Business and Industry ***or***	
PSY	121	Introduction to Psychology	3
		Humanities & Fine Arts Elective (Recommend HUM 127, PHI 122 ***or*** PHI 125)	3
		Social & Behavioral Sciences Elective	3
MTH	122	College Algebra ***or*** higher Math ***or***	
AOS	122	Business Mathematics	3-4
			18-19

Business Courses Required

BUS	121	Introduction to Business	3
ACC	112	Accounting Procedures I ***or***	
ACC	121	Financial Accounting	3-4
ACC	113	Accounting Procedures II ***or***	
ACC	122	Managerial Accounting ***or***	
BUS	111	Fundamentals of Finance	3-4
			9-11

CIS Courses Required

CIS	120	Introduction to Computers	3
CIS	110	Programming Concepts using Visual Basic ***or***	
CIS	113	Programming Concepts using Java	3
			6

Specialty Option:
Java Programmer, C++ Programmer, Visual Basic Programmer, Web Programmer 27

Total Hours for AAS 60-63

Specialty Option – Java Programmer (22CM)

CIS	112	Introduction to Local Area Networking	3
CIS	170	Internet Programming for Business	3
CIS	230	Comprehensive Database	3
CIS	215	Object Oriented Programming using Java	3
CIS	234	Programming Using JavaBeans	3
CIS	235	Enterprise Java Development	3
CIS	258	Systems Analysis	3
CIS	277	Database Concepts	3
		CIS Programming or Non-programming Electives	3
			27

Specialty Option – C++ Programmer (22CR)

CIS	112	Introduction to Local Area Networking	3
CIS	230	Comprehensive Database	3
CIS	226	Programming in C++	3
CIS	227	Advanced C++	3
CIS	238	Programming in Visual C++	3
CIS	258	Systems Analysis	3
CIS	277	Database Concepts	3
CIS Programming or Non-programming Electives			6
			27

Specialty Option – Visual Basic Programmer (22CL)

CIS	112	Introduction to Local Area Networking	3
CIS	230	Comprehensive Database	3
CIS	210	Intro to Visual Basic Programming	3
CIS	212	Objects and Components using Visual Basic	3
CIS	213	Enterprise Database Access/Visual Basic	3
CIS	258	Systems Analysis	3
CIS	277	Database Concepts	3
CIS Programming or Non-programming Electives			6
			27

Specialty Option – Web Programmer (22CJ)

CIS	112	Introduction to Local Area Networking	3
CIS	170	Internet Programming for Business	3
CIS	171	Scripting Languages	3
CIS	230	Comprehensive Database	3
CIS	258	Systems Analysis	3
CIS	277	Database Concepts	3
CIS	278	Server Side Programming	3
CIS	279	Markup Language Programming	3
CIS Programming or Non-programming Electives			3
			27

Programming Electives

CIS	171	Scripting Languages	3
CIS	210	Intro to Visual Basic Programming	3
CIS	211	Introduction to C Programming	3
CIS	212	Objects and Components using Visual Basic	3
CIS	213	Enterprise Database Access/ Visual Basic	3
CIS	215	Object Oriented Programming Using Java	3
CIS	226	Programming in C ++	3
CIS	227	Advanced C++	3
CIS	238	Programming in Visual C ++	3
CIS	234	Programming Using JavaBeans	3
CIS	235	Enterprise Java Development	3
CIS	273	C# Programming	3
CIS	275	Programming for Office Applications	3
CIS	277	Database Concepts	3
CIS	278	Server Side Programming	3
CIS	279	Markup Language Programming	3
CIS	299	Selected Topics in CIS	1-3

Non-programming Electives

CIS	111	Comprehensive Spreadsheets	3
CIS	112	Introduction to Local Area Networking	3
CIS	114	Operating Systems for A+ Certification	3
CIS	116	Windows Operating System	3
CIS	117	Linux Operating System	3
CIS	170	Internet Programming for Business	3
CIS	193	Digital Evidence Recovery	3
CIS	230	Comprehensive Database	3
CIS	231	E-Commerce Implementation and Impact	3
CIS	236	LAN Administration	3
CIS	237	Managing Windows Network Environment	3
CIS	252	Linux Systems Administration	3
CIS	258	Systems Analysis	3
CIS	259	Project Management Software	3
CIS	272	Network Security Fundamentals	3
CIS	274	Implementing and Administering Security in Windows	3
CIS	277	Database Concepts	3
CIS	293	Advanced Digital Evidence Recovery	3
CIS	294	Analysis of Digital Media	3
CIS	295	Hardening the Infrastructure	3
CIS	296	Network Defense and Countermeasures	3
CIS	299	Selected Topics in CIS	1-3
EWE	220	Educational Work Experience	1-3

Network Administration and Security Plan 22CD

General Education Requirements

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
PSY	122	Psychology in Business and Industry ***or***	
PSY	121	Introduction to Psychology	3
		Humanities & Fine Arts Elective (Recommend HUM 127, PHI 122 ***or*** PHI 125)	3
MTH	122	College Algebra ***or*** higher Math ***or***	
AOS	122	Business Mathematics	3-4
			15-16

Business Courses Required

BUS	121	Introduction to Business	3
ACC	112	Accounting Procedures I ***or***	
ACC	121	Financial Accounting (for transfer)	3-4
			6-7

CIS Courses Required

CIS	120	Introduction to Computers	3
CIS	110	Programming Concepts using Visual Basic ***or***	
CIS	113	Programming Concepts using Java	3
			6

Specialty Option:

Network Administration and Security 36

Total Hours 63-65

Specialty Option
Network Administration and Security (22CD)

CIS	112	Introduction to Local Area Networking	3
CIS	116	Windows Operating System	3
CIS	117	Linux Operating System	3
CIS	192	Introduction to Computer Forensics	3
CIS	193	Digital Evidence Recovery	3
CIS	236	LAN Administration or	
CIS	252	Linux System Administration	3
CIS	237	Managing Windows Network Environment	3
CIS	272	Network & Systems Security Basics	3
CIS	274	Implementing and Administering Security in Windows	3
CIS	295	Hardening the Infrastructure	3
CIS	296	Network Defense and Countermeasures	3
ELT	151	PC Hardware Fundamentals	3
		Total Hours	36

Office Application Specialist
Plan 22CB

General Education Requirements

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
		Social and Behavioral Science Elective	3
		Humanities & Fine Arts Elective (Recommend HUM 127, PHI 122 ***or*** PHI 125)	3
MTH	122	College Algebra ***or*** higher Math ***or***	
AOS	122	Business Mathematics	3-4
			15-16

Business Courses Required

BUS	121	Introduction to Business	3
ACC	112	Accounting Procedures I ***or***	
ACC	121	Financial Accounting (for transfer)*	3-4
			6-7

Specialty Option:
Office Application Specialist 39-40

Total Hours for A.A.S 60-63

Specialty Option
Office Application Specialist (22CB)

CIS	120	Introduction to Computers	3
CIS	111	Comprehensive Spreadsheets	3
CIS	230	Comprehensive Database	3
AOS	113	Comprehensive Word Processing	3
CIS	170	Internet Programming for Business	3
CIS	275	Programming for Office Applications	3
CIS	112	Introduction to Local Area Networking	3
CIS	116	Windows Operating System	3
		Electives from list below	15-16
		Total Hours	39-40

Office Application Specialist Electives

CIS	110	Programming Concepts Using Visual Basic ***or***	3
CIS	113	Programming Concepts Using Java	3
CIS	171	Scripting Languages	3
CIS	231	E-Commerce Implementation and Impact	3
CIS	259	Project Management Software	3
CIS	277	Database Concepts	3
CIS	279	Markup Language Programming	3
ACC	122	Managerial Accounting (for transfer)*	4
ELT	151	PC Hardware Fundamentals	3
ELT	152	PC Peripherals and Troubleshooting	3

*Students who plan to transfer to a four year college or university should take ACC 121 and ACC 122.

Computer Forensics
Plan 22CU

General Education Requirements

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
PSY	121	Introduction to Psychology ***or***	
PSY	122	Psychology in Business and Industry	3
SOC	223	Deviance	3
PHI	125	Introduction to Ethics	3
		Science or Math Elective	3
			18

Criminal Justice Courses Required

CRJ	121	Introduction to Criminal Justice	3
CRJ	123	Introduction to Criminology I	3
CRJ	211	Criminal Procedural Law	3
CRJ	215	Issues in Criminal Justice	3
			12

Specialty Option:

Computer Forensics			30
		Total Hours for A.A.S	60

Specialty Option

Computer Forensics Courses Required

CIS	120	Introduction to Computers	3
CIS	112	Introduction to Local Area Networks	3
CIS	116	Windows Operating System	3
CIS	117	Linux Operating System	3
CIS	272	Network Security Fundamentals	3
ELT	151	PC Hardware Fundamentals	3
CIS	192	Introduction to Computer Forensics	3
CIS	193	Digital Evidence Recovery	3
CIS	293	Advanced Digital Evidence Recovery	3
CIS	294	Analysis of Digital Media	3
		Total Hours	30

Visual Basic Programming

(Certificate) • Plan 22CQ

The Visual Basic Programming certificate is centered in object oriented technologies. It is intended to enhance programming skills by providing knowledge and experience in the Visual Basic language in a minimal amount of time. It includes interaction with databases and the utilization of a systems approach to problem solving.

CIS	210	Introduction to Visual Basic Programming	3
CIS	212	Objects and Components Using Visual Basic	3
CIS	213	Enterprise Database Access Using Visual Basic	3
CIS	277	Database Concepts	3
CIS	258	Systems Analysis	3
		Total Hours	15

Java Programming

(Certificate) • Plan 22CP

The Java Programming certificate is centered in object oriented technologies. This certificate is intended to enhance programming skills by providing knowledge and experience in the Java language in a minimal amount of time. It includes interaction with databases and the utilization of a systems approach to problem solving.

CIS	215	Object Oriented Programming in Java	3
CIS	234	Programming Using JavaBeans	3
CIS	235	Enterprise Java Development	3
CIS	277	Database Concepts	3
CIS	279	Markup Language Programming	3
		Total Hours	15

C++ Programming

(Certificate) • Plan 22CO

The C++ Programming certificate is centered in object oriented technologies. The certificate is intended to enhance programming skills by providing knowledge and experience in the C++ language in a minimal amount of time. It includes interaction with databases and the utilization of a systems approach to problem solving.

CIS	226	Programming in C++	3
CIS	227	Advanced C++	3
CIS	238	Programming in Visual C++	3
CIS	277	Database Concepts	3
CIS	258	Systems Analysis	3
		Total Hours	15

Office Application Specialist

(Certificate) • Plan 22CG

The Office Application Specialist certificate prepares students to apply information technology concepts to solve problems and increase efficiency in the workplace. The certificate develops proficiency in software applications involving data manipulation and management.

Required Courses

CIS	111	Comprehensive Spreadsheets	3
CIS	230	Comprehensive Database	3
CIS	170	Internet Programming for Business	3
CIS	275	Programming for Office Applications	3
CIS	279	Markup Language Programming	3
AOS	113	Comprehensive Word Processing	3
		Total Hours	18

Network Administration and Security

(Certificate) • Plan 22CK

The Network Administration and Security certificate prepares students for careers in designing and administering computer networks. In addition, coursework for this curriculum addresses how to keep networks secure from outside intrusion and procedures on securing evidence if network security has been breached.

CIS	112	Introduction to Local Area Networking	3
CIS	116	Windows Operating System	3
CIS	117	Linux Operating System	3
CIS	192	Introduction to Computer Forensics	3
CIS	193	Digital Evidence Recovery	3
CIS	236	LAN Administration ***or***	
CIS	252	Linux System Administration	3
CIS	237	Managing Windows Network Environment	3
CIS	272	Network & Systems Security Basics	3
CIS	274	Implementing and Administering Security in Windows	3
CIS	295	Hardening the Infrastructure	3
CIS	296	Network Defense and Countermeasures	3
		Total Hours	33

Security Administration

(Certificate) • Plan 22CV

The Security Administration certificate is designed for students who currently are employed as Network Administrators or have taken courses in Network Administration. Coursework for this certificate addresses how to keep networks secure from outside intrusion and procedures on securing evidence if network security has been breached.

CIS 192	Introduction to Computer Forensics	3
CIS 193	Digital Evidence Recovery	3
CIS 272	Network & Systems Security Basics	3
CIS 274	Implementing and Administering Security in Windows	3
CIS 293	Advanced Digital Evidence Recovery	3
CIS 295	Hardening the Infrastructure	3
CIS 296	Network Defense and Countermeasures	3
	Total Hours	21

Computer Forensics Technician

(Certificate) • Plan 22CS

This certificate is designed for individuals in both law enforcement and the private sector who wish to learn the skills needed to become a Computer Forensics Technician. The primary responsibility of a Computer Forensics Technician is to investigate and secure evidence on computer hard drives. In addition, a Computer Forensics Technician must also be skilled in crime scene note-taking and report writing.

CIS	120	Introduction to Computers	3
CIS	116	Windows Operating System	3
CIS	117	Linux Operating System	3
CIS	192	Introduction to Computer Forensics	3
CIS	193	Digital Evidence Recovery	3
ELT	151	PC Hardware Fundamentals	3
		Total Hours	18

Computer Forensics Analyst

(Certificate) • Plan 22CT

This certificate is designed for individuals in both law enforcement and the private sector who wish to learn the skills needed to become a Computer Forensics Analyst. The primary responsibility of a Computer Forensics Analyst is to investigate, secure, and analyze evidence on computer hard drives and networks. In addition, a Computer Forensics Analyst must also be skilled in crime scene note-taking, report writing, and presentation of findings.

CIS	120	Introduction to Computers	3
CIS	112	Introduction to Local Area Networks	3
CIS	116	Windows Operating System	3
CIS	117	Linux Operating System	3
CIS	272	Network Security Fundamentals	3
CIS	192	Introduction to Computer Forensics	3
CIS	193	Digital Evidence Recovery	3
CIS	293	Advanced Digital Evidence Recovery	3
CIS	294	Analysis of Digital Media	3
ELT	151	PC Hardware Fundamentals	3
		Total Hours	30

PC Technician

(Certificate) • Plan 22CI

The PC technician certificate provides career training for students entering the computer technical support field. The skill sets involved in this certificate provides the training for individuals who install, maintain, upgrade and repair PC hardware and software. This certificate helps prepare the student for the A+ Certification exam. Proficiency credit through examination is available for CIS 120 and ELT 170.

CIS	120	Introduction to Computers	3
CIS	114	Operating Systems for A+Certification	3
ELT	170	DC Circuit Fundamentals	2
ELT	151	PC Hardware Fundamentals	3
ELT	152	PC Peripherals & Troubleshooting	3
		Total Hours	14

Web Programming

(Certificate) • Plan 22CN

The Web Programming Certificate provides students with the necessary skills to begin a career in web development. The student will learn to create web pages and interfaces using client- and server-side programming for the development of web applications. The student will also develop web pages incorporating database applications and components, which will include database administration, security and maintenance.

CIS	170	Internet Programming for Business	3
CIS	171	Scripting Languages	3
CIS	277	Database Concepts	3
CIS	210	Introduction to Visual Basic ***or***	
CIS	279	Markup Language Programming ***or***	
CIS	215	Object Oriented Programming Using Java	3
CIS	278	Server Side Programming	3
		Total Hours	15

For more information on these courses of study students may contact either the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Changyi Chen	T212	(847) 543-2518	cchen@clcillinois.edu
Dan Dainton	T219	(847) 543-2538	ddainton@clcillinois.edu
Ellen Dykeman	T219	(847) 543-2521	edykeman@clcillinois.edu
Sanjay Kumar	T210	(847) 543-2818	skumar@clcillinois.edu
John North	T210	(847) 543-2507	jnorth@clcillinois.edu
Daniel Petrosko	T209	(847) 543-2442	dpetrosko@clcillinois.edu
Bob Scherbaum	T206	(847) 543-2820	rscherbaum@clcillinois.edu

CONSTRUCTION MANAGEMENT TECHNOLOGY

(Associate in Applied Science) • Plan 24BA
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program prepares students to work as entry-level construction management technicians in the construction industry. This degree is particularly well-suited for students with field experience in construction trades who desire a more management-oriented position. Job opportunities include positions in estimating, supervision, scheduling, procurement, inspection and testing, site layout design and drafting. Employers include construction firms, suppliers, architects, material testing and inspection companies, and department of public works. Graduate may also transfer many of the program's credits toward a B.S. in Construction Management from area schools.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Core

MTH	117	Technical Math I*	3
ENG	120	Technical Composition ***or***	
ENG	121*	English Composition	3
CMM	111	Communication Skills ***or***	
CMM	121*	Fundamentals of Speech	3
ARC	228*	History of Architecture ***or***	
		Humanities & Fine Arts Elective*	3
ECO	222*	Principles of Microeconomics ***or***	
ECO	110	Economics for Business and Industry ***or***	
		Social Science Elective*	3
CIS	119	Introduction to Office Software ***or***	
CIS	120*	Introduction to Computers	3

Construction Management Core

CMT	110	Introduction to the Built Environment	1
CMT	111	Construction Layout ***or***	
CIV	111*	Surveying I	3
CMT	112	Blueprint Reading	3
CMT	113	Construction Materials	3
CIV	113	Construction Inspection	3
BUS	115	Elements of Supervision ***o***r	
BUS	121*	Introduction to Business	3
CMT	117	Construction Methods	3
CMT	118	Mechanical and Electrical Equipment	3
CMT	119	Specifications and Building Codes	3
CMT	211	Job Scheduling and Control	3
CMT	212	Heavy Construction Methods	3
CMT	213	Construction Law and Documents	3
CMT	214	Construction Estimating	3
CIV	214	Civil Materials and Testing	3

CMT	215	Construction Management ***or***	
EWE	220	Cooperative Education/ Educational Work Experience	3
		Technical Elective	3
		Total Hours	64

Technical Electives**

ACC	112	Accounting Procedures	3
ACC	121*	Financial Accounting	3
ARC	121*	Architectural Graphics	3
BUS	219	Small Business Management	3
BUS	221*	Business Law I	3
CAD	117	Introduction to AutoCAD	3
IMR	113	Plumbing and Pipefitting I	3
IMR	115	Carpentry I	3
ISE	110	Industrial Electricity	3

* Courses that may transfer to Bachelors of Science in construction management. Note – students desiring to transfer should take MTH 122. Courses required for transfer vary by transfer school and program. Students should consult with the program advisor to plan an individualized curriculum based on their specific needs.

**May be substituted for individual courses in construction management core upon consultation with advisor in order to meet specific student learning objectives and/or job requirements.

Construction Management Technology

(Certificate) • Plan 24BF

This certificate is intended for students desiring to focus on a career in construction management or supervision, and who may already have work experience in the construction field. Courses include the core courses from the A.A.S. degree program that are most closely linked to immediate employment opportunities. Job opportunities include estimating, scheduling, procurement, and field supervision. Other CMT courses may be substituted upon consultation with program advisor.

CMT	112	Construction Blueprint Reading	3
CMT	113	Construction Materials	3
CMT	117	Construction Methods	3
CIS	119	Introduction to Office Software	3
MTH	117	Technical Math I	3
CMT	211	Job Scheduling and Control	3
CMT	214	Construction Estimating	3
CMT	215	Construction Management or	
EWE	220	Cooperative Education/ Educational Work Experience	3
		Total Hours	24

For more information on this course of study students may contact the division office or the following faculty member.

Name	Office	Phone Number	E-mail Address
Rob Twardock	T113	(847) 543-2903	rtwardock@clcillinois.edu

CNC PROGRAMMING

(Associate in Applied Science) • Plan 24NA
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

The Computerized Numerical Control program is designed to provide knowledge and skills needed for employment and advancement in CNC Programming. Programming on the latest FANUC and HAAS CNC controlled lathes, milling machines and Wire EDM. Advanced placement in the program may be arranged for experienced programmers and operators. All machine tool courses are approved by the United States Department of Labor, Bureau of Apprenticeship Training. Mastercam certification is also available.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Phase I

CNC	110	CNC Operations I	3
EGR	121	Engineering Graphics	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
MTH	115	Applied Mathematics II	3
MTT	112	Machining Principles ***or***	
MTT	210	Machine Shop II	3
			15

Phase II

CAD	117	Introduction to AutoCAD	3
CNC	115	CNC Programming I	3
ECO	110	Economics for Business and Industry	3
MTH	117	Technical Mathematics I	3
MTT	211	Jig and Fixture Design	3
			15

Phase III

CAD	175	AutoCAD 3D	3
CNC	215	Advanced Mill Programming	3
CMM	111	Communication Skills	3
		Humanities & Fine Arts Elective	3
		Technical Elective	3
			15

Phase IV

CNC	216	Advanced Lathe Programming	3
CNC	217	Introduction to Wire EDM Machining ***or***	
EWE	220	Cooperative Work Experience I	3-4
CNC	218	Introduction to Master Cam	3
		Social & Behavioral Sciences Elective	3
		Technical Elective	3
			15-16
		Total Hours	60-61

Technical Electives:
Approval of technical electives must be obtained from the program advisor.

CNC	210	CNC Operations II	3
ELT	116	Technical Programming	3
ELT	117	Industrial Digital Electronics I	3
MTT	116	Introduction to Moldmaking	3
MTT	115	Introduction to Diemaking	3
MCD	111	Manufacturing Processes	3
MFG	210	Manufacturing Materials	3
MFG	215	Manufacturing Analysis	3
MCS	124	Programming in Basic Language	2
ROB	111	Introduction to Robotics	3

CNC Programming/Operations

(Certificate) • Plan 24NG

This certificate program provides knowledge and skills needed for entry level employment in CNC programming operating. Operations and programming on FANUC and HAAS CNC controlled machine tools is performed. Advanced placement and NIMS credentialing may be arranged for experienced machinists.

Phase I

CNC	110	CNC Operations I	3
EGR	121	Engineering Graphics	3
MTH	115	Applied Mathematics II	3
MTT	112	Machining Principles ***or***	
MTT	210	Machine Shop II	3
			12

Phase II

CNC	115	CNC Programming I	3
CNC	210	CNC Operations II	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
MTT	211	Jig and Fixture Design	3
			12

Phase III

CNC	215	Advanced Mill Programming ***or***	
CNC	216	Advanced Lathe Programming	3
CNC	217	Introduction to Wire EDM Machining	3
			6
		Total Hours	30

CNC Operations

(Certificate) • Plan 24NH

Students are provided the opportunity to learn the operations of a modern FANUC and HAAS CNC controlled vertical mills, turning center, and vertical machining centers.

Phase I

CNC	110	CNC Operations I	3
MTT	110	Machine Trades Blueprint Reading	3
MTT	112	Machining Principles ***or***	
MTT	210	Machine Shop II	3
			9

Phase II

CNC	210	CNC Operations II	3
MTH	114	Applied Mathematics I	3
			6
		Total Hours	15

For more information on this course of study students may contact either the division office listed or the following faculty member.

Name	Office	Phone Number	E-mail Address
Don Ruesch	T123	(847) 543-2506	druesch@clcillinois.edu

CRIMINAL JUSTICE

(Associate in Applied Science) • Plan 25CE
Social Science Division, Room A244, (847) 543-2047

This program is structured to prepare students for a variety of careers in the criminal justice system at local, state, and federal levels. Students can specialize in a number of areas, including law enforcement, criminal investigation, juvenile justice, court services, as well as community-based and institutional corrections. Students pursuing the A.A.S. degree are required to complete twenty-one credit hours of general education, twenty-four credit hours of criminal justice core courses, and fifteen credit hour of criminal justice electives. All students are urged to consult with a criminal justice advisor in planning their program of study.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69 unless otherwise specified in the following listing. All course prerequisites must be met.

General Education Requirements:

ENG	120	Technical Composition I (recommended) ***or***	
ENG	121	English Composition I	3
CMM	121	Fundamentals of Speech	3
SOC	121	Introduction to Sociology	3
PSC	121	American National Politics ***or***	
PSC	122	State and Local Politics	3
PSY	121	Introduction to Psychology	3
		Humanities & Fine Arts Elective	3
		Science or Mathematics Elective	3-4
		Total	21-22

Criminal Justice Core (Required Courses)

CRJ	121	Introduction to Criminal Justice	3
CRJ	111	Introduction to Policing	3
CRJ	123	Introduction to Criminology	3
CRJ	124	Penology and Corrections	3
CRJ	221	Criminal Law	3
CRJ	211	Criminal Procedural Law	3
CRJ	229	Juvenile Delinquency	3
CRJ	270	Criminal Justice Assessment Seminar	3
		Total	24

Criminal Justice Electives (Select 15 credit hours)

CIS	192	Introduction to Computer Forensics	3
CRJ	117	Community-Based Corrections	3
CRJ	118	Evidence Technology	3
CRJ	119	Principles of Direct Supervision	3
CRJ	212	Traffic Law Enforcement	3
CRJ	213	Community Policing	3
CRJ	214	Substance Abuse and Criminal Justice	3
CRJ	215	Issues in Criminal Justice	3
CRJ	216	Police Management and Supervision	3
CRJ	218	Criminal Justice Internship	3
CRJ	219	Principles of Criminal Investigation	3
CRJ	220	Independent Research	3
HUX	170	Introduction to Substance Abuse	3
SWK	121	Introduction to Social Work	3
EWE	220	Cooperative Work Experience I	3
EWE	270	Cooperative Work Experience II	3
SOC	222	Social Problems	3
SOC	223	Deviance	3
		EDM Elective	3
		Total Hours	60

Criminal Justice

(Certificate) • Plan 25CF

CRJ	121	Introduction to Criminal Justice	3
CRJ	123	Introduction to Criminology	3
SOC	121	Introduction to Sociology	3
PSY	121	Introduction to Psychology	3
CRJ	221	Criminal Law	3
		Approved Criminal Justice Courses	15
		Total Hours	30

For more information on this course of study students may contact either the division office listed or the following faculty members.

Name	Office	Phone Number	E-mail Address
Roger Voltz	D118	(847) 543-2468	rvoltz@clcillinois.edu
Thomas Arnold	D118	(847) 543-2944	tra@clcillinois.edu

DENTAL HYGIENE

(Associate in Applied Science) Plan 21DH
Biological & Health Sciences Division
Room C140, (847) 543-2042.

Dental hygienists are licensed professionals who are a vital part of a dental health team. Dental hygienists provide oral health assessment, disease prevention, and health promotion. They serve individuals and families within the community. The purpose of the dental hygiene program at the College of Lake County is to prepare students to develop the competencies that are needed to present extensive, preventive oral health care services to the community.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

The Dental Hygiene program has been granted accreditation status by the American Dental Association.

The number of students that can be admitted to the Dental Hygiene Program is limited. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration.

Preference will be given to residents of Community College District 532 (including other community college districts with which CLC has a Joint Educational Agreement).

Attendance at a Program Information Session is required to apply to the program and to learn other specifics of the application process. Sessions are scheduled for the first Wednesday of every month (except January, June, and August) from 12:00 to 1:00 p.m. in B224. Attendance is required for each academic year for which the student applies.

1. **Attend one Program Information Session: (Attendance must be at a session that is no more than 12 months prior to the screening deadline).**

2. **Submit the following records to the Admission and Records Office:**
   A. Application for admission to the college.
   B. Official transcript/test results (sent to the Admission & Records Office directly from the appropriate institution):
      1. Your record from the last high school you attended. Your date of graduation must appear on the transcript. If you did not or will not graduate from high school, you must submit your official GED test results.
      OR
      2. Your college or university (must be regionally accredited) record documenting completion of an Associate Degree or Bachelor Degree. The transcript must indicate which degree you were awarded and the date.
   C. Official transcripts from any previous college(s) showing course work relevant to the Dental Hygiene selection criteria, sent directly to CLC by the colleges.
   D. Dental Hygiene request for screening.
3. **Minimum Selection Criteria: Student records must indicate the following:**
   A. High school graduate or the equivalent
   B. Demonstration of language and math proficiency.
   C. Successful completion of BIO 121 with a grade of "C" or better or an equivalent course from another accredited college with a grade of "C" or better.
   D. Successful completion of CHM 120 or CHM 121 with a grade of "C" or better or an equivalent course from another accredited college (must be regionally accredited) with a grade of "C" or better.
   E. Attendance at a Dental Hygiene Program Information Session.
   F. Completion of the Health Occupations Basic Entrance Test (HOBET)

Note: Applicants can take the Health Occupation Basic Entrance Test (HOBET) only twice per screening year. If taken more than two times, the selection committee will only consider the results of the first two exams. It may be taken once between January 1st and June 30th, and once between July 1st and December 31st. Test scores in excess of this limit will not be considered for screening purposes. Please contact the Testing Center at (847) 543-2076 for test dates and times.

Test scores more than five years old will not be considered.

Screening Deadline: First Wednesday in February. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications.

Students who have completed either of the following courses (or an equivalent) must have obtained a grade of "C" or better. These courses are not prerequisites. They are program requirements, but may be taken prior to acceptance into the program.

- BIO 124 - Anatomy and Physiology - must be completed before the first fall semester of the program
- BIO 125 - Introduction to Microbiology - must be completed before the first spring semester of the program. If this course is taken during the first fall semester of the program, it must be taken as an evening class.

ENG 121-English Composition – must be completed before the first fall semester in the program.

Note: A student must maintain at least a grade of "C" in each Dental Hygiene course to continue in and graduate from the program. All course prerequisites must be met.

General Education and Support Courses

BIO	124	Anatomy and Physiology	5
BIO	125	Introduction Microbiology	4
		Communication Elective (Choose from CMM 111, CMM 121, CMM 123 or CMM 128)	3
ENG	121	English Composition	3
PSY	121	Introduction to Psychology	3
SOC	121	Introduction to Sociology	3
		Humanities Elective	3

Dental Hygiene Courses
(Listed in the order in which they are taken)

First Semester

DHY	111	Principles in Dental Hygiene I	2
DHY	113	Preclinical Dental Hygiene	2
DHY	115	Head and Neck Anatomy	3
DHY	117	Dental Anatomy	2
DHY	119	Nutrition & Biochemistry	2
DHY	171	Preventive Dental Hygiene	1

Second Semester

DHY	112	Principles in Dental Hygiene II	2
DHY	114	Clinical Dental Hygiene I	2
DHY	116	Dental Radiology I	3
DHY	118	General and Oral Pathology	2
DHY	172	Medical Emergencies	1
DHY	174	Introduction to Periodontics	2
DHY	176	Dental Materials and Expanded Functions	3

Summer Session

DHY	178	Review of Dental Literature	1
DHY	179	Clinical Dental Hygiene II	2

Third Semester

DHY	211	Theory and Practice of Dental Hygiene I	2
DHY	213	Clinical Dental Hygiene III	4
DHY	215	Dental Radiology II	1
DHY	217	Dental Pharmacology & Anesthetics	2
DHY	219	Advanced Periodontics	2
DHY	271	Community Dentistry I	2
DHY	273	Applied Radiology	2

Fourth Semester

DHY	212	Theory and Practice of Dental Hygiene II	1
DHY	214	Clinical Dental Hygiene IV	3
DHY	216	Ethics and Jurisprudence and Practical Management	2
DHY	218	Dental Radiology III	1
DHY	272	Community Dentistry II	1
DHY	274	Advanced Dental Hygiene	2

Total Hours 79

For more information on this course of study students may contact either the division office listed or the following faculty member.

Name	Office	Phone Number	E-mail Address
Sue Nierstheimer	D214	(847) 543-2638	sneirstheimer@clcillinois.edu

EARLY CHILDHOOD EDUCATION

(Associate in Applied Science) Plan 25EA
Social Science Division, Room A244, (847) 543-2047

The Associate of Applied Science Degree program in Early Childhood Education prepares students for careers working with young children. Graduates of the program are DCFS qualified to be lead teachers in and directors of day care centers, preschools, and school-age programs. Public school Pre-K programs employ A.A.S. degree graduates as assistant teachers. The program is designed to qualify graduates for the Director I Credential of the Illinois Network of Child Care Resource and Referral Agencies. Many of the courses transfer to four year institutions with related programs.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Requirements

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
PSY	121	Introduction to Psychology	3
SOC	121	Introduction to Sociology	3
PSY	222	Child Growth and Development	3
		Humanities & Fine Arts Elective	3
MTH	121	Mathematics for Elementary Teaching I ***or*** higher Mathematics ***or*** Science Elective	3
		Total	21

Early Childhood Education Core (Required Courses)

ECE	141	Health, Safety and Nutrition for Young Children	3
ECE	115	Music Activities for Young Children	3
ECE	116	Creative Activities	3
ECE	119	Language Development/Activities for Young Children	3
ECE	131	The Special Needs Child in Early Childhood Education	3
ECE	132	Professional Ethics in Early Childhood Education	1
ECE	214	Group Care of Infants and Toddlers	3
ECE	221	Principles of Early Childhood Education	3
ECE	223	Child, Family, and Community	3
ECE	232	Math and Science for Young Children	3
ECE	270	Early Childhood Program Administration I: Human Aspects	3
EDU	120	Observation and Guidance of Children	3
ECE	271	Early Childhood Education Practicum I	4
ECE	272	Early Childhood Education Practicum II	4

Early Childhood Education Electives
(Select at least 3 credit hours)

ECE	117	Creative Activities for Infants, Toddlers and Twos	3
ECE	231	School-Age Programming	3
ECE	273	Early Childhood Program Administration II: Business Aspects*	3
EDU	222	The Exceptional Child	3
EDU	299	Special Topics in Education	1-3

Total Education Core/Elective Hours 45

Total Hours for Degree 66

* Students interested in obtaining the Illinois Director Credential will be required to take ECE 273.

Early Childhood Education

(Certificate) • Plan 25EB

The certificate program is intended for students who already hold degrees or who have taken extensive coursework in other academic fields. The certificate provides the additional study that is often required when there has been a career change.

General Education Requirements

ENG	121	English Composition I ***or***	
ENG	120	Technical Composition I	3
PSY	121	Introduction to Psychology	3
PSY	222	Child Growth and Development	3
HUS	121	Health and Nutrition	3
EDU	120	Observation and Guidance of Children	3
ECE	221	Principles of Early Childhood Education	3
			18

Select 15 credit hours from the following:

ECE	115	Music Activities for Young Children	3
ECE	116	Creative Activities I	3
ECE	119	Language Development and Activities for Young Children	3
ECE	131	The Special Needs Child in Early Childhood Education	3
ECE	214	Group Care of Infants and Toddlers	3
ECE	223	Child, Family, and Community	3
ECE	232	Math and Science for Young Children	3
ECE	270	Early Childhood Program Administration I: Human Aspects	3
ECE	273	Early Childhood Program Administration II: Business Aspects	3
EDU	299	Special Topics in Education (With Coordinator Approval)	3
			15

Total Hours 33

Infant-Toddler Specialist

(Certificate) • Plan 25EC

This certificate program is designed to prepare individuals with the knowledge and skills required to work successfully with infants and toddlers in child care programs. All of the courses in this certificate also apply to the A.A.S. degree in Early Childhood Education.

PSY	121	Introduction to Psychology	3
PSY	222	Child Growth and Development	3
ENG	121	English Composition ***or***	
ENG	120	Technical Composition I	3
ECE	117	Creative Activities for Infants, Toddlers, and Twos	3
ECE	214	Group Care of Infants and Toddlers	3
		Total Hours	15

School-aged Child Care

(Certificate) • Plan 25ED

This certificate is designed to prepare individuals with the knowledge and skills required to work successfully with school-age children in out-of-school time programs. Emphasis is placed on teaching practices necessary to plan and deliver developmentally appropriate programming, environments and interactions for children aged six to twelve years that meet the social, emotional, physical and cognitive needs of this age group.

Required Courses:

ENG	121	English Composition *or*	
ENG	120	Technical Composition	3
PSY	121	Introduction to Psychology	3
PSY	222	Child Growth and Development	3
ECE	231	School-Age Child Care	3
			12

Choose 6 credit hours from the following:

ECE	141	Health, Safety, and Nutrition for Young Children	3
ENG	249	Children's Literature	3
PED	129	Fundamentals of Youth Programming	4
ART	125	Art for Elementary Teachers	2
ECE	223	Child, Family, and Community	3
ECE	116	Creative Activities I	3
ECE	132	Professional Ethics in Early Childhood Education	1
EDU	222	The Exceptional Child	3
		Total Hours	18

For more information on this course of study students may contact either the division office listed or the following faculty member.

Name	Office	Phone Number	E-mail Address
Diane Wolter	D122	(847) 543-2570	dwolter@clcillinois.edu

EDUCATION PARAPROFESSIONAL

(Associate in Applied Science) • Plan 25TC
Social Science Division, Room A244, (847) 543-2047

This program is designed to prepare students with the knowledge and skills required to work successfully as teacher aides primarily in elementary and middle schools.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Requirements

English/Communication

CMM	121	Fundamentals of Speech	3
ENG	121	English Composition I	3
ENG	122	English Composition II	3

Social Science 3
(Choose from the selection below)

ANT	121	Introduction to Anthropology ***or***
ANT	221	Cultural Anthropology ***or***
GEG	122	Cultural Geography ***or***
GEG	123	World Regional Geography ***or***
HST	126	History of Contemporaty Non-Western Civilization ***or***
HST	127	History of Chinese Culture and Society

Humanities/Fine Arts Elective 3
(Choose from the selection below)

ART	121	Introduction to Art ***or***
ART	240	Art History I ***or***
MUS	124	Introduction to Music ***or***
MUS	224	Music Literature ***or***
PHI	125	Introduction to Ethics

Math/Science Elective 3-4
(Choose from the selection below)

AST	121	Introduction to Astronomy ***or***
BIO	120	Environmental Biology ***or***
BIO	121	General Biology ***or***
GEG	121	Physical Geography ***or***
GEO	120	Earth Science ***or***
MTH	121	Mathematics of Elementary Teaching I ***or***
PHY	120	Practical Aspects of Physics

18-19

Paraprofessional Core

ECE	119	Language Development and Activities	3
EDU	122	Pre-Clinical Educator Experience	1
EDU	221	Introduction to Teaching ***or***	
ECE	221	Principles of Early Childhood Education	3
EDU	222	The Exceptional Child	3
EDU	223	Technology in the Classroom	3
ENG	249	Children's Literature	3
PSY	121	Introduction to Psychology	3
PSY	221	Educational Psychology	3
PSY	222	Child Growth and Development	3
MTH	121	Mathematics for Elementary Teaching I ****or***	
MTH	221	Mathematics for Elementary Teaching II	3

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Electives (Choose 18 credit hours)

ANT	221	Cultural Anthropology*	3
ART	125	Art for Elementary Teachers I	3
ART	126	Art for Elementary Teachers II	3
BIO	120	Environmental Biology*	4
BIO	121	General Biology*	4
CRJ	229	Juvenile Deliquency	3
ECE	223	Child, Family, and Community	3
ECE	115	Music Activities for Young Children	3
EDU	120	Observation and Guidance of Children	3
EDU	299	Special Topics in Education (with coordinator's consent)	3
GEG	121	Physical Geography*	3
HST	221	U.S. History to 1876	3
HST	222	U.S. History from 1876	3
HUS	111	Health and Nutrition	3
HUX	170	Introduction to Substance Abuse	3
PSY	226	Adolescent Development	3
SOC	223	Sociology of the Family	3
SPA	121	Beginning Conversational Spanish	3

Total Hours 63-64

* Cannot use one course to meet two requirements

Paraprofessional Educator

(Certificate) • Plan 25TB

This certificate program is designed for individuals who are currently working as teacher's aids or who are considering a career as a teacher aide.

Required Courses

ECE	119	Language Development & Activities	3
EDU	221	Introduction to Teaching ***or***	
ECE	221	Principles of Early Childhood Education	3
EDU	222	The Exceptional Child	3
EDU	223	Technology in the Classroom	3
ENG	249	Children's Literature	3
PSY	221	Educational Psychology	3
PSY	222	Child Growth & Development	3
MTH	121	Mathematics for Elementary Teaching I ***or***	
MTH	221	Mathematics for Elementary Teaching II	3

24

Choose 6-8 credit hours from the courses below:

ENG	121	English Composition I	3
ENG	122	English Composition II	3
CMM	121	Fundamentals of Speech	3
ANT	121	Introduction to Anthropology	3
ANT	221	Cultural Anthropology	3
GEG	122	Cultural Geography	3
GEG	123	World Regional Geography	3
HST	126	History of Contemporary Non-Western Civilization	3
HST	127	History of Chinese Culture and Society	3
MUS	124	Introduction to Music	3
MUS	224	Music Literature	3
ART	121	Introduction to Art	3
ART	240	Art History I	3
HUM	127	Introduction to Humanities	3
PHI	125	Introduction to Ethics	3
BIO	120	Environmental Biology	4
BIO	121	General Biology	4
PHY	120	Practical Aspects of Physics	4
GEG	121	Physical Geography	3
GEO	120	Earth Science	4
AST	121	Introduction to Astronomy	4
			6-8

Choose 6 hours from the courses below:

HUS	121	Health and Nutrition	3
ANT	221*	Cultural Anthropology	3
BIO	120*	Environmental Biology	4
BIO	121*	General Biology	4
GEG	121*	Physical Geography	3
ART	125	Art for Elementary Teachers I	3
ART	126	Art for Elementary Teachers II	3
EDU	120	Observation and Guidance of Children	3
SPA	121	Beginning Conversational Spanish	3
SOC	223	Sociology of the Family	3
ECE	223	Child Family and Community	3
PSY	226	Adolescent Development	3
ECE	115	Music Activities for Young Children	3
CRJ	229	Juvenile Delinquency	3
HUX	170	Introduction to Substance Abuse	3
HST	221	U.S. History to 1876	3
HST	222	U.S. History from 1876	3
EDU	299	Special Topics in Education (with coordinator's consent)	3
			6

Total Hours 36-38

For more information on this course of study, students may contact either the division office listed or the following faculty member.

Name	Office	Phone Number	E-mail Address
Carol Huntsinger	D120	(847) 543-2742	chuntsinger@clcillinois.edu

ELECTRICIAN APPRENTICESHIP

(Associate in Applied Science) • Plan 24EG
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program has been established in partnership with the International Brotherhood of Electrical Workers (IBEW), Local 150. ***Students must be accepted into the IBEW apprenticeship program prior to enrollment in the program.***

First Year - First Semester

EMF	111	Electronics Mathematics I	2
EMF	112	Electronics Mathematics II	2
ELT	170	DC Circuit Fundamentals	2
ISE	114	National Electrical Code	2
EAP	111	Electrician Apprenticeship Work Experience I	2
			10

First Year - Second Semester

ELT	111	Electronic Drafting	2
ELC	113	Basic Instrumentation & Shop Practice	3
EAP	111	Electrician Apprenticeship Work Experience II (Continued from 1st semester)	
			5

Second Year - First Semester

CMT	112	Construction Blueprint Reading	3
ELC	172	Applied AC Circuit Theory	2
EAP	112	Electrician Apprenticeship Work Experience II	2
			7

Second Year - Second Semester

*ENG	120	Technical Composition I ***or***	
*ENG	121	English Composition I	3
ISE	118	Power Distribution	3
EAP	112	Electrician Apprenticeship Work Experience II (Continued from 1st semester)	
			6

Third Year - First Semester

ELT	173	Applied Analog Circuits	3
*CMM	111	Communication Skills ***or***	
*CMM	121	Fundamentals of Speech	3
EAP	113	Electrician Apprenticeship Work Experience III	2
			8

Third Year - Second Semester

ELC	114	Motor and Machine Controls	3
ELC	276	Electrical Industrial Safety	1
CMT	118	Mechanical and Electrical Equipment	3
EAP	113	Electrician Apprenticeship Work Experience III (Continued from 1st semester)	
			7

Fourth Year - First Semester

ELC	211	Electrical Machines	3
ELC	171	Programmable Logic Controllers	3
EAP	114	Electrician Apprenticeship Work Experience IV	2
			8

Fourth Year - Second Semester

*HST	225	American Labor History	3
ELT	117	Industrial Digital Electronics I	3
EAP	114	Electrician Apprenticeship Work Experience IV (Continued from 1st semester)	
			6

Fifth Year - First Semester

*CAD	117	Introduction to AutoCAD	3
*ARC	228	History of Architecture	3
EAP	115	Electrician Apprenticeship Work Experience V	2
			8

Fifth Year - Second Semester

ELT	172	Industrial Control Systems	3
EAP	115	Electrician Apprenticeship Work Experience V (Continued from 1st semester)	
			3
		Total Hours	68

* Classes to take at CLC.

For more information on this course of study students may contact either the division office listed or the following faculty member.

Name	Office	Phone Number	E-mail Address
Greg Morris	T203	(847) 543-2905	gmorris@clcillinois.edu

ELECTRONIC INFORMATION TECHNOLOGY

(Associate in Applied Science) • Plan 24ET
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This degree provides a comprehensive study of computer (PC) hardware, computer networking, and the computer software required for a computer networking support specialist. This degree will prepare students to work in the information technology field by preparing them with a theoretical background as well as hands on experiences. The intent is to give the students a working knowledge of the Support Technician field with both software and hardware experience.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

ELT	151	PC Hardware Fundamentals	3
CIS	120	Introduction to Computers	3
ELT	170	DC Circuit Fundamentals	2
ELT	152	PC Peripherals and Troubleshooting	3
EIT	110	Topics in Mathematics for Computer and Electronic Technicians	3
ENG	120	Technical Composition I	3
			17

Second Semester

		Computer Language Elective*	3
CIS	115	PC Operating Systems	3
EIT	111	Digital and Network Fundamentals	4
HUM	127	Critical Thinking	3
CMM	121	Fundamentals of Speech	3
			16

Third Semester

EIT	210	Data and Network Communication	4
EIT	212	Applied Linux	3
EIT	230	Secure Wireless Networking	3
EWE	220	Cooperative Work Experience I ***or*** Technical Elective **	3
		Social & Behavioral Sciences Elective	3
			16

Fourth Semester

EIT	211	Network Design and Analysis	4
CIS	236	LAN Administration	3
EIT	232	Linux Server Implementation	3
		Technical Elective**	3
EWE	270	Cooperative Work Experience II ***or*** Technical Elective**	3
			16
		Total Hours	65

* ELT 116, CIS 110, CIS 113, CIS 170, or other departmentally approved elective.

**Chosen for ELT/ELC, CIS, CNA, or other departmentally approved elective

The electives may be chosen to be used in a sequence such as CIS 170 & CIS 171 (Web Programmer), CIS 113-CIS215 (Java), ELT 116-CIS217 (C++), CIS 110-CIS210 (Visual Basic).

Linux System Administration

(Certificate) • Plan 24ES

ELT	151	PC Hardware Fundamentals	3
ELT	152	PC Peripherals and Troubleshooting	3
CNA	111	CISCO Networking I ***or***	
EIT	111	Digital and Network Fundamentals	3-4
EIT	212	Applied Linux	3
EIT	232	Linux Server Implementation	3
		Total Hours	15-16

For more information on this course of study, students may contact either the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Michelle Leonard	T202	(847) 543-2760	mleonard@clcillinois.edu
Greg Morris	T203	(847) 543-2905	gemorris@clcillinois.edu

ELECTRONICS ENGINEERING TECHNOLOGY

(Associate in Applied Science) • Plan 24ED
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

Students are prepared to work in research, electronic layout, instrumentation, design, field service, communication and service laboratories.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

ELT	111	Electronic Drafting	2
ELT	170	DC Circuit Fundamentals	2
ELC	173	DC Analysis-Network Theorems	2
MTH	117	Technical Mathematics I*	3
ELT	116	Technical Programming	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
			15

Second Semester

ELT	213	Introduction to Digital Electronics	4
ELC	174	AC Fundamentals	2
ELC	175	AC Analysis & Circuit Theorems	2
MTH	118	Technical Mathematics II*	3-4
SOC	121	Introduction to Sociology	3
		Humanities & Fine Arts Elective	3
			17-18

Third Semester

ELT	113	Transistor Electronics	4
ELT	216	Microprocessors I	3
MTH	224	Calculus for Business and Social Science[1]	4
PHY	120	Practical Aspects of Physics*	4
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech	3
			17

Fourth Semester

ELT	115	Electronic Laboratory Techniques ***or*** approved Technical Elective	2
ELT	211	Advanced Solid State Electronics	3
ELT	212	Electronic Communication Systems	3
ELT	217	Microprocessors II	3
ECO	110	Economics for Business & Industry ***or***	
ECO	221	Principles of Macroeconomics	3
			14
		Total Hours	63-65

*For Students who wish to pursue a Bachelor Degree in Engineering Technology these courses may be substituted: MTH 122 College Algebra, MTH 123 Trigonometry, MTH 144, Pre-Calculus, MTH 145, Calculus, PHY 121 General Physics

[1] Students choosing to complete MTH 117 and MTH 118 should follow with MTH 224.

Please see an advisor in the Electronics area before selecting these courses.

Electronics Technology

(Certificate) • Plan 24EF

A minimum of 34 semester hours credit must be completed for the certificate. Although courses are generally selected from the following, other subjects may be taken as part of a program with division approval.

PHY	120	Practical Aspects of Physics	4
MTH	117	Technical Mathematics I	3
MTH	118	Technical Mathematics II	4
ELT	111	Electronic Drafting	2
ELT	170	DC Circuit Fundamentals ***and***	
ELC	173	DC Analysis-Network Theorems	4
ELC	174	AC Fundamentals ***and***	
ELC	175	AC Analysis & Circuit Theorems	4
ELT	113	Transistor Electronics	4
ELT	116	Technical Programming	3
ELT	211	Advanced Solid State Electronics	4
ELT	212	Electronic Communications Systems	3
ELT	213	Introduction to Digital Electronics	4
ELT	216	Microprocessors I	3
ELT	217	Microprocessors II	3

For more information on this course of study students may contact either the division office listed above or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Michelle Leonard	T202	(847) 543-2760	mleonard@clcillinois.edu
Greg Morris	T203	(847) 543-2905	gemorris@clcillinois.edu

Electrical/Electronic Maintenance

(Certificate) • Plan 24EH
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program is intended to provide students with skills necessary to perform trouble-shooting and maintenance procedures in industry. Students with experience in the field and demonstrating appropriate knowledge may be given advanced standing in the program.

First Semester

ELT	170	DC Circuit Fundamentals	2
ELC	172	Applied AC Circuit Theory	2
ELT	117	Industrial Digital Electronics I	3
ELC	113	Basic Instrumentation and Shop Practices	2
MTH	114	Applied Mathematics I ***or***	
MTH	117	Technical Mathematics I	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
			15

Second Semester

ELT	118	Industrial Digital Electronics II	3
ELT	171	Industrial Control Systems	3
ELT	172	Applied Communication Systems	3
ELT	173	Applied Analog Circuits	3
		Technical Elective	3-4
			15-16
		Total Hours	30-32

Technical Electives

CNA	111	Cisco Networking	3
CNA	112	Cisco Networking II	3
CNA	113	Cisco Networking III	3
CNA	114	Cisco Networking IV	3
ELC	114	Motor and Machine Control	3
ELC	171	Programmable Logic Controllers	3
ELC	211	Electrical Machinery	3
ELC	215	Power Transmission and Distribution	4
ELT	151	PC Hardware Fundamentals	3
ELT	152	PC Peripherals & Troubleshooting	3
ROB	111	Introduction to Robotics	3

For more information on this course of study students may contact either the division office listed above or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Michelle Leonard	T202	(847) 543-2760	mleonard@clcillinois.edu
Greg Morris	T203	(847) 543-2905	gemorris@clcillinois.edu

PC Technician

(Certificate) • Plan 22CI

The PC Technician certificate provides career training for students entering the computer technical support field. The skill sets involved in this certificate provides the training for individuals who install, maintain, upgrade and repair PC hardware and software. This certificate helps prepare the student for the A+ Certification exam. Proficiency credit through examination is available for CIS 120 and ELT 170.

CIS	120	Introduction to Computers	3
CIS	115	PC Operating Systems	3
ELT	170	DC Circuit Fundamentals	2
ELT	151	PC Hardware Fundamentals	3
ELT	152	PC Peripherals & Troubleshooting	3
		Total Hours	14

For more information on these courses of study students may contact the division office listed.

ELECTRONIC SYSTEMS TECHNOLOGY

(Associate in Applied Science) • Plan 24EL
Engineering, Math and Physical Sciences Division
Room T102, (847) 543-2044

This degree will provide advanced knowledge to students who install, repair and maintain a wide range of electronic systems, including industrial control systems, radio and television communication systems, personal computer systems, and consumer audio and video home entertainment systems.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

ELT	170	DC Circuit Fundamentals	2
ELC	172	Applied AC Circuit Theory	2
EIT	110	Topics in Math for Computers and Electrical Technicians	3
ELT	115	Electronic Laboratory Techniques	2
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
		Social and Behavioral Science Elective	3
			15

Second Semester

EST	210	Maintenance and Repair of PC Systems ..	3
ELT	213	Introduction to Digital Electronics	4
ELC	211	Electrical Machinery	3
ELT	173	Applied Analog Circuits	3
CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking ***or***	
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
			16

Third Semester

ELT	171	Industrial Control Systems.....	3
ELT	172	Applied Communication Circuits	3
ELT	214	Microwave Systems and Measurements ..	3
EST	213	Digital Telecommunications	4
		Humanities or Fine Arts Elective.....	3
			16

Fourth Semester

EST	211	Electronics Systems ***or***	
EST	215	Radar Systems	3
EST	214	Digital Telecommunications II ***or***	
		Technical Elective	4
EST	212	Systems Control Theory	3
ECO	110	Economics for Business and Industry ***or***	
ECO	221	Principles of Macroeconomics.....	3
			13

Total Hours 60

For more information on this course of study students may contact either the division office listed above or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Michelle Leonard	T202	(847) 543-2760	mleonard@clcillinois.edu
Greg Morris	T203	(847) 543-2905	gemorris@clcillinois.edu

EMERGENCY AND DISASTER MANAGEMENT

(Certificate) • Plan 25EM
Social Science Division, Room A244, (847) 543-2047

This certificate program is designed to assist students in developing and improving their skills in emergency and disaster management. Students will receive an understanding of federal, state and local government and their roles and responsibilities. This certificate is intended for students who currently have an interest or role in emergency management and disaster preparedness, including homeland security issues.

EDM	111	Introduction to Emergency Management	3
EDM	112	Emergency Planning	3
EDM	113	Professional Development: Emergency Management	3
EDM	114	Communications in Emergency Management	3
EDM	211	Emergency Disaster Response.....	3
		Total Hours	15

For more information on this course of study students may contact the division office listed.

EMERGENCY MEDICAL TECHNOLOGY

(Associate in Applied Science) • Plan 21EA
Biological & Health Sciences Division
Room C140, (847) 543-2042

This degree will give students the knowledge and skills needed to gain employment as an emergency medical technologist. Graduates of this program will be provided with a high degree of specialized emergency medical training and courses of general education designed to provide breadth of knowledge in a variety of fields, specific scientific knowledge, and additional communication skills.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Courses

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
MTH	114	Applied Mathematics I	3
		Humanities & Fine Arts Elective (recommended: HUM 127 Critical Thinking or PHI 122 Logic or PHI 125)	3
		Social Science Elective (recommended: PSY 121 Introduction to Psychology)	3
			15

Emergency Medical Technology Courses:

EMT	111	Emergency Medical Technician-Basic	7
EMT	114	Paramedic Clinical Practicum	3
EMT	115	Paramedic Field Experience Practicum	3
EMT	131	Introduction to Advanced Pre-hospital Care	4
EMT	132	Patient Assessment	2
EMT	133	Medical Emergencies	5
EMT	134	Trauma Emergencies	3
EMT	135	Special Considerations and Operations	6
			33

Additional Courses:

BIO	111	Human Form and Function ***or***	
BIO	124	Anatomy and Physiology	4-5
HIT	111	Medical Terminology	3
HIT	119	Pharmacology	1
		Electives	6
			14-15

Total Hours 62-63

Emergency Medical Technician - Basic

(Certificate) • Plan 21EM

Emergency medical technicians provide emergency medical care for illness and injury at the site and in route to the hospital. They provide pre-hospital and inter-hospital emergency medical services and medical transport services at the basic life support level. Graduates are employed primarily by ambulance services, and by fire and rescue departments. Graduates will understand the emergency services system, the responsibilities of emergency services personnel, as well as assessment, stabilization, and initial pre-hospital medical treatment of injured and ill patients. Completion of this certificate prepares students to take the licensing examination to become an EMT-B (Emergency Medical Technician-Basic). Courses are offered at associated hospitals and fire/rescue departments in Lake County.

EMT	111	Emergency Medical Technician – Basic	7

Total Hours 7

Emergency Medical Technician - Paramedic

(Certificate) • Plan 21EP

Paramedics provide emergency medical care for illness and injury at site and en route to the hospital. Paramedics are trained to provide pre-hospital and inter-hospital emergency medical services and medical transport services at the advanced life support level, including administration of intravenous lines, intubation, and defibrillation. Paramedics are employed primarily by fire and rescue departments and by ambulance services. Students entering this program already must have earned the EMT-B or EMT-I license. Completion of this certificate prepares students to take the licensing examination to become an EMT-P (Emergency Medical Technician-Paramedic). Courses are offered at associated hospitals in Lake County.

BIO	111	Human Form and Function or	
BIO	124	Anatomy and Physiology	4-5
EMT	114	EMT Paramedic – Clinical Practicum	3
EMT	115	EMT Paramedic – Field Experience Practicum	3
EMT	131	Introduction to Advanced Pre-hospital Care	4
EMT	132	Patient Assessment	2
EMT	133	Medical Emergencies	5
EMT	134	Trauma Emergencies	3
EMT	135	Special Considerations and Operations	6

Total Hours 30-31

NOTE: All EMT classes are held at area hospitals or fire and rescue departments. Registration for classes, except EMT 111-300 is processed directly through the individual site that is hosting the class. Space is limited and classes fill up quickly. For more information regarding requirements for the classes and how to register, please contact one of the EMS coordinators listed below:

- **Vista Healthcare**
  EMT-Basic
  Aaron Bernau (847) 360-2038 (St. Therese Hospital)
  EMT-Paramedic
  Dave Chase (847) 360-4333, extension 5094 (St. Therese Hospital)
- **Grayslake Fire Protection District**
  EMT-Basic
  John Christian (847) 223-8960
- **Condell Medical Center**
  EMT-Paramedic
  Sharon Hopkins (847) 990-5309
- **Evanston Northwestern Healthcare**
  EMT-Basic
  Martha Pettineo (847) 480-3787 (Highland Park Hospital)
  EMT-Paramedic
  Martha Pettineo (847) 480-3787 (Highland Park Hospital)

ENGLISH

(Certificate) • Plan 23TK
Communication Arts, Humanities & Fine Arts Division
Room B237, (847) 543-2040

Teaching English to Speakers of Other Languages
This certificate is intended for current teachers, native or non-native speakers, who wish to expand their professional opportunities and to enhance their teaching skills by adding a TESOL certificate to their portfolio and for college graduates and/or first time teachers interested in teaching English in a non-English speaking country; as well as professionals interested in applying their skills in the field of English language teaching. NOTE: This certificate does not meet the requirements for the Illinois State Board of Education ESL approval, but individual courses can be used towards the approval.

Introductory Courses

EDU	221	Introduction to Teaching ***or***	
PSY	121	Introduction to Psychology	3
ENG	127	Introduction to General Linguistics	3
ENG	128	Linguistics and Society	3
CMM	127	Intercultural Communication	3
			12

Specialty Courses

ENG	261	Methods of Teaching ESL	3
ENG	262	Theories of Teaching ESL and Bilingual Education	3
ENG	265	Grammar for English Language Teachers	3
ENG	267	Phonetics and Phonology for English Language Teachers	3
ENG	268	Assessment of the English Language Learner	3
ENG	271	Teaching English to Speakers of Other Languages Practicum	3
			18
		Total Hours	30

For more information on this course of study students may contact either the division office listed above or the following faculty member.

Name	Office	Phone Number	E-mail Address
Jacinta Thomas	A240	(847) 543-2565	jacath@clcillinois.edu

FIRE SCIENCE TECHNOLOGY

(Associate in Applied Science) • Plan 24FB
Social Science Division, Room A244, (847) 543-2047

Fire Science Technology is a career program that leads to an Associate in Applied Science Degree. It is designed to serve the needs of students in the Fire Service, and to prepare others to enter the service.

Many of the Fire Science courses are articulated with the Office of the State Fire Marshal and count toward the requirements for INSTRUCTOR I, INSTRUCTOR II, FIRE OFFICER I, FIRE OFFICER II, APPARATUS ENGINEER, AND HAZMAT 1ST RESPONDER.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Requirements

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CMM		(CMM 111, 121, 122, 123, or 128)	3
PSY	121	Introduction to Psychology	3
PSC	122	State and Local Politics	3
		Math or Science Elective	3
		Humanities and Fine Arts Electives	3
CIS	119	***or***	
CIS	120		3
		Total General Education	21

Fire Science Core Courses

FST	111	Introduction to Fire Science (Not for active firefighters)	3
FST	116	Tactics and Strategy I	3
FST	173	Fire Instructor I	3
FST	177	Fire Prevention Principles I	3
FST	218	Fire Officer Supervision (MGMT I)	3
FST	217	Fire Officer Communications (MGMT II)	3
		Total (required FST)	18

Fire Science Electives - 21 Credit Hours

FST	117	Tactics and Strategy II	3
FST	119	Fire Apparatus Engineer	3
FST	174	Fire Instructor II	3
FST	273	Fire Science Business & Operations (MGMT III)	3
FST	274	Fire Administration & The Law (MGMT IV)	3
FST	192	Hazardous Materials First Responder	3
FST	118	Incident Command	3
FST	279	Special Topics in the Fire Service	3

(No more than 7 hours of the following courses may count towards FST Electives:)

EDM	111	Introduction to Emergency Management	3
EDM	112	Emergency Planning	3
EDM	113	Professional Development: Emergency Management	3
EDM	114	Communication in Emergency Management	3
EDM	211	Emergency and Disaster Response	3
EMT	111	Emergency Medical Technician Basic	7

Total Hours 60

For more information on this course of study students may contact the division office listed above.

FOOD SERVICE

(Associate in Applied Science) • Plan 22FB
Business Division, Room T102, (847) 543-2041

The Food Service program is designed to provide students with technical skills in food preparation, food operations and food service management.

Food Service Management is designed to prepare students for managerial positions in the food service industry. It emphasizes course work in business management and supervision, food service operations and sufficient food preparation to manage kitchen activities. Students selecting this option would be preparing for such positions as food service supervisor, manager in a chain or independent restaurant, owner-manager, catering manager or managerial positions with food processors and distributors.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Communication Courses (6 Hours)

ENG	121	English Composition ***or***	
ENG	120	Technical Composition I	3
CMM	128	Interviewing Practices ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking ***or***	
CMM	123	Dynamics of Small Group Discussion	3

General Education Courses (12 Hours)

PSY	122	Psychology in Business and Industry	3
		Humanities & Fine Arts Elective*	3
		Social & Behavioral Sciences Elective*	3
		Math or Science Elective (AOS 122 recommended)*	3

Business Courses (12 Hours)

BUS	121	Introduction to Business	3
ACC	112	Accounting Procedures I	3
CIS	119	Introduction to Office Software	3
BUS	221	Business Law I	3

Food Service Management Courses (27 Hours)

FSM	110	Introduction to Professional Food Service	3
FSM	111	Principles of Food Preparation I	4
FSM	113	Applied Food Service Sanitation	1
FSM	170	Principles of Food Preparation II	4
FSM	175	Nutrition	3
FSM	212	Menus/Merchandising/ Facilities Planning	3
FSM	213	Quantity Food Purchasing	3
FSM	271	Food Service Management	3
FSM	273	Food, Beverage, and Labor Control	3

Electives (3 Hours)

EWE	220	Cooperative Work Experience I ***or***	
BUS	115	Elements of Supervision ***or***	
BUS	219	Small Business Management ***or***	
FSM	299	Selected Topics in Food Service	3

Total Hours 60

* Courses that meet these requirements can be found in the Programs of Instruction and Graduation Requirements section of the CLC Catalog under Career Programs Degree Requirements

Food Service Management

(Certificate) • Plan 22FG

This program prepares students for entry level employment in restaurants, clubs, caterers, bakeries and institutional food service as members of the management team. Professional food service managers are able to profitably plan menus, purchase products and services, and recruit and motivate employees in appropriately designed facilities to market prepared food and beverage services to customers.

FSM	110	Introduction to Professional Food Service	3
FSM	111	Principles of Food Preparation I	4
FSM	113	Applied Food Service Sanitation	1
FSM	170	Principles of Food Preparation II	4
FSM	175	Nutrition	3
FSM	212	Menus/Merchandising/Facilities Planning	3
FSM	213	Quantity Food Purchasing	3
FSM	271	Food Service Management	3
FSM	273	Food, Beverage and Labor Control	3
EWE	220	Cooperative Work Experience I ***or*** FSM Elective	3-4

Total Hours 30-31

Culinary Arts

(Certificate) • Plan 22FH

This program prepares students for employment as cooks and bakers in the food service industry. Graduates of the program are able to profitably plan menus, utilize recipes, choose ingredients, use equipment properly and safely, coordinate production, and maintain records to satisfy discriminating customers. Appropriate experience and expertise in the industry leads to "chef" status."

FSM	110	Introduction to Professional Food Service	3
FSM	111	Principles of Food Preparation I	4
FSM	112	Culinary Arts I	3
FSM	113	Applied Food Service Sanitation	1
FSM	170	Principles of Food Preparation II	4
FSM	171	Culinary Arts II	3
FSM	175	Nutrition	3
FSM	213	Quantity Food Purchasing	3
EWE	220	Cooperative Work Experience I ***or*** FSM Elective	3-4
		Total Hours	27-28

Professional Cook

(Certificate) • Plan 22FD

This program prepares students for entry level employment as cooks and bakers in the Food Service Industry. Students are taught to use recipes, equipment, and ingredients in a professional kitchen.

FSM	111	Principles of Food Preparation I	4
FSM	112	Culinary Arts I	3
FSM	113	Applied Food Service Sanitation	1
FSM	170	Principles of Food Preparation II	4
FSM	171	Culinary Arts II	3
		Total Hours	15

For more information on this program of study students may contact either the division office listed above or the following faculty member.

Name	Office	Phone Number	E-mail Address
Cliff Wener	T206	(847) 543-2823	crwener-fsm@clcillinois.edu

HEALTH INFORMATION TECHNOLOGY

(Associate in Applied Science) • Plan 21HM
Biological & Health Sciences Division
Room C140, (847) 543-2042

The field of health information provides a wide variety of professional opportunities in the health care industry. Health information is a unique profession that combines facets of medicine, data management, and information technology, giving graduates the background to work in a range of health care settings. Courses in medical terminology, anatomy and physiology, and medical science lay the foundation for the program, which focuses on collecting, maintaining, retrieving, and analyzing the health information of patients. Students also learn the legal aspects of health information, statistics, coding and reimbursement methods, health care quality improvement techniques, as well as health records management.

Graduates of the college's Health Information Technology Program include coding professionals, health information department managers, cancer registrars, nursing home consultants, quality improvement specialists, medical billers, transcriptionists, and medical office managers, among others. Work settings include hospitals, HMOs, physicians' offices, clinics, insurance companies, professional associations, nursing homes, and medical billing services.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

If you are interested in health care but don't think direct patient care is right for you, health information technology can prepare you for a satisfying and rewarding career in health care and related fields.

Accreditation and Certification
The Health Information Technology Program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). Graduates of the program are eligible to apply to write the certification examination of the American Health Information Management Association for the designation RHIT (Registered Health Information Technician).

Admissions to the program
Interested students may take HIT 111, 112, 113, 115, 117, 118, 119, and 215 prior to being admitted to the program. However, the number of students that can be admitted to the Professional Practice Experience (HIT 212 and HIT 213) each year is limited. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration. Preference will be given to residents of Community College District 532 (including community colleges with which CLC has a Joint Educational Agreement).

Students should seek admission to the Health Information Technology Program the year prior to enrolling in HIT 212. (e.g., If you expect to take HIT 212 in Fall 2007, apply by February 2006.) DO NOT APPLY for admission to the program unless you are planning on enrolling in HIT 212 in the fall of next year. If you are accepted into the program and do not enroll in HIT 212 as scheduled, CLC will attempt to accommodate the schedule change but there is no guarantee you will be permitted to enroll in HIT 212 in subsequent years. Please review the admission requirements that are listed below.

1. **Attend a Health Information Technology Information Meeting. Attendance date must be no more than two years prior to the screening deadline of the year for which you are applying. Meetings are scheduled for 1:00 p.m. on the first Wednesday of each even month and 4:30 p.m. on the first Wednesday of each odd month except January, June and August.**

2. **Submit the following records to the Admission and Records Office:**
   A. Application for admission to the college.
   B. Official transcript/test results (sent to the Admission & Records Office directly from the appropriate institution):
      1. Your record from the last high school you attended. Your date of graduation must appear on the transcript. If you did not or will not graduate from high school, you must submit your official GED test results.
      OR
      2. Your college or university (must be regionally accredited) record documenting completion of an Associate Degree or Bachelor Degree. The transcript must indicate which degree you were awarded and the date.
   C. Official transcripts (sent directly to CLC from the appropriate institution) from any previous college(s) (must be regionally accredited) showing course work relevant to the Health Information Technology Program selection criteria.
   D. Results of the HOBET (Health Occupations Basic Entrance Test).
   E. Current Health Information Technology Request for Screening.

3. **Minimum Selection Criteria. Your official transcripts and records must show that you satisfy all of the following criteria:**
   A. High school graduate or equivalent.
   B. Language and Math proficiency.
   C. Cumulative GPA of 2.0 or above for any credit courses completed at CLC.
   D. Completion of the Health Occupations Basic Entrance Test (HOBET).

Note: Applicants can take the Health Occupations Aptitude Test(HOBET)only twice per screening year. It may be taken once between January 1st and June 30th, and once between July 1st and December 31st. Test scores in excess of this limit will not be considered for screening purposes. Please contact the Testing Center at (847) 543-2076 for test dates and times.

Test scores more than five years old will not be considered.

Screening deadline: The first Wednesday in February.

General Education and Support Courses

BIO	111	Human Form and Function ***or***	
BIO	124	Anatomy & Physiology	4-5
CIS	111	Comprehensive Spreadsheets ***or***	
CIS	119	Introduction to Office Software ***or***	
CIS	230	Comprehensive Database	3
CIS	120	Introduction to Computers ***or***	
AOS	112	Automated Office Technology	3
ENG	121	English Composition I ***or***	
ENG	120	Technical Composition I	3
		Communication Elective (Choose from CMM 111, 121, 122, 123, or 128)	3
		Humanities and Fine Arts Elective	3
		Social and Behavioral Science Electives	6
			25-26

A student must achieve a grade of C or better in all HIT courses.

Health Information Technology Courses:

HIT	111	Medical Terminology	3
HIT	112	Health Care Delivery Systems	2
HIT	113	Ethical/Legal Aspects of Medical Records	2
HIT	115	Health Data Content and Structure	3
HIT	117	Basic CPT Coding	3
HIT	118	Basic ICD-9-CM Coding	3
HIT	119	Pharmacology	1
HIT	172	Health Statistics and Registries	2
HIT	212	Professional Practice Experience in Health Information I	4
HIT	213	Professional Practice Experience in Health Information II	2
HIT	214	Organization and Supervision	2
HIT	215	Medical Science	3
HIT	217	Health Information Systems and Data Literacy	3
HIT	218	Seminar in Health Information	2
HIT	219	Quality Management and Performance Improvement	2
HIT	271	Advanced Coding	2
HIT	272	Reimbursement Systems in Healthcare	2
			41

Total Hours for A.A.S. Degree 66-67

The following courses will be offered in the spring of odd years (spring of 2007, spring of 2009) ONLY: HIT 172 and HIT 214

The following courses will be offered in the spring of even years (spring of 2008, spring of 2010) ONLY: HIT 217 and HIT 219

Students are ***recommended*** to seek the advice of the HIT faculty for course scheduling ***every*** semester.

Medical Transcription

(Certificate) • Plan 21MH
Biological & Health Sciences Division
Room C140, (847) 543-2042

Medical transcriptionists transcribe medical reports dictated by physicians and other health care professionals. These reports include operative reports, pathology reports, history and physical examinations, and other reports. Transcriptionists must have an extensive knowledge of medical terminology, anatomy, medications, and the vocabulary related to the diagnosis and treatment of disease. Accuracy and speed in word processing is also required. Medical transcriptionists are employed by hospitals, physician's offices and transcription services.

Many of the courses may be applied to the Health Information Technology associate degree program if the student desires to progress in the future to become a Registered Health Information Technician (RHIT).

A student must achieve a grade of C or better in all HIT courses.

BIO	111	Human Form and Function ***or***	
BIO	124	Anatomy & Physiology	4-5
AOS	113	Comprehensive Word Processing	3
AOS	172	Business English	3
AOS	175	Keyboarding Speed and Accuracy Building ***or***	
AOS	128	Intermediate Keyboarding	2-4
HIT	111	Medical Terminology	3
HIT	112	Health Care Delivery Systems	2
HIT	114	Medical Transcription	2
HIT	115	Health Data Content and Structure	3
HIT	116	Advanced Medical Transcription	3
HIT	119	Pharmacology	1
HIT	174	Professional Practice Experience in Medical Transcription	1
HIT	215	Medical Science	3
		Total Hours	30-33

Medical Billing Specialist

(Certificate) • Plan 21HN
Biological & Health Sciences Division
Room C140, (847) 543-2042

Medical billers play a critical role in the financial aspects of a physician's practice. They report the patient's diagnosis and the services rendered to that patient using special medical codes. These codes are included on the bills submitted to insurance companies, managed care plans, and Medicare. Medical billers need to have extensive knowledge of medical terminology, coding, and insurance procedures. Medical billers are employed by physicians, clinics, and billing services.

Many of the courses may be applied to the Health Information Technology associate degree program if the student desires to progress in the future to become a Registered Health Information Technician (RHIT).

A student must achieve a grade of C or better in all HIT courses.

BIO	111	Human Form and Function ***or***	
BIO	124	Anatomy and Physiology	4 -5
HIT	111	Medical Terminology	3
HIT	117	Basic CPT Coding	3
HIT	118	Basic ICD-9-CM Coding	3
HIT	119	Pharmacology	1
HIT	171	Insurance Procedures for the Medical Office	3
		A computer applications course: (CIS 120 or AOS 112 or CIS 119)	3
		Total Hours	20-21

Medical Coding Specialist

(Certificate) • Plan 21HR
Biological & Health Sciences Division
Room C140, (847) 543-2042

Medical coders review patient records and classify their medical conditions (diagnoses) and procedures by using numerical codes. These codes are used for insurance claims, to generate a database that allows healthcare providers to retrieve patient records by disease and/or procedures, to generate statistics about the type of patients treated, and to conduct research. Medical coders need to have extensive knowledge of medical terminology, anatomy, disease processes, and coding/classification systems. Medical coders are employed by hospitals, physicians offices and clinics, managed care companies, and insurance companies.

The American Health Information Management Association (AHIMA) strongly recommends that candidates interested in taking the Certified Coding Associate (CCA) exam have at least six months experience in a healthcare organization applying ICD-9-CM and CPT coding conventions and guidelines, or have completed either an AHIMA-approved coding certificate program, or other formal coding training program. The Medical Coding Specialist Program is approved as a Comprehensive Coding Program by the Approval Committee for Certificate Programs (ACCP), offered cooperatively by AHIMA and the American Association for Medical Transcription (AAMT).

Many of the courses may be applied to the Health Information Technology associate degree program if the student desires to progress in the future to become a Registered Health Information Technician (RHIT).

A student must achieve a grade of C or better in all HIT courses.

BIO	111	Human Form and Function ***or***	
BIO	124	Anatomy and Physiology	4 -5
CIS	120	Introduction to Computers ***or***	
AOS	112	Automated Office Technologies	3
CIS	111	Comprehensive Spreadsheets ***or***	
CIS	119	Introduction to Office Software ***or***	
CIS	230	Comprehensive Database	3
HIT	111	Medical Terminology	3
HIT	112	Health Care Delivery Systems	2
HIT	113	Ethical and Legal Aspects of Medical Records	2
HIT	115	Health Data Content and Structure	3
HIT	117	Basic CPT Coding	3
HIT	118	Basic ICD-9-CM Coding	3
HIT	119	Pharmacology	1
HIT	173	Medical Office Procedures	3
HIT	215	Medical Science	3
HIT	271	Advanced Coding	2
HIT	272	Reimbursement Systems in Healthcare	2
HIT	273	Professional Practice Experience in Medical Coding	2
		Total Hours	39-40

Medical Office Specialist

(Certificate) • Plan 21HO
Biological & Health Sciences Division
Room C140, (847) 543-2042

This certificate is designed to prepare students to work in the front office of a physician's office or clinic. Medical office specialists need to have the knowledge and skills required of many office workers; in addition, they need specialized knowledge related to the medical setting. Students in the program will learn how to schedule appointments, arrange hospital tests and surgery, protect the confidentiality of patient records, transcribe letters and medical reports, and maintain accurate records.

Many of the courses may be applied to the Health Information Technology associate degree program if the student desires to progress in the future to become a Registered Health Information Technician (RHIT).

A student must achieve a grade of C or better in all HIT courses.

AOS	112	Automated Office Systems	3
AOS	128	Intermediate Keyboarding ***or***	
AOS	175	Keyboarding Speed & Accuracy Building	2-4
AOS	214	Administrative Office Procedures	3
HIT	111	Medical Terminology	3
HIT	112	Health Care Delivery Systems	2
HIT	113	Ethical/Legal Aspects of Medical Records	2
HIT	114	Medical Transcription	2
HIT	119	Pharmacology	1
HIT	173	Medical Office Procedures	3
		Total Hours	21-23

For more information on these programs, students may contact the division office listed or the following faculty members. Faculty are available during scheduled office hours to advise students about program and career opportunities.

Name	Office	Phone Number	E-mail Address
Ellen Anderson	C143	(847) 543-2867	eanderson@clcillinois.edu
Margaret Kyriakos	C143	(847) 543-2879	mkyriakos@clcillinois.edu

HORTICULTURE

(Associate in Applied Science)
Plan 21HA, 21HB, 21HC, 21HP
Biological & Health Sciences Division
Room C140, (847) 543-2042

The curriculum is designed to provide a foundation in one of four occupational areas: Floriculture, Landscape Design, Turf and Landscape Maintenance, or Natural Areas Management. Course work is intended for persons who are already employed in horticulture as well as those who want to enter the field. Supervised fieldwork or Cooperative Work Experience is provided for students with sophomore status, and is required of those students with no work experience in horticulture.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Requirements for all students:

CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
		Social & Behavior Sciences Elective	6
		Humanities & Fine Arts Elective	3
		Science and/or Math Elective	3
			18

Horticulture Core Courses
(required for all HRT degree seeking students)

HRT	111	Basic Horticulture	3
HRT	112	Tree Identification	3
HRT	113	Shrub Identification	3
HRT	114	Soils, Fertilizers and Water	3
HRT	116	Entomology	3
HRT	119	Plant Pathology	3
HRT	217	Plant Propagation	3
			21

Horticulture Program Options
(Choose one of the four options.)

Option 1 ~ Floriculture (Plan 21HA)

HRT	172	Interior Plant Maintenance	3
HRT	173	Perennial Flowers	3
HRT	174	Basic Floral Design	3
HRT	210	Greenhouse Crop Production	3
		Work Experience (Choose from HRT 276 or EWE 220)	3
		Horticulture or General Electives	6
			21

Option 2 ~ Landscape Design (Plan 21HB)

HRT	118	Landscape Graphics	3
HRT	213	Landscape Design	3
HRT	214	Landscape Construction	3
HRT	215	Computer Landscape Design	3
		Work Experience (Choose from EWE 220 or HRT 276)	3
		Horticulture or General Electives	6
			21

Option 3 ~ Landscape Construction and Maintenance (Plan 21HC)

HRT	110	Landscape Maintenance	3
HRT	173	Perennial Flowers	3
HRT	176	Small Engine Repair and Maintenance	3
HRT	214	Landscape Construction	3
		Work Experience (Choose from EWE 220, HRT 276)	3
		Horticulture or General Electives	6
			21

Option 4 ~ Natural Areas Management (Plan 21HP)

BIO	120	Environmental Biology	4
BIO	126	Local Flora	2
GEO	126	Geology of Illinois or	
GEO	224	Environmental Geology	2-3
HRT	216	Natural Areas Management	3
		Work Experience (choose from EWE 220 or HRT 276)	3
		Horticulture or General Elective	6-7
			21-22

Total Hours 60-61

Arboriculture

(Certificate) • Plan 21HL

HRT	110	Landscape Maintenance	3
HRT	111	Basic Horticulture	3
HRT	112	Tree Identification	3
HRT	116	Entomology	3
HRT	119	Plant Pathology	3
HRT	170	Arboriculture	3
		Total Hours	18

Landscape Maintenance

(Certificate) • Plan 21HH

HRT	110	Landscape Maintenance	3
HRT	112	Tree Identification	3
HRT	113	Shrub Identification	3
HRT	173	Perennial Flowers	3
HRT	176	Small Engine Repair and Maintenance	3
		Total Hours	15

Floral Design

(Certificate) • Plan 21HI

HRT	111	Basic Horticulture	3
HRT	172	Interior Plant Maintenance	3
HRT	174	Basic Floral Design	3
HRT	175	Advanced Floral Design	3
HRT	210	Greenhouse Crop Production	3
		Total Hours	15

Natural Areas Management

(Certificate) • Plan 21HQ

HRT	111	Basic Horticulture	3
HRT	112	Tree Identification	3
HRT	113	Shrub Identification	3
BIO	120	Environmental Biology	4
GEO	126	Geology of Illinois or	
GEO	224	Environmental Geology	2-3
BIO	126	Local Flora	2
HRT	216	Natural Areas Management	3
		Total Hours	20-21

For more information on this course of study, students may contact the division office listed or the following faculty members.

Name	Office	Phone Number	E-mail Address
Don Lloyd	1408	(847) 543-2881	dlloyd@clcillinois.edu
Mark Zampardo	1420	(847) 543-2320	mzampardo@clcillinois.edu

HUMAN SERVICES PROGRAM

(Associate in Applied Science) • Plans 25HB, 25HC, 25HD
Social Science Division,
Room A244, (847) 543-2047

This program prepares students for entry and middle-level positions in agencies and programs specialized in helping people. This includes organizations with programs for the exceptional child and adult-care programs provided through hospitals, nursing homes, institutions for the developmentally disabled, community human service programs, as well as treatment programs for alcohol and substance abuse. The degree-seeking student completes general education and HUS core courses, plus one of the three options. All students are encouraged to consult with the program coordinator. Human Services courses may transfer to four-year institutions with related programs.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

The Human Services Program ASAAD degree and certificate options are accredited by the Illinois Alcohol and Other Drug Abuse Certification Agency (IAODAPCA) for the 2004-2005 and 2005-2006 academic years.

Exceptional Child Services • Plan 25HB

General Education

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
MTH	141	Quantitative Literacy ***or***	
		Higher Level Mathematics ***or***	
		Science Elective	3
PSY	121	Introduction to Psychology	3
PSY	222	Child Growth and Development	3
SOC	121	Introduction to Sociology	3
		Humanities & Fine Arts Elective	3
			21

Human Services Core for Exceptional Child Services

HUS	121	Health and Nutrition	3
HUS	113	Group Processes	3
HUS	118	Professional Helping Skills	3
PSY	226	Adolescent Development	3
HUX	170	Introduction to Substance Abuse	3
SWK	121	Introduction to Social Work	3
			18

Exceptional Child Services
(Take 26 credit hours from the following list)

ART	125	Art for Elementary Teachers I	2
CRJ	121	Introduction to Criminal Justice	3
CRJ	124	Penology and Corrections	3
CRJ	229	Juvenile Delinquency	3
ECE	131	The Special Needs Child in ECE	3
ECE	216	Creative Activities I	3
*ECE	222	The Exceptional Child	3
*ECE	273	Child, Family, and Community ***or***	
SOC	224	Sociology of the Family	3
*EDU	120	Observation and Guidance of Children	3
EDU	221	Introduction to Teaching	3
EDU	299	Special Topics in Education	1-3
ENG	249	Child and Young Adult Media	3
*HUS	170	Human Services Practicum I	4
*HUS	171	Human Services Practicum II	4
HUS	213	Mental Retardation	3
HUS	299	Special Topics in Human Services	1-3
PSY	221	Educational Psychology	3
		Total Hours	65

*Required Course

Human Services – Adult Services • Plan 25HC

General Education and Human Services Core

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
PSY	121	Introduction to Psychology	3
SOC	121	Introduction to Sociology	3
MTH	141	Quantitative Literacy ***or***	
		Higher Level Mathematics ***or***	
		Science Elective	3
		Humanities & Fine Arts Elective	3
HUS	121	Health and Nutrition	3
HUS	113	Group Processes	3
HUS	118	Professional Helping Skills	3
HUX	170	Introduction to Substance Abuse	3
SOC	224	Sociology of the Family	3
SWK	121	Introduction to Social Work	3

Take two of the following three courses

HUS	231	Adult Development and Aging	3
PSY	222	Child Growth and Development	3
PSY	226	Adolescent Development	3
			42

Adult Services Courses
(Take 22 credit hours from the following list)

HUS	114	Human Services Supervision	3
HUS	116	Principles of Foster Care	1
*HUS	170	Human Services Practicum I	4
*HUS	171	Human Services Practicum II	4
HUS	220	Principles of Residential Care	3
HUS	213	Mental Retardation	3
CRJ	117	Community – Based Corrections	3
CRJ	121	Introduction to Criminal Justice	3
CRJ	124	Penology and Corrections	3
HUS	299	Special Topics in Human Services	1-3
PRS	111	Survey of Rehabilitation Skills	3
PRS	112	Psychiatric Rehabilitation Skills	3
*PSY	223	Abnormal Psychology ***or***	
SOC	223	Deviance	3
		Total Hours	64

* Required Courses

Human Services – Alcohol, Substance Abuse, and Addictive Disorders (ASAAD) • Plan 25HD

General Education and Human Services Core

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
PSY	121	Introduction to Psychology	3
SOC	121	Introduction to Sociology	3
MTH	141	Quantitative Literacy ***or***	
		Higher Level Mathematics ***or***	
		Science Elective	3
		Humanities & Fine Arts Elective	3
HUS	121	Health and Nutrition	3
HUS	113	Group Processes	3
HUS	118	Professional Helping Skills	3
HUX	170	Introduction to Substance Abuse	3
SOC	224	Sociology of the Family	3
SWK	121	Introduction to Social Work	3

Take two of the following three courses

HUS	231	Adult Development and Aging	3
PSY	222	Child Growth and Development	3
PSY	226	Adolescent Development	3
			42

Alcohol, Substance Abuse, and Addictive Disorders Courses

HUX	171	Assessment and Diagnosis of Alcoholism & Substance Abuse Disorders	3
HUX	173	Special Populations and Addictive Disorders	2
HUX	174	Ethics, Law, Regulations, Records, and Documentation	2
HUX	175	Pharmacological and Other Medical Terminology	1
HUX	176	Advanced Counseling Skills for Addictive Disorders	3
HUX	177	Advanced Group Counseling Skills	3
HUX	271	Human Services ASAAD Practicum I	5
HUX	272	Human Services ASAAD Practicum II	5
		Electives	2
		Total Hours	68

Electives (choose two credit hours from list below)

HUX	172	Other Addictive Disorders ***or***	
HUX	178	Assessment & Treatment of Addictive Families ***or***	
HUX	179	Psycho-Social Aspects of HIV ***or***	
HUS	299	Special Topics	2

Students who enter the ASAAD option should either have no history of alcohol, substance abuse or any other addictive disorders or have been recovering without relapse for at least one year. Students who do not meet one of these criteria may not be eligible to participate in required practica or to be certified to work in the field.

Human Services – Correctional Counseling Option
Plan 25HD

General Education and Human Services Foundation

ENG	121	English Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	128	Interviewing Practices	3
PSY	121	Introduction to Psychology	3
SOC	121	Introduction to Sociology	3
		Humanities and Fine Arts Elective	3
MTH	141	or higher or Science Elective	3
HUS	121	Health and Nutrition	3
HUS	113	Group Processes	3
SWK	121	Introduction to Social Work	3
HUX	170	Introduction to Substance Abuse	3
HUS	118	Professional Helping Skills	3
			33

Correctional Counseling Required Courses (20 hours)

PSY	226	Adolescent Development or	
HUS	231	Adult Development and Aging	3
HUX	177	Advanced Group Counseling Skills	3
CRJ	117	Community-Based Corrections	3
CRJ	121	Introduction to Criminal Justice	3
CRJ	214	Substance Abuse and Criminal Justice	3
HUS	219	Human Service Internship	5

Correctional Counseling Elective Courses (7 hours)

*PSY	223	Abnormal Psychology or	
*SOC	223	Deviance	3
HUS	210	Principles of Residential Care	3
HUS	114	Human Services Supervision	3
HUX	172	Other Addictive Disorders	2
HUX	179	Psychosocial Aspects of HIV Infections	2
CRJ	119	Principles of Direct Supervision	3
CRJ	124	Penology and Corrections	3
CRJ	123	Introduction to Criminology	3
CRJ	229	Juvenile Delinquency	3
CRJ	221	Criminal Law	3
PSC	122	State and Local Politics	3
HUS	299	Special Topics in Human Services	1-3

*Recommended Course (either PSY 223 or SOC 223)

Total AAS Degree Hours 60

Human Services Program

(Certificate)
Plan 25HF

The certificate program is intended only for students who already hold professional degrees or have taken extensive course work in other academic fields. The certificate provides the additional study that is often required when there has been a career change.

Required Courses

ENG	121	English Composition I	3
PSY	121	Introduction to Psychology	3
PSY	222	Child Growth and Development	3
HUS	113	Group Processes	3
HUS	118	Professional Helping Skills	3
HUS	231	Adult Development and Aging	3
SOC	224	Sociology of the Family	3
SWK	121	Introduction to Social Work	3
			24

Electives

A minimum of 6 additional semester hours must be selected from one of the options in Human Services Program: Exceptional Child Services; Adult Services. Substitutions may be made with coordinator or division approval 6

Total Hours 30

Human Services Program

Alcohol, Substance Abuse and Addictive Disorders (ASAAD) Certificate • Plan 25HG

In order to be admitted to this option, students must first meet with the program coordinator. Up to 18 credit hours of prerequisite courses may be waived with the permission of the Human Services Program Coordinator, upon submission and review of transcripts indicating their successful completion. Students needing to meet these prerequisites may take them concurrent with the courses required for the certificate.

According to IAODAPCA regulations, students desiring their CADC must possess a minimum of an Associates degree in Human Services or Behavioral Science from an accredited institution of higher education. Students who do not meet this requirement should complete the AAS in ASAAD, Plan 25HD.

The prerequisite courses for completion are:

HUS	121	Health and Nutrition	3
HUS	113	Group Processes	3
HUS	118	Professional Helping Skills	3
SOC	224	Sociology of the Family	3
			12

Must take two of the following three classes:

PSY	222	Child Growth and Development	3
PSY	226	Adolescent Development	3
HUS	231	Adult Development and Aging	3
			6

Alcohol, Substance Abuse and Addictive Disorders

HUX	170	Introduction to Substance Abuse	3
HUX	171	Assessment and Diagnosis of Alcoholism & Substance Abuse Disorders	3
HUX	173	Special Populations and Addictive Disorders	2
HUX	174	Ethics, Law, Regulations, Records, and Documentation	2
HUX	175	Pharmacological & Other Medical Terminology	1
HUX	176	Advanced Counseling Skills for Addictive Disorders	3
HUX	177	Advanced Group Counseling Skills	3
HUX	271	Human Services ASAAD Practicum I	5
HUX	272	Human Services ASAAD Practicum II	5
Electives			4
		Total Hours	31

Electives (choose four credit hours from list below)

HUX	172	Other Addictive Disorders	2
HUX	178	Assessment & Treatment of Addictive Families	2
HUX	179	Psycho-Social Aspects of HIV	2
HUS	299	Special Topics	2

For more information on this course of study, students may contact the division office listed or the following faculty members.

Name	Office	Phone Number	E-mail Address
Janet Mason	D122	(847) 543-2536	jmason@clcillinois.edu

INDUSTRIAL MAINTENANCE AND REPAIR

(Associate in Applied Science) • Plan 24ID
(Certificate) • Plan 24IC - Certificate
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program prepares students for employment and advancement in various fields related to industrial maintenance. Maintenance mechanics typically install, maintain, and repair machinery and equipment. A general certificate may be earned by completing the core courses. The associate degree program provides areas of concentration within the industrial maintenance field.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Core Courses: Required for Certificate or A.A.S. Degree

MTT	110	Blueprint Reading	3
MTH	114	Applied Mathematics I	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
MCD	111	Manufacturing Processes	3
CAD	110	CAD/CAM Concepts	3
MTT	111	Machine Shop I	3
IMR	110	Industrial Pneumatics and Hydraulics	3
IMR	111	Machine Components and Repair	3
IMR	117	Machinery's Handbook	3
RAC	174	Applied Electricity (for RAC concentration) ***or***	4
ELT	170	DC Circuit Fundamentals ***and***	2
ELC	172	Applied AC Circuit Theory	2
		Total Hours	31

Concentrations
In order to obtain an A.A.S. degree an additional 18 credit hours of technical courses must be taken along with the required additional general education courses. Courses are arranged by concentrations to allow the student to focus on a specific area of industrial maintenance.

Machine Maintenance & Repair

IMR	112	Pump Overhaul and Repair	3
MTT	210	Machine Shop II	3
CNC	110	CNC Operations I	3
ELC	114	Motor & Machine Controls	3
		Technical Elective	6

Electrical Maintenance & Repair

ELC	113	Basic Instrumentation and Shop Practice	2
ELC	114	Motor and Machine Controls	3
ELC	211	Electrical Machinery	3
		Technical Elective	10

Welding

WLD	170	General Welding	2
WLD	171	Gas Welding, Cutting, and Brazing	3
WLD	172	Shielded Metal Arc Welding	3
WLD	175	Gas Metal Arc Welding	3
		Technical Elective	7

Refrigeration & Air Conditioning Maintenance & Repair

RAC	110	Theory of Refrigeration	4
RAC	113	Commercial Refrigeration Systems	4
RAC	119	Electric Motors and Controls	4
RAC	176	Certification Preparation	2
		Technical Elective	4

Plumbing & Pipefitting

IMR	113	Plumbing & Pipefitting I	3
IMR	114	Plumbing & Pipefitting II	3
IMR	112	Pump Overhaul & Repair	3
		Technical Electives	9

Additional General Education Requirements for A.A.S. Degree

CMM	111	Communication Skills	3
ECO	110	Economics for Business & Industry	3
		Social & Behavioral Sciences Elective	3
		Humanities & Fine Arts Elective	3
		Total Hours	61

Technical Electives
Technical electives may include courses from the above areas of concentration as well as those listed below. See an advisor for assistance in choosing courses related to your area of concentration and/or career goals. Prerequisites must be met.

EWE	220	Cooperative Work Experience I	1-4
ELC	171	Programmable Logic Controllers	3
ELC	211	Electrical Machinery	3
ELC	215	Power Transmission and Distribution	4
ELT	117	Industrial Digital Electronics I	3
ELT	118	Industrial Digital Electronics II	3
ELT	172	Applied Communications Circuits	3
IMR	115	Carpentry I	3
IMR	116	Carpentry II	3
MTT	210	Machine Shop II	3
MTT	212	Precision Machining/ NIMS Credentialing	3
CNC	210	CNC Operations II	3
MFG	210	Manufacturing Materials	3
MCD	112	Basic Metallurgy I	3
MCD	113	Basic Metallurgy II	3
MCD	114	Dimensional Metrology	3
PHY	120	Practical Aspects of Physics	4
RAC	117	Refrigeration Installation and Service Problems	4
RAC	118	Residential Heating Systems	4
ROB	111	Introduction to Robotics	3
ROB	112	Automated Systems Controls	3
WLD	174	Advanced Shielded Metal Arc Welding	3
WLD	176	Welding Certification	1-3
WLD	178	Gas Tungsten Arc Welding	3

For more information on this course of study students may contact either the division office listed above or the following faculty member.

Name	Office	Phone Number	E-mail Address
Randall Roettger	HST150c	(847) 543-2512	rroettger@clcillinois.edu

LIBRARY TECHNICAL ASSISTANT

(Associate in Applied Science) • Plan 23LC
Communication Arts, Humanities & Fine Arts Division
Room B237, (847) 543-2040

Library Technical Assistants work at the paraprofessional or preprofessional level in libraries. They are technical support staff members with specific library related skills. The courses will provide a broad foundation of knowledge which can apply to technical or public service work in academic, school, public, or special libraries. There is a heavy emphasis on skills related to automation of library processes and services.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
LTA	121	Introduction to Library Science	3
LTA	171	Audio-Visual Media and Equipment	3
CIS	120	Introduction to Computers	3
		Social & Behavioral Sciences Elective	3
			15

Second Semester

LTA	272	Cataloging and Classification	3
COM	111	Introduction to Multimedia	3
CMM	121	Fundamentals of Speech	3
		Social & Behavioral Sciences Elective	3
		Elective (listed below)	3
			15

Third Semester

LTA	172	Reference and Public Services I	3
LTA	273	Library Materials	3
COM	115	Internet Fundamentals	3
		Mathematics or Science Elective	3-4
ART	240	History of Art I ***or***	
HUM	121	Introduction to Humanities I ***or***	
HUM	125	Introduction to Fine Arts I ***or***	
MUS	124	Introduction to Music	3
			15-16

Fourth Semester

LTA	277	Automation for Libraries	3
LTA	173	Reference and Public Services II	3
LTA	115	Supervised Field Practicum II	3
		Electives (from A.A.S. degree list)	6
			15

Total Hours 60-61

A.A.S. Degree Electives

LTA	279	Children's Library Services	3
ENG	249	Children and Young Adult Media	3
CIS	112	Introduction to Local Area Networking	3
CIS	236	LAN Administration	3
CIS	119	Introduction to Office Software	3
COM	112	Multimedia Platforms	3
COM	171	Introduction to Computer Graphics	3
COM	215	Multimedia Presentations	3
CIS	290	Desktop Publishing	3
ART	222	Introduction to Computer Art	3

Library Technical Assistant

(Certificate) • Plan 23LH

LTA	121	Introduction to Library Science	3
LTA	171	Audio-Visual Media and Equipment	3
LTA	273	Library Materials	3
LTA	272	Cataloging and Classification	3
LTA	277	Automation for Libraries	3
LTA	172	Reference and Public Services I	3
LTA	173	Reference and Public Services II	3
LTA	114	Supervised Field Practicum I	2
COM	115	Internet Fundamentals	3
		Electives (from certificate list below)	6
		Total Hours	32

LTA Certificate Electives are to be chosen from the following courses:

LTA	279	Children's Library Services	3
ENG	249	Children and Young Adult Media	3
COM	111	Introduction to Multimedia	3
CIS	112	Introduction to Local Area Networking	3
CIS	119	Introduction to Office Software	3
CIS	120	Introduction to Computers	3
CIS	236	LAN Administration	3
COM	112	Multimedia Platforms	3
COM	171	Introduction to Computer Graphics	3
COM	215	Multimedia Presentations.	3
CIS	290	Desktop Publishing	3
ART	222	Introduction to Computer Art	3

For more information on this course of study students may contact either the division office listed above or the following faculty member.

Name	Office	Phone Number	E-mail Address
Jo Beckwith	L206	(847) 543-2466	jbeckwith@clcillinois.edu

MACHINE TOOL TRADES

(Certificates & A.A.S.)
Plan 24MJ - Basic Machining Certificate
Plan 24SM - Machine Tool Trades Certificate
Plan 24SR - Tool and Mold Maker Certificate
Plan 24MD - A.A.S.
Engineering, Mathematics, Physical Sciences Division
Room T102, (847) 543-2044

This program prepares students for employment and advancement in the machine tool field. Machinists are skilled workers who are able to read and interpret blueprints, use common hand tools, set up and operate metal cutting machines, and use precision measuring instruments. Advanced placement in this program is possible for experienced machinists. Apprenticeship and N.I.M.S. national credentialing credit is also available. Machine tool courses are approved by the United States Department of Labor, Bureau of Apprenticeship Training and the N.I.M.S. national certified program.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Phase I — Basic Machining Certificate

CNC	110	CNC Operations I	3
MTH	114	Applied Mathematics I	3
MTT	110	Machine Trades Blueprint Reading	3
MTT	111	Machine Shop I	3
MTT	210	Machine Shop II	3
		Total Hours	15

Phase II — Machine Tool Trades Certificate

CNC	115	CNC Programming I ***or***	
EWE	220	Cooperative Work Experience I	3
MCD	111	Manufacturing Processes	3
MCD	112	Basic Metallurgy I	3
MTH	115	Applied Mathematics II	3
MTT	113	Grinding Technology	3
MTT	212	Precision Machining/ NIMS Credentialing	3
WLD	170	General Welding	2
		Total Hours	35

Phase III — Tool & Mold Maker Certificate
An advanced certificate in Tool and Mold Making is obtained by completing the courses listed above and the following. These courses may be taken prior to the courses listed above provided requisites have been met. Substitutions may be made with advisor approval.

CNC	210	CNC Operations II ***or***	
MTT	215	Diemaking II ***or***	
MTT	216	Moldmaking II	3
CNC	217	Introduction to Wire EDM Machining	3
MTT	115	Introduction to Diemaking	3
MTT	116	Introduction to Moldmaking	3
MTT	211	Jig & Fixture Design	3
		Total Hours	50

Phase IV — Machine Tool Trades A.A.S. Degree

Students wishing to obtain an A.A.S. Degree must complete the following course requirements along with those required for the advanced certificate.

General Education Courses*

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CMM	111	Communication Skills	3
ECO	110	Economics for Business & Industry	3
		Social & Behavioral Sciences Elective	3
		Humanities & Fine Arts Elective	3
			15
		Total Hours	65

*Refer to general education requirements for career programs on page 68.

For more information on this course of study, students may contact either the division office listed above or the following faculty member.

Name	Office	Phone Number	E-mail Address
Don Ruesch	T123	(847) 543-2506	druesch@clcillinois.edu

MECHANICAL ENGINEERING TECHNOLOGY

(Associate in Applied Science) • Plan 24MB
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

Mechanical engineering technicians are the semi-professional members of the engineer-scientist-technician team engaged in the design of machines, mechanisms, and other mechanical systems. Assignments may include drafting, designing, product and materials testing, and supervision. In addition to a broad based background in mechanical design, this program offers training on an industrial CAD system.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

EGR	121	Engineering Graphics	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
MCD	111	Manufacturing Processes	3
MTH	117	Technical Mathematics I **	3-4
PHY	121	General Physics I	5
			17-18

Second Semester

CAD	117	Introduction to AutoCAD	3
CAD	173	Introduction to Solidworks ***or***	
CAD	176	Introduction to Pro-Engineer	3
EGR	115	Applied Mechanics: Statics	3
MTH	118	Technical Mathematics II**	3-4
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech	3
			15-16

Third Semester

EGR	215	Mechanics of Materials for Technology	3
ECO	221	Principles of Economics I ***or***	
ECO	110	Economics for Business and Industry	3
MCD	214	Mechanical Design & Drafting	3
PSY	121	Introduction to Psychology ***or***	
PSY	122	Psychology in Business and Industry	3
		Technical Elective*	6
			18

Fourth Semester

MCD	212	Mechanisms	4
MCD	215	Machine Design	5
ELT	170	DC Circuit Fundamentals ***and***	
ELC	172	Applied AC Circuit Theory ***or***	
PHY	122	General Physics II	4-5
		Humanities & Fine Arts Elective	3
MTT	111	Machine Shop I	3
			19-20

Total Hours 69-72

* **Technical Electives**:
A broad choice of technical electives is available. Students may choose the CAD option (program description follows) or choose electives from certain MCD, ELC, CAD, MTH, MFG, EWE or other technical courses. Students may obtain technical elective approval from the program coordinator.

** For students who may pursue a Bachelors degree in mechanical engineering technology (BSMET) the following mathematics courses may be substituted:
MTH 122 - College Algebra
MTH 123 - Trigonometry

Please see an advisor in the Mechanical Engineering Technology area before selecting the above courses.

Mechanical Engineering Technology - CAD Option

(Associate in Applied Science) • Plan 24MQ
Engineering, Math., Physical Sciences Division
Room T102, (847) 543-2044

Students desiring the CAD option of the Mechanical Engineering Technology program must take 6 credit hours of CAD coursework in place of the technical electives listed in the Mechanical Engineering Technology program (Plan 24MB). Any two courses, totaling 6 credit hours, may be selected from the following group:

CAD	176	Introduction to Pro-Engineer	3
CAD	177	Site Planning & Drafting	3
CAD	211	Mechanical Detailing	3
CAD	214	Architectural Applications	3
CAD	217	AutoCAD II	3
CAD	273	Advanced CAD Specialization	1-3
			6

Note: The student should check course prerequisites before planning any combination of the above courses.

Total Hours for A.A.S. degree 70

Mechanical Design Technology

(General Certificate) • Plan 24MI

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
MTH	117	Technical Mathematics I	3
PHY	121	General Physics I	5
EGR	121	Engineering Graphics	3
EGR	122	Descriptive Geometry	3
CAD	117	Introduction to AutoCAD	3
MCD	111	Manufacturing Processes	3
MCD	212	Mechanisms	4
MCD	214	Mechanical Design & Drafting	3
		Technical Electives	3

Total Hours 33

For more information on this course of study, students may contact either the division office listed above or the following faculty member.

Name	Office	Phone Number	E-mail Address
Margie Porter	T123	(847) 543-2904	margieporter@clcillinois.edu

MEDICAL ASSISTING

(Associate in Applied Science) • Plan 21MD
(Certificate) • Plan 21MA
Biological & Health Sciences Division
Room C140, (847) 543-2042

This program prepares students to work as Medical Assistants. These positions provide routine administrative and clinical tasks to keep the offices of physicians, chiropractors, and other health practitioners running smoothly. The tasks vary by office and specialty area. In smaller offices, Medical Assistants are usually generalists, providing both administrative and clinical support. In larger practices, Medical Assistants often specialize in certain areas. Administrative duties include tasks such as scheduling and receiving patients, preparing and maintaining medical records, handling telephone calls and written correspondence, medical transcription, submitting insurance claims, and maintaining practice finances. Clinical duties may include asepsis and infection control, taking patient histories and vital signs, performing first aid and CPR, preparing patients for procedures, assisting the physician with examinations and treatments, collecting and processing specimens, performing selected diagnostic tests, and preparing and administering medications as directed by the physician and as permitted by state law.

Admission to the program
A screening procedure is used to select the academically best qualified from those who request admittance to the program. Preference will be given to residents of Community College District 532 (including community colleges with which CLC has a Joint Educational Agreement).

Many courses in the program curriculum may be taken by any interested student prior to being accepted into the program. However, MOA 111, MOA 211 and MOA 212 are open only to students who are admitted to the program.

To be considered for admission to the Medical Assisting program, students must:

1. Attend a Medical Assisting Information Meeting. Attendance date must be no more than two years prior to the screening deadline of the year for which you are applying. Meetings are scheduled for 11:30 a.m. on the first Monday of each even month and 5:30 p.m. on the first Wednesday of odd months. There are no information sessions in January, June, or August. Call the Biological and Health Sciences division office at 847-543-2042 for room information.
2. Submit the following records to the Admissions and Records office:
   A. Application for admission to the college.
   B. Official transcript/test results (sent to the Admissions & Records Office directly from the appropriate institution):
      1. Your record from the last high school you attended. Your date of graduation must appear on the transcript. If you did not or will not graduate from high school, you must submit your official GED test results.
      OR
      2. Your college or university (must be regionally accredited) transcript documenting completion of an Associate Degree or Bachelor Degree. The transcript must indicate which degree you were awarded and the date.
   C. Official transcripts from any previous college(s) (must be regionally accredited) sent directly to CLC from the college(s).
   D. Official report of your Health Occupations Basic Entrance Test (HOBET) scores sent directly to CLC.
   E. Current Medical Assisting Request for Screening form (available in Admissions & Records Office).
3. Minimum Selection Criteria: Official transcripts and records must show satisfaction of all of the following criteria:
   A. High School graduate or the equivalent.
   B. Language and Math proficiency.
   C. Completion of the Health Occupations Basic Entrance Test (HOBET).
   D. Attend a Medical Assisting information session. Sessions are scheduled for the fourth Tuesday of every month for 5:30 p.m.

Note: Applicants can take the Health Occupations Basic Entrance Test (HOBET) only twice per screening year. It may be taken once between January 1st and June 30th, and once between July 1st and December 31st. Test scores in excess of this limit will not be considered for screening purposes. Please contact the Testing Center at 847-543-2076 for test dates and times.

Test scores more than five years old will not be considered.

Screening deadline: The deadline is the first Wednesday in April. All required materials must be submitted to the Office of Admissions & Records by the screening deadline. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications.

Students must maintain a minimum grade of "C" in all HIT, MOA and BIO courses listed below to continue in and graduate from the program. In addition, students must maintain a CLC GPA of 2.0 or higher.

Associate in Applied Science Degree
General Education Courses

ENG	121	English Composition I ***or***	
ENG	120	Technical Composition I	3
CMM	111	Communication Skills ***or***	
CMM	121	Fundamentals of Speech ***or***	
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
PSY	121	Introduction to Psychology	3
BIO	111	Human Form and Function *or*	
BIO	124	Anatomy and Physiology	4-5
		Humanities and Fine Arts elective	3

Program Courses

CIS	120	Introduction to Computers ***or***	
AOS	112	Automated Office Technologies	3
CIS	119	Introduction to Office Software ***or***	
CIS	230	Comprehensive Database ***or***	
CIS	111	Comprehensive Spreadsheets	3
MOA	110	Medical Terminology	3
MOA	171	Insurance Procedures for the Medical Office	3
MOA	173	Medical Office Procedures	3
MOA	114	Medical Transcription	2
MOA	119	Pharmacology	1
MOA	117	Basic CPT Coding	3
MOA	118	Basic ICD-9-CM Coding	3
MLT	110	Introduction to Medical Lab Tech	2
MLT	115	Phlebotomy Techniques	2
MOA	111	Introduction to Medical Assisting	4
MOA	211	Medical Assisting II	4
MOA	212	Medical Assisting Clinical Externship	3
		Electives	6
		Total Hours	61-62

Medical Assisting

(Certificate) • Plan 21MA

General Education Courses

PSY	121	Introduction to Psychology	3
BIO	111	Human Form and Function ***or***	
BIO	124	Anatomy and Physiology	4-5

Program Courses

CIS	120	Introduction to Computers ***or***	
AOS	112	Automated Office Technologies	3
MOA	110	Medical Terminology	3
MOA	173	Medical Office Procedures	3
MOA	171	Insurance Procedures for the Medical Office	3
MOA	114	Medical Transcription	2
MOA	119	Pharmacology	1
MOA	117	Basic CPT Coding	3
MOA	118	Basic ICD-9-CM Coding	3
MLT	110	Introduction to Medical Lab Tech	2
MLT	115	Phlebotomy Techniques	2
MOA	111	Introduction to Medical Assisting	4
MOA	211	Medical Assisting II	4
MOA	212	Medical Assisting Clinical Externship	3
		Total Hours	43-44

Technical Standards

Applicants to the College of Lake County's Medical Assisting Program must demonstrate the ability to perform, or learn to perform the following essential skills:

- motor skills sufficient to perform record filing and data input tasks and be able to utilize various computer hardware and software in accomplishing operational functions related to medical assisting activities
- have full range of motion of joints, fine motor movements of the hands, ability to perform repetitive tasks and the ability to stoop, bend, twist, reach and occasionally kneel and squat
- have the ability to lift and carry objects weighting up to 50 lbs.
- Be able to push or pull a wheelchair, cart or gurney
- Have adequate hearing which permits the individual to communicate in a rational and coherent manner with others in the English language
- Have the ability to examine closely images or other forms of output created by diagnostic equipment; must have color vision; must have good visual acuity for client assessment, medical checking, assisting in medical procedures, and for documentation
- Demonstrate critical thinking/cognitive skills needed for problem solving and effective performance of standard medical assisting functions
- Adapt effectively to environments with high stress in learning situations
- Be able to stand and walk 4 to 8 or more hours per clinical session
- Ability to acquire and apply information from classroom instruction, professional practice, independent learning and team projects
- Ability to synthesize information regarding healthcare data for formal, verbal and/or written, presentation to healthcare professionals
- follow job related logical thought processes to make judgments
- take initiative and work independently yet recognize self limitations
- demonstrate prolonged concentration skills
- cope in an appropriate manner to common job related stressful situations
- protect the confidentiality and security of health information
- meet the ethical standards of the profession.

Upon admission, students must be able to perform the essential functions of the curriculum and meet the standards described herein for the program.

For more information on this course of study, students may contact the division office listed or one of the following faculty members. Faculty are available during scheduled office hours to advise students about program and career opportunities.

Name	Office	Phone Number
Julie Rose-Skifano	C140	(847) 543-2595

MEDICAL IMAGING

(Associate in Applied Science) • Plan 21MI
Biological & Health Sciences Division
Room C140, (847) 543-2042

The Medical Imaging Program prepares radiographers to work in medical facilities producing radiographic examinations which are interpreted by a radiologist or another medical specialist. Graduates of the program are qualified to take the national certification examination given by the American Registry of Radiologic Technologists. Graduates also meet the additional criteria required for Illinois licensure.

The Medical Imaging program is nationally accredited by the Joint Review Committee on Education in Radiologic Technology. To contact the JRCERT, the address is:

20 North Wacker Drive, Suite 2850 • Chicago, IL 60606-2901
(312) 704-5300 • E-Mail jcert@mail.idt.net

Consistent with the Mission and goals of the College of Lake County, the Medical Imaging Program strives for excellence in preparing students for entry-level positions in the Medical Imaging profession. By maintaining high academic and clinical standards, graduates receive an Associate of Applied Science degree in Medical Imaging, become eligible for certification as Registered Radiologic Technologists, and attain clinical competency as entry-level professional radiographers.

The Medical Imaging program sets forth the following goals:
1. Provide graduates with entry-level knowledge and skills to function as competent radiographers.
2. Produce graduates who will provide an optimal level of patient care.
3. Provide the opportunity to explore advanced level imaging modalities.
4. Provide a general education component of approximately 20 hours which are recognized as transfer classes leading to a baccalaureate degree.
5. At least 75% of program graduates will pass the American Registry of Radiologic Technologists certifying examination on the first attempt.

Interested students may take MIM 110 prior to being admitted to the program. However, the number of students that can be admitted to any clinical education course is limited for any given session. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration.

Preference is given to residents of Community College District 532 (CLC) and residents of other community college districts with which CLC has joint educational agreements.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

To be considered for admission to the Medical Imaging Program, you must:

1. **Attend a MIM information session scheduled. Sessions are schedule for the first Monday of each month (except January, June and August) for 2:00 p.m. Attendance date must be no more than two years prior to the screening deadline of the year for which you are applying. For additional information and session location, please call (847) 543-2880.**
2. **Submit the following records to the Admission and Records Office:**
   A. Application for admission to the college.
   B. Official transcript/test results (sent to the Admission & Records Office directly from the appropriate institution):
      1. Your record from the last high school you attended. Your date of graduation must appear on the transcript. If you did not or will not graduate from high school, you must submit your official GED test results.
      OR
      2. Your college or university (must be regionally accredited) record documenting completion of an Associate Degree or Bachelor Degree. The transcript must indicate which degree you were awarded and the date.
   C. Official transcripts (sent directly to CLC from appropriate institution) from any previous college(s) (must be regionally accredited) showing course work relevant to the MIM selection criteria.
   D. MIM request for screening.
3. **Minimum selection criteria. Official transcripts and records must show that students satisfy all of the following criteria:**
   A. High school graduate or the equivalent.
   B. Language and Math Proficiency.
   C. Cumulative GPA of 2.0 or above for any credit courses completed at CLC.
   D. Credit for two years of high school algebra (Remedial or modified algebra will not count.) with a grade of "C" or better,
      OR completion of MTH 108 at CLC with a grade of "C" or better,
      OR an equivalent course from another accredited college with a grade of "C" or better.
      OR a score on the CLC Math Placement Test that indicates proficiency in MTH 108.
   E. Credit for BIO 121 at CLC with a grade of "C" or better,
      OR an equivalent course from another accredited college with a grade of "C" or better.
   F. Credit for one year of high school physics or chemistry with a grade of "C" or better
      OR completion of CHM 120 or CHM 121 or PHY 121 at CLC with a grade of "C" or better,
      OR an equivalent course from another accredited college with a grade of "C" or better.
   G. Eighteen (18) years of age by mid-term of the fall semester following the screening deadline.
   H. Completion of the Health Occupation Basic Entrance Test (HOBET)

Note: Applicants can take the Health Occupation Basic Entrance Test (HOBET) only twice per screening year. If taken more than two times, the selection committee will only consider the results of the first two exams. It may be taken once between January 1st and June 30th, and once between July 1st and December 31st. Test scores in excess of this limit will not be considered for screening purposes. Please contact the Testing Center at (847) 543-2076 for test dates and times.

Test scores more than five years old will not be considered.

4. Meet minimum technical performance standards as defined for the profession. A Statement of Performance Standards is published in the MIM program brochure.

Screening Deadline: First Wednesday in March. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications

A student must maintain a minimum grade of "C" in each Medical Imaging course to continue in and graduate from the program.

First Fall Semester			
MIM	110	Introduction to Medical Imaging	3
MIM	111	Radiographic Anatomy & Positioning	5
MIM	112	Principles of Radiographic Exposure	3
MIM	170	Orientation to the Clinical Education Center	1
PSY	121	Introduction to Psychology	3
			15
First Spring Semester			
BIO	124	Anatomy and Physiology	5
ENG	121	English Composition I	3
MIM	113	Radiographic Anatomy & Positioning II	5
MIM	114	Clinical Practice I	3
			16
First Summer Session			
MIM	115	Clinical Practice II	3
MIM	116	Advanced Radiographic Procedures I	1
			4
Second Fall Semester			
MIM	210	Technical Aspects of Patient Care	2
MIM	211	Imaging Equipment	6
MIM	212	Clinical Practice III	3
		CMM Communication Elective (CMM 111, CMM 121, CMM 123, or CMM 128)	3
			16
Second Spring Semester			
MIM	214	Advanced Topics in Radiography	6
MIM	215	Clinical Practice IV	3
MIM	216	Computed Imaging	2
		Social & Behavioral Sciences Elective	3
		Humanities & Fine Arts Elective	3
			17
Second Summer Session			
MIM	271	Clinical Practice V	3
			3
		Total Hours	69

Pregnancy Policy
During the first semester in the medical imaging program, all students will be taught basic radiation protection procedures. These instructions will include enough background so that female students will be able to understand the possible biological risks of ionizing radiation to the embryo and fetus.

Female students shall read the United States Nuclear Regulatory Commission (NRC) guide #8.13 on possible biological risks to the fetus and embryo and sign an acknowledgement form stating that they understand these risks. NRC guide #8.13 and the acknowledgement form are found in the appendices of the MIM handbook. The signed forms will be placed in the female student's CLC files.

A. Students may inform the program director and the radiation safety officer should a pregnancy occur during the educational period. The pregnancy then becomes declared. Student may rescind pregnancy declaration at any time.
B. The possible risks to the embryo and fetus shall be reviewed and the review documentation by the radiation safety officer and the student. The student will then be referred to the program director for discussion and documentation of pregnancy options.
C. The student will decide and the program director document one of the following options:

1. A leave of absence may be taken until the birth of the child. All medical imaging grades will be recorded as withdrawn (W) if the student grades are acceptable at the time. This will permit the student to return with no penalty. Student acceptance to clinical facilities depends upon availability of sites.
2. The student may continue in the program upon the written recommendation of the student's obstetrician or prenatal agency which has the student under its care. In this case, two badges will be used, one worn at the collar and on top of the apron during fluoroscopy and one worn on the belt and under the apron during fluoroscopy to record the student exposure and the fetal exposure respectively. Should recorded fetal exposure increase to 500 mrem or be received at a rate greater than 50 mrem per month at any time during pregnancy, the student will be required to take a leave of absence. See (1). All course objectives and rotations shall be equivalent to any and all students enrolled in this particular course. Adherence to policies 1-4 should eliminate almost all fetal exposure. Other counseling on radiation protection procedures shall be done as needed.
3. The student may terminate the program.

The college medical imaging program will counsel students, but has no responsibility for the decisions made by students regarding educational choices if they become pregnant during the educational period.

Technical Performance Standards
Please read the following statements which describe the performance standards relative to Medical Imaging.

All interested students must meet the following performance standards:

a. transport, move, lift or transfer patients from a wheelchair or litter to an x-ray table or to a patient's bed
b. move, adjust and manipulate a variety of x-ray equipment in order to properly align equipment with respect to the patient and image receptor according to established procedures and standards of speed and accuracy (to include mobile equipment).
c. physically place patients in proper positions for x-ray examinations according to established procedures and standards of speed and accuracy.
d. handle stressful situations related to technical, procedural or patient-care situations
e. communicating effectively in order to explain and direct patients as it pertains to their radiologic examinations
f. provide physical and emotional support to patients during radiographic procedures
g. physically respond to situations requiring emergency care of patients until more qualified help can arrive
h. visually review and evaluate radiographic images to identify shades of gray, proper patient positions, proper exposure factors, and other appropriate technical qualities.

For more information on this course of study, students may contact the division office listed or one of the following faculty members. Faculty are available during scheduled office hours to advise students about program and career opportunities.

Medical Imaging

Name	Office	Phone Number	E-mail Address
Lynn Wiechert	B226	(847) 543-2880	lwiechert@clcillinois.edu

Magnetic Resonance Imaging

(Certificate) • Plan 21MR

The Magnetic Resonance Imaging (MRI) certificate prepares radiographers to work in medical facilities as MRI technologists. Graduates of the program are qualified to take the national MRI certification examination given by the American Registry of Radiologic Technologists.

Please note that MRI is an advanced certificate and open only to students who are registered in radiography or radiation therapy by the ARRT or in nuclear medicine technology by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) or in sonography by ARRT or in any sonography-related modality by ARDMS. In addition, students must maintain registration in radiography or radiation therapy by the ARRT or in nuclear medicine technology by the ARRT or NMTCB or in sonography by ARRT or in any sonography-related modality by ARDMS at all times to be eligible for certification and registration in magnetic resonance imaging.

First Semester (Fall of odd years)

MIM	251	MRI Physics & Instrumentation	3
MIM	253	MRI Procedures	2
MIM	272	MRI Practicum*	3
			8

Second Semester

MIM	255	MRI Sectional Anatomy & Pathology	4
MIM	272	MRI Practicum*	3
			7

Total Hours 15

* The Practicum has been designed to be flexible and accommodate a variety of schedules. Actual clinic days and hours will be determined by the student and the instructor.

Consistent with the Mission and Goals of the College of Lake County, the Magnetic Resonance Imaging and the Computed Tomography certificates strive for excellence in preparing students for advanced-level positions in the Medical Imaging profession. By maintaining high academic and clinical standards, graduates receive a certificate in MRI or CT, become eligible for certification as MRI or CT Registered Technologists, and attain clinical competency as advanced professional radiographers.

To be considered for admission to the Magnetic Resonance Imaging or the Computed Tomography Program, students must:

1. Submit the following records to the Admission and Records Office:
A. Application for admission to the college.
B. MRI or CT request for screening.
C. Copy of current certification of your imaging field
D. Official copy of your certification scores sent directly to CLC from the certifying agency.
E. Official transcripts of your related imaging field sent directly to CLC from the institution.
F. If available, documentation of years of experience in a related imaging field.

2. Meet minimum technical performance standards as defined for the profession.

Screening Deadlines:

MRI – The deadline is the first Wednesday in March of odd years. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications. All required materials must be submitted to the Office of Admission & Records by the screening deadlines.

CT – The deadline is the first Wednesday in March of even years. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications. All required materials must be submitted to the Office of Admission & Records by the screening deadlines

The number of students that can be admitted to any clinical education course is limited for any given session. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration. Preference is given to residents of Community College District 532 (CLC) and residents of other community college districts with which CLC has a Joint Education Agreement.

Computed Tomography

(Certificate) • Plan 21MT

The Computed Tomography (CT) certificate prepares radiographers to work in medical facilities as a CT Technologist. Graduates of the program are qualified to take the national CT certification examination given by the American Registry of Radiologic Technologists.

Please note that CT is an advanced certificate and open only to students who are registered in radiography or radiation therapy by the ARRT or in nuclear medicine technology by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB.) In addition, students must maintain registration in radiography or radiation therapy by the ARRT or in nuclear medicine technology by the ARRT or NMTCB at all times to be eligible for certification and registration in Computed Tomography.

See Magnetic Resonance Imaging for screening requirements.

First Semester (Fall of even years)

MIM	252	CT Physics, Instrumentation, and Procedures I	3
MIM	256	CT Sectional Anatomy and Pathology I	3
MIM	273	CT Practicum I	1

Second Semester

MIM	254	CT Physics, Instrumentation, and Procedures II	3
MIM	258	CT Sectional Anatomy and Pathology II	3
MIM	274	CT Practicum II	2

Total Hours 15

* The Practicum has been designed to be flexible and accommodate a variety of schedules. Actual clinic days and hours will be determined by the student and the instructor.

Students must maintain a minimum grade of "C" in each Medical Imaging course to continue in and graduate from the MRI or CT program. In addition, students must maintain a CLC GPA of 2.0 or higher.

For more information on this course of study, students may contact the division office listed or the the following faculty member. Faculty are available during scheduled office hours to advise students about program and career opportunities.

Name	Office	Phone Number	E-mail Address
Lynn Wiechert	B226	(847) 543-2880	lwiechert@clcillinois.edu

MULTIMEDIA COMMUNICATIONS

(Associate in Applied Science) • Plan 23TB
Communication Arts , Humanities & Fine Arts Division, Room B237, (847) 543-2040

The Multimedia Communications Associate in Applied Science Degree provides you with the technical communication skills you'll need to design and produce a variety of commercial, educational and entertaining multimedia products. These skills will require a demonstrable competency in technical writing, standard PC hardware/ software operations, Internet communications, graphic design, audio editing, video editing and multimedia authoring. Building on traditional concepts grounded in technical writing, graphic design, audio, and public speaking, Multimedia Communications seeks to extend conventional communication formats to the realm of electronic multimedia. Products will ultimately appear on computer screens, information kiosks, CD-ROMs, in online formats, or theater-like seminar environments. Using the Internet as a primary source, you'll also master the online research and communication skills you'll need to develop media projects, find materials, and keep up with industry developments.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

General Education Courses

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking ***or***	
CMM	128	Interviewing Practices	3
ANT	121	Introduction to Anthropology ***or***	
PSY	121	Introduction to Psychology ***or***	
PSY	122	Psychology in Business & Industry	3
MTH	114	Applied Mathematics or higher (MTH 117 or 122 recommended)	3
PHI	122	Logic ***or***	
HUM	127	Critical Thinking ***or***	
		Humanities Elective	3
			15

Core Courses

ENG	126	Advanced Composition: Scientific Technical Communications	3
ENG	220	Introduction to Scriptwriting for Video, TV, and Film ***or***	
HUM	123	Introduction to Film ***or***	
HUM	222	Film and Society ***or***	
BUS	121	Introduction to Business ***or***	
		Dance or Music Elective	3
ART	111	Printing Production	3
ART	122	Basic Color and Design	3
ART	222	Introduction to Computer Art	3
COM	111	Introduction to Multimedia	3
COM	115	Internet Fundamentals	3
COM	116	Developing Web Pages	3
ENG	113	Technical Communications Practicum ***or***	
EWE	220	Cooperative Work Experience ***or***	
ENG	266	Professional Communication	3
			27

Web Development Option • Plan 23TB

COM	216	Advanced Online Publishing	3
COM	218	Building Commercial Web Sites ***or***	
COM	219	Building Instructional Web	3
COM	172	Graphics for the Web	1
COM	256	Web Editing	3
COM	257	Web Animation	3
		COM, ART, CIS, or CAD electives	6
			19
		Total Hours	61

CD ROM Development Option • Plan 23TL

COM	216	Advanced Online Publishing	3
COM	173	Introduction to Digital Sound	3
COM	277	CD ROM Development	3
COM	217	Multimedia Authoring ***or***	
CAD	179	CAD Animation and Rendering	3
ART	272	Introduction to Video Production	3
COM	257	Web Animation	3
			21
		Total Hours	61

Multimedia Communications

(Certificate) • Plan 23TH

Written Communications (12 hours)

ENG	120	Technical Composition I ***or***	
ENG	121	Composition I	3
ENG	126	Advanced Composition: Scientific and Technical Communication	3
ENG	113	Technical Communication Practicum	3
ENG	266	Professional Communication	3
			12

Speech Communication (3 hours)

CMM	121	Fundamentals of Speech ***or***	
CMM	122	Business and Professional Speaking	3
			3

Graphics (9 hours)

ART	122	Basic Color and Design	3
ART	111	Printing Production	3
ART	222	Introduction to Computer Art	3
			9

Multimedia Communications (12 hours)

COM	111	Introduction to Multimedia	3
COM	116	Developing Web Pages	3
COM	216	Advanced Online Publishing	3
		COM Elective	3
			12
		Total Hours	36

Multimedia Presentations

(Certificate) • Plan 23TE

COM	111	Introduction to Multimedia	3
AOS	215	Presentation Software	2
COM	277	CD Rom Development	3
ART	267	Introduction to Video Production	3
COM	173	Introduction to Digital Sound	3
		Total Hours	14

Internet Communications

(Certificate) • Plan 23TD

COM	115	Internet Fundamentals	3
COM	116	Developing Web Pages	3
		Total Hours	6

Web Development

(Certificate) • Plan 23TC

COM	111	Introduction to Multimedia	3
COM	115	Internet Fundamentals	3
COM	116	Developing Web Pages	3
COM	172	Graphics for the Web	1
ART	222	Introduction to Computer Art	3
COM	216	Advanced Online Publishing	3
COM	219	Building Instructional Web Sites ***or***	
COM	218	Building Commercial Web Sites	3
COM	257	Web Animation	3
		Total Hours	22

For more information on these programs, students may contact the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Michael Kozien	D108	(847) 543-2553	mkozien@clcillinois.edu
Yang Xiang	D108	(847) 543-2503	yaisng@clcillinois.edu

NURSING

(Associate in Applied Science) • Plan 21NA
Nursing Education
Room D208, (847) 543-2043

The Associate Degree Program in Nursing prepares individuals to practice as registered nurses in entry level positions across health care settings. The program provides a balanced curriculum of general education and nursing courses. Clinical experience is provided at local hospitals and health care agencies.

The program is accredited by the National League for Nursing Accrediting Commission, 61 Broadway 33rd Floor, New York, NY 10006, (212) 363-5555, ext 153. www.nlnac.org. It is approved by the State of Illinois Department of Financial and Professional Regulation, 320 West Washington Street, Springfield, IL 62786, (217) 785-0800, www.IDFPR.com. After the completion of the program, the graduate is eligible to write the National Council Licensure Examination for Registered Nursing and, if completed successfully, he or she may apply to any state in the U.S. for licensure as a registered nurse.

Registered nurses must be licensed by a State Department of Financial & Professional Regulation. To become licensed, applicants must graduate from an approved professional nursing education program, pass an examination for registered nursing, pay the required fees and satisfy requirements of a UCIA criminal history record check. Licenses must be renewed every two years.

The number of students that can be admitted to the first course in the sequence (Nursing 171) is limited for both the fall and spring semester. Therefore, a screening procedure is used to select the academically best qualified from those who request consideration.

Proficiency examinations are available in NUR 171, 172, and 271 ***for qualified candidates who have been admitted to the program.***

Preference will be given to residents of Community College District 532 (including other community college districts with which CLC has a Joint Educational Agreement).

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

To be considered for admission to the Registered Nursing Program, students must:

1. Attend one Nursing Information Meeting: Meetings are scheduled for the first Tuesday of each month. Meetings are scheduled at 10:00 a.m. during oddmonths (January, March, etc.) and 5:30 p.m. during even months (February, April, etc.). The meetings are approximately 2 hours long. Please call the Nursing Education Office at (847) 543-2043, to confirm specific date and location.

2. Submit the following records to the Admission and Records Office:

A. Application for admission to the college.

B. Official transcript/test results (sent to the Admission & Records Office directly from the appropriate institution):

1. Your record from the last high school you attended. Your date of graduation must appear on the transcript. If you did not or will not graduate from high school, you must submit your official GED test results.

AND

2. Your college or university (must be regionally accredited) record documenting completion of an Associate Degree or Bachelor Degree. The transcript must indicate which degree you were awarded and the date.

C. Official transcripts from any previous college(s) (must be regionally accredited) showing course work relevant to the ADN selection criteria, sent directly to CLC from the college(s).

D. Current ADN request for screening.

3. Minimum Selection Criteria: Official transcripts and records must show satisfaction of all of the following criteria:

A. High School graduate or the equivalent.

B. Language and Math proficiency.

C. Cumulative GPA of 2.0 or above for any credit courses completed at CLC..

D. A grade of "C" or better in MTH 102 at CLC or an equivalent course from another accredited college with a grade of "C" or better.
OR a score of 26 or greater on the CLC Math Placement Test, or an ACT math score of 22 or greater
E. A grade of "C" or better for two semesters (1 year) of high school chemistry,
OR a grade of "C" or better in CHM 120 or CHM 121 at CLC or an approved equivalent course from another accredited college with a grade of "C" or better.
F. A grade of "C" or better in BIO 121 at CLC or an equivalent course from another accredited college with a grade of "C" or better. If an applicant has completed both BIO 124 and BIO 125 with a grade of "C" or better or equivalent coursework from another accredited college with a grade of "C" or better. BIO 121 will not be required.
G. Completion of the National League for Nursing Pre-Admission Entrance Examination-RN with a minimum percentile score at or above 30 in each test component (verbal ability, mathematics and science) AND a composite score at or above the 40th percentile.

Note: Applicants can take the NLN Pre-RN exam only twice per screening year. The test can be taken once between January 1st and June 30th, and once between July 1st and December 31st. If taken more than once per screening period, the selection committee only will consider the results of the first exam.

Screening Deadlines: The first Wednesday in January and the first Wednesday in September.

A student must maintain at least a grade of "C" in each nursing course to continue in and graduate from the program.

First Semester

NUR	171	Nursing: Universal Self-Care	7
BIO	124	Anatomy and Physiology	5
PSY	121	Introduction to Psychology	3
			15

Second Semester

NUR	172	Nursing: Developmental Self-Care	7
ENG	121	English Composition I	3
BIO	125	Introduction to Microbiology	4
CMM	127	Intercultural Communication	3
			17

Third Semester

NUR	271	Nursing: Health Deviation Self-Care I	9
CMM	121	Fundamentals of Speech ***or***	
CMM	123	Group Discussion ***or***	
CMM	128	Interviewing Practices	3
SOC	121	Introduction to Sociology	3
			15

Fourth Semester

NUR	272	Nursing: Health Deviation Self-Care II	9
		Humanities & Fine Arts Elective	3
		General Elective[1]	3
			15

Total Hours 62

[1] No course that was used to meet the nursing program screening requirements may be used as a general elective..

For more information on this course of study, students may contact the office of the Director of Nursing Education in Room D208A, (847) 543-2043, the Nursing Education office, D208, or one of the following faculty members. Faculty are available during scheduled office hours to advise students about program and career opportunities.

Name	Office	Phone Number	E-mail Address
Lucille Coleman	D217	(847) 543-2012	lcoleman@clcillinois.edu
Vicki Francis	D220	(847) 543-2331	vfrancis@clcillinois.edu
Nikki Hagen	D220	(847) 543-2871	nlhagen@clcillinois.edu
Willa Harrison	D218	(847) 543-2312	wharrison@clcillinois.edu
Sherry Hernandez	D218	(847) 543-2873	shernandez@clcillinois.edu
Barbara Hunt	D221	(847) 543-2332	bhunt@clcillinois.edu
Cindy MacDonald	D219	(847) 543-2336	cmacdonald@clcillinois.edu
Barbara McNeill	D213	(847) 543-2333	bio579@clcillinois.edu
Carmella Mikol	D215	(847) 543-2329	cmikol@clcillinois.edu
Amy Morton-Miller	D219	(847) 543-2870	amortonmiller@clcillinois.edu
Janet Racina	D213	(847) 543-2874	cmikol@clcillinois.edu
Peggy Welch	D217	(847) 543-2398	jracina@clcillinois.edu

Certified Nurse Assisting

(Certificate) • Plan 21NB
Nursing Education, Room D208, (847) 543-2043

This program prepares men and women for employment as nurse assistants helping those who provide patient care. While the majority of nurse assistants work in long-term care facilities, many are employed in hospitals and other care settings. Includes emphasis on basic nurse assistant skills and related knowledge. Provides campus and clinical laboratory experiences. Focuses on the role of the nurse assistant in the health care team within legal and regulatory parameters.

This program is approved by the Illinois Department of Public Health, 525 West Jefferson, Springfield, IL 62761, (217) 785-X5133. www.idph.state.il.us . Students must satisfy the state required theory and clinical hours of attendance. Students who fail to attend the first day of class or fail to meet the state required hours of attendance throughout the course will not be allowed to continue in the class. Students MUST OFFICIALLY WITHDRAW THEMSELVES from the class by the refund date listed in the current class schedule in order to cancel their financial obligations.

The State of Illinois Health Care Worker Background Check Act of 1995 requires the college to initiate a UCIA criminal history record check on all individuals registering for the program. The UCIA Criminal Background Check is required for the individual to work as a nursing assistant in Illinois. The Student Handbook contains a description of convictions which would disqualify a person from finding employment as a nursing assistant in the State of Illinois. Please consult the Illinois Department of Public Health website at www.idph.state.il.us for further clarification and information regarding this law.

Upon successful completion of this program, the student is eligible to take the state mandated written competency examination for Nurse Assistant Certification.

Prerequisites: Language proficiency or high school diploma or GED or Adult Education reading test, or ENG 93, or ENG 108 or ENG 109, or ENG 121 and at least 16 years of age.

Certificate Requirements:
To receive the Certified Nurse Assisting Certificate, a student must receive a minimum grade of "C" in the following NUR course and maintain a CLC GPA of 2.0 or higher.

NUR	110	Nurse Assisting	7
		Total Hours	7

For more information on this course of study, students may contact the Nursing Education office or the following faculty members. Faculty are available during scheduled office hours to advise students about program and career opportunities.

Name	Office	Phone Number	E-mail Address
Imelda Forsberg	D211	(847) 543-2337	iforsberg@clcillinois.edu
Vicki Francis	D220	(847) 543-2331	vfrancis@clcillinois.edu
Willa Harrison	D218	(847) 543-2312	wharrison@clcillinois.edu
Sherry Hernandez	D218	(847) 543-2873	shernandez@clcillinois.edu

PARALEGAL STUDIES

(Associate in Applied Science) • Plan 22PA
Business Division, Room T102, (847) 543-2041

The Paralegal Studies program prepares students to perform substantive and procedural legal work under the supervision of an attorney. Paralegals work in many different areas of law within the public and private sectors, and assist attorneys in the delivery of efficient and cost-effective legal services. The purpose of the program is to prepare students for successful, productive employment and contributions to the legal and business fields. The program provides the foundation for students to think critically and ethically in performing specifically delegated substantive legal work for which a lawyer is responsible.

First Semester

PLS	110	Introduction to Paralegal Studies.	3
ENG	121	English Composition	3
CMM	128	Interviewing Practices	3
PHI	125	Introduction to Ethics.....	3
CIS	119	Introduction to Office Software.....	3
			15

Second Semester

ENG	126	Advanced Composition: Scientific and Technical Communications	3
PSY	121	Introduction to Psychology ***or***	
SOC	121	Introduction to Sociology	3
PLS	112	Legal Research and Writing I	3
PLS	114	Litigation	3
PLS	116	Contract Law	3
			15

Third Semester

MTH		Mathematics elective (MTH 114 or higher)	3
PSC	121	American National Politics	3
PLS	118	Real Property Law	3
PLS	210	Tort Law.....	3
		Electives.....	6
			18

Fourth Semester

PLS	250	Internship in Paralegal Studies I*	3
		Electives.....	12
			15

Total Hours 63

Electives: As indicated above, a total of 18 credits in elective courses should be selected from the following list of courses.

PLS	212	Corporate and Securities Law	3
PLS	214	Administrative Agency Law	3
PLS	216	Intellectual Property	3
PLS	230	Family Law	3
PLS	232	Probate	3
PLS	218	Bankruptcy Law	3
PLS	299	Topics in Paralegal Studies	1-6
CRJ	211	Criminal Procedural Law	3
BUS	221	Business Law I	3
BUS	222	Business Law II	3
CIS	192	Introduction to Computer Forensics	3

*Students with legal experience may substitute another PLS course.

Paralegal Studies

(Certificate) • Plan 22PB

The Paralegal Studies certificate prepares students to perform substantive and procedural legal work under the supervision of an attorney. Paralegals work in many different areas of law within the public and private sectors, and assist attorneys in the delivery of efficient and cost-effective legal services. The required certificate courses focus on the specific knowledge and skills needed by paralegals in all areas. The elective courses enable students to gain additional knowledge in the legal specialty areas of greatest interest to them. The certificate program is available only to students who already have an Associate's or Bachelor's degree.

Required Courses

PLS	110	Introduction to Paralegal Studies	3
PLS	112	Legal Research and Writing I	3
PLS	114	Litigation	3
		Electives**	12

Electives

PLS	116	Contract Law	3
PLS	210	Tort Law	3
PLS	250	Internship in Paralegal Studies I	3
PLS	212	Corporate and Securities Law	3
PLS	214	Administrative Agency Law	3
PLS	216	Intellectual Property	3
PLS	230	Family Law	3
PLS	118	Real Property Law	3
PLS	232	Probate	3
PLS	218	Bankruptcy Law	3
PLS	299	Topics in Paralegal Studies	1-6
CRJ	211	Criminal Procedural Law	3
BUS	221	Business Law I	3
CIS	192	Introduction to Computer Forensics	3

** Note that 9 credits must have the PLS designation.

NOTE: To earn this certificate students must have completed, in addition to the specialty courses required for the certificate, one of the following: Bachelor degree, Associate in Arts degree, Associate in Science degree or Associate in Applied Science degree.

If you have an Associate of Applied Science(AAS) degree, you must have completed the equivalent of the following College of Lake County general education courses: ENG 121, ENG 126, CMM 128, PHI 125, CIS 119, PSY 121 or SOC 121, PSC 121, MTH 114 or higher. If you have an AAS degree and do not have these courses, you will need to take any you do not have in addition to the 21 credit hours for the certificate.

To download a screening form for the Paralegal certificate program go to http://clcpages.clcillinois.edu/depts/adr/Paralegal_Screening_Form.pdf.

PHLEBOTOMY TECHNICIAN

(Certificate) • Plan 21MP
Biological & Health Sciences Division
Room C140, (847) 543-2042

This certificate program prepares students for entry level competencies as phlebotomists in hospitals, clinics, blood banks, and other health care settings. Students will develop skills in performing phlebotomy procedures during on-campus training followed by a clinical practicum during which students spend eight (8) hours a day, five days a week for three weeks (120 hours) at a clinical site during the daytime shift.

Students must demonstrate English language and math proficiency prior to enrolling in MLT 110. In addition, if a student has a CLC GPA, it must be 2.0 or higher.

Students must have health insurance and satisfy phlebotomy health requirements and have minimum essential functions prior to beginning MLT 116 - Phlebotomy Clinical.

This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 W. Barn Mawr Avenue, Suite 670, Chicago, IL 60631, (773) 714-8880, http://www.naacls,org .

Graduates of this program are eligible for registry by nationally recognized certifying agencies.

A student must maintain at least a grade of "C" in each course to continue the program and obtain a phlebotomy certificate.

Students will be required to comply with clinical site requirements, which may include "Care Worker Criminal Background Check" and drug testing.

Certificate Requirements:
To receive the Phlebotomy Certificate, a student must be a high school graduate or the equivalent and at least 18 years old, receive a minimum grade of "C" in the following MLT courses, and must maintain an overall CLC GPA of 2.0 or higher.

MLT	110	Introduction to Medical Laboratory Technology	2
MLT	115	Phlebotomy Techniques	2
MLT	116	Phlebotomy Clinical	2
		Total Hours	6

For more information on this course of study students may contact the division office listed or the following faculty member. The coordinator is available during scheduled office hours to advise students about program and career opportunities.

Name	Office	Phone Number	E-mail Address
Reme Tesch	B248	(847) 543-2878	rtesch@clcillinois.edu

REFRIGERATION & AIR CONDITIONING

(Associate in Applied Science) • Plan 24RB
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This program provides instruction in air conditioning, heating, and refrigeration. Introductory courses in electricity, electric motors, and theory of refrigeration are included. Advanced work in the commercial area includes work on reach-in and walk-in units found in stores, dairies, and markets. Other areas of study include uses of air conditioning, temperature and humidity control, air circulation, cleaning, installation, and troubleshooting of equipment. Students are required to provide their own basic tools, and to take a national exit exam which will give passing students national recognition on an A.R.I. (Air Conditioning and Refrigeration Institute) National Registry, which goes to Refrigeration, Heating and Air Conditioning employers.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

First Semester

RAC	110	Theory of Refrigeration	4
RAC	174	Applied Electricity	4
MTH	115	Applied Mathematics II	3
ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
RAC	176	Certification Preparation	2
			16

Second Semester

RAC	113	Commercial Refrigeration Systems	4
RAC	119	Electric Motors & Controls	4
RAC	112	Residential AC Systems	4
		Social & Behavioral Sciences Elective	3
			15

Third Semester

RAC	118	Residential Heating Systems	4
RAC	114	Commercial AC Systems	4
PHY	120	Practical Aspects of Physics	4
		Technical Elective[1]	2-4
			14-16

Fourth Semester

RAC	173	Air Movement & Ventilation	4
CMM	111	Communication Skills	3
RAC	117	Installation & Service Problem	4
ECO	110	Economics for Business & Industry	3
		Humanities & Fine Arts Elective	3
			17

Total Hours 62-64

Refrigeration and Air Conditioning

The two certificates allow students to specialize in Heating and Air Conditioning or Refrigeration and Air Conditioning. Both certificates require introductory courses in electricity, motors and controls, and theory of refrigeration system operation. Students are required to provide their own basic tools, and will be given a national exit exam which will give passing students national recognition on an A.R.I. (Air Conditioning and Refrigeration Institute) National Registry, which goes to Refrigeration, Heating and Air Conditioning employers.

Heating & Air Conditioning

(Certificate) • Plan 24RI

RAC	110	Theory of Refrigeration	4
RAC	174	Applied Electricity	4
RAC	118	Residential Heating Systems	4
RAC	119	Electric Motors & Controls	4
RAC	173	Air Movement & Ventilation	4
RAC	115	Installation and Service Practices for Heating & Air Conditioning	4
RAC	112	Residential AC Systems	4
RAC	176	Certification Preparation	2
		Technical Electives[1]	4
		Total Hours	34

Refrigeration & Air Conditioning

(Certificate) • Plan 24RH

RAC	110	Theory, of Refrigeration	4
RAC	174	Applied Electricity	4
RAC	113	Commercial Refrigeration Systems	4
RAC	119	Electric Motors & Controls	4
RAC	117	Installation & Service Problems	4
RAC	176	Certification Preparation	2
		Technical Electives[1]	12
		Total Hours	34

Commercial Refrigeration Technician

(Certificate) • Plan 24RK

RAC	110	Theory of Refrigeration	4
RAC	113	Commercial Refrigeration	4
RAC	174	Applied Electricity	4
		Total Hours	12

Electrical Troubleshooting Technician

(Certificate) • Plan 24RL

RAC	110	Theory of Refrigeration	4
RAC	119	Motors and Controls	4
RAC	174	Applied Electricity	4
		Total Hours	12

Residential Air Conditioning Specialist

(Certificate) • Plan 24RN

RAC	110	Theory of Refrigeration	4
RAC	112	Residential Air Conditioning	4
RAC	174	Applied Electricity	4
RAC	176	Certification Preparation	2
		Total Hours	14

Residential Air Conditioning Technician

(Certificate) • Plan 24RM

RAC	110	Theory of Refrigeration	4
RAC	112	Residential Air Conditioning	4
RAC	174	Applied Electricity	4
		Total Hours	12

Residential Heating Technician

(Certificate) • Plan 24RJ

RAC	110	Theory of Refrigeration	4
RAC	118	Residential Heating	4
RAC	174	Applied Electricity	4
		Total Hours	12

[1]Technical Electives must have previous RAC advisor approval. Typically technical electives are to be chosen from the following: RAC prefix courses including RAC 111, 171, 172, and 175, EWE 220 Cooperative Work Experience I, and ELC 171 Programmable Logic Controllers.

For more information on this course of study students may contact either the division office listed or one of the following faculty members.

Name	Office	Phone Number	E-mail Address
Scott Allen	T010	(847) 543-2511	scottallen@clcillinois.edu
Al Levandowski	T010	(847) 543-2549	alevandowski@clcillinois.edu

SURGICAL TECHNOLOGY

(Associate of Applied Science) • Plan 21SA
Biological & Health Sciences Division
Room C140, (847) 543-2042

Surgical technologists are allied health professionals who are an integral part of the surgical team. They provide intraoperative services under the direct supervision of surgeons or registered nurses. They assist in the decontamination and set up of the operating room suites for each surgical case of the day, organize the sterile supplies and equipment, and maintain the quality, safety, and efficiency of the sterile field throughout the operation.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

Technologists might also be involved in transporting patients to the operating room, assisting to position patients on the operating table, observing vital signs, checking charts, and helping the surgical team with sterile gowns and gloves.

During surgery, technologists must anticipate the needs of the surgeon by watching the progress of the surgical case and knowing the steps of the procedure. They are accountable for care of the surgical instrumentation and equipment before, during, and at the end of surgical cases.

The Surgical Technology certificate is a four-semester sequence (including two summer terms) that prepares students to work in medical facilities as surgical technologists. Graduates of the program are qualified to take the national certification examination given by the Liaison Council on Certification for the Surgical Technologist (LCC-ST).

Program Accreditation
The Association of Surgical Technologists (AST) requires that surgical technologists who are applying for certification for the first time complete their education in a program that is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The CLC surgical technology program is fully accredited by CAAHEP.

Physical and Emotional Ability Performance Standards
Students must meet the following physical and emotional ability standards to satisfactorily perform in the Surgical Technology program:

1. Have full range of motion of joints, fine motor movements of the hands, ability to perform repetitive tasks and the ability to stoop, bend, twist, reach and occasionally kneel and squat.
2. Have the ability to lift and carry objects weighing up to 50 pounds.
3. Be able to push or pull a wheelchair, cart, or gurney.
4. Have adequate hearing which permits the individual to communicate in a rational and coherent manner with others in the English language.
5. Have the ability to examine closely images or other forms of output created by diagnostic equipment; must have color vision; must have good visual acuity for client assessment, medication checking, performing surgical technology procedures, and for documentation.
6. Adapt effectively to environments with high stress to insure client safety.
7. Respond in an emotionally controlled manner in learning situations.
8. Be able to stand and walk 4 to 8 or more hours per clinical session.

Please contact the SRG Coordinator, Soheila Kayoud at (847) 543-2776 or your instructor if you have questions regarding your personal situation and these standards.

Physical Demands for the Surgical Technology

Constant (67 – 100%)
• Talking, seeing, and hearing
• Standing for prolonged periods
• Walking at average speed or faster
• Responding quickly to orders
• Manual dexterity

Frequent (34 – 66%)
• Lifting and moving patients
• Kneeling, bending, stooping
• Pushing, pulling, reaching
• Refraining from nourishment

Occasionally (10 – 33%)
• Exert up to 100 lbs. of force

The number of students that can be admitted to any clinical education course is limited for any given session. Therefore, a screening procedure is used to select the academically best qualified from among those who request consideration.

Preference is given to residents of Community College District 532 (CLC) and residents of other community college districts with which CLC has a Joint Education Agreement.

To be considered for admission to the Surgical Technology certificate program, students must:

1. Attend a Surgical Technology Information Meeting. Attendance date must be no more than two years prior to the screening deadline of the year for which you are applying. Meetings are scheduled for 5:30 p.m. on the first Thursday of every month (except January, June, and August) in Room D204.

2. Submit the following records to the Admission and Records Office:
A. Application for admission to the college.
B. Official transcript/test results (sent to the Admission & Records Office directly from the appropriate institution):
1. Your record from the last high school you attended. Your date of graduation must appear on the transcript. If you did not or will not graduate from high school, you must submit your official GED test results.
OR
2. Your college or university (must be regionally accredited) record documenting completion of an Associate Degree or Bachelor Degree. The transcript must indicate which degree you were awarded and the date.
C. Official transcripts from any previous college(s) (must be regionally accredited) sent directly to CLC from the college(s).
D. Official report of your Health Occupations Basic Entrance Test (HOBET) scores sent directly to CLC.
E. Current SRG request for screening.

3. Minimum Selection Criteria: Official transcripts and records must show satisfaction of all of the following criteria:
A. High School graduate or the equivalent.
B. Language and Math proficiency.
C. Completion of the Health Occupations Basic Entrance Test (HOBET).
D. Attend a surgical technology information session. Sessions are scheduled for the first Thursday of every month (except January, June and August) for 5:30 p.m. in D204.

Note: Applicants can take the Health Occupations Basic Entrance Test (HOBET) only twice per screening year. It may be taken once between January 1st and June 30th, and once between July 1st and December 31st. Test scores in excess of this limit will not be considered for screening purposes. Please contact the Testing Center at 847 543-2076 for test dates and times.

Test scores more than five years old will not be considered.

Screening Deadline: The deadline is the first Wednesday in February. If space is available in the program after the initial screening deadline, qualified students will be accepted in an order based on academic qualifications. All required materials must be submitted to the Office of Admission & Records by the screening deadlines.

Students must maintain a minimum grade of "C" in each of the courses listed below to continue in and graduate from the program. In addition, students must maintain a CLC GPA of 2.0 or higher.

This degree will give students the knowledge and skills needed to be employed as entry level scrub surgical technologists and to gain higher level employment in area hospitals and surgical supply businesses. Graduates of this program will be qualified to sit for the national certification examinations given by the Liaison Council on Certification for Surgical Technologists (LCC-ST).

General Education and Support Courses

ENG	120	Technical Composition I ***or***	
ENG	121	English Composition I	3
CMM	123	Dynamics of Small Group Discussion ***or***	
CMM	128	Interviewing Practices	3
HUM	127	Critical Thinking ***or***	
PHI	122	Logic ***or***	
PHI	125	Introduction to Ethics	3
PSY	121	Introduction to Psychology	3
			12

Surgical Technology Courses per SRG Certification curriculum

SRG	110	Introduction to Surgical Technology	6
SRG	111	Practice Principles, and Introduction to Surgical Procedures	7
SRG	112	Surgical Procedures I	6
SRG	113	Surgical Procedures II	6
SRG	114	Surgical Procedures III	3
SRG	115	Surgical Technology Internship	3
SRG	116	Introduction to Microbiology and Pathophysiology	3
			36

Additional Courses

BIO	121	General Biology I	4
BIO	124	Anatomy and Physiology	5
BIO	125	Introduction to Microbiology	4
HIT	111	Medical Terminology	3
HIT	119	Pharmacology	1
SRG	118	Advanced Surgical Procedures	3
		Elective	3
			19

Total Hours 67

*NOTE: BIO 111 (Human Form and Function) can be used to meet the requirements of the SRG certificate, but BIO 124 (Anatomy and Physiology) is required for the A.A.S. degree.

Surgical Technology

(Certificate) • Plan 21SD

First Summer Semester

BIO	111	Human Form & Function* or	
BIO	124	Anatomy & Physiology*	4-5
			4-5

Fall Semester

HIT	111	Medical Terminology	3
SRG	110	Introduction to Surgical Technology	6
SRG	111	Principles of Practice and Introduction to Surgical Procedures	7
			16

Spring Semester

SRG	112	Surgical Procedures I	6
SRG	113	Surgical Procedures II	6
SRG	116	Introduction to Microbiology and Pathophysiology	3
SRG	117	Surgical Pharmacology	2
			17

Second Summer Semester

SRG	114	Surgical Technology Seminar	3
SRG	115	Surgical Technology Internship	6

Total Hours 43-44

*NOTE: BIO 111 (Human Form and Function) can be used to meet the requirements of the SRG certificate, but BIO 124 (Anatomy and Physiology) is required for the A.A.S. degree.

For more information on this course of study, students may contact the division office listed or the following faculty member.

Name	Office	Phone Number	E-mail Address
Sohila Kayoud	B248	(847) 543-2776	skayoud@clcillinois.edu

TECHNICAL COMMUNICATION

(Associate in Applied Science) • Plan 23TA
Communication Arts, Humanities & Fine Arts Division
Room B237, (847) 543-2040

Technical communicators are employed in a wide variety of occupational areas to produce the written documentation required at each step of the manufacturing process. They provide the communication links between divergent technical specialties as well as between different levels of technical expertise. This program offers training in both communication skills and technical skills. These skills may be gained two ways: by specializing in communications and electing a technical area or areas, or by specializing in a technical area and electing communications courses.

To complete an AAS, students must meet the General Requirements on page 68. In addition, students should select the General Education electives from the requirements listed on page 69. All course prerequisites must be met.

	Hours Required
Written Communication	15
Speech Communication	3
Social Science	6
Mathematics	6
Humanities and Fine Arts	3
Data/Word Processing	4
Graphics	6
Technical specialization in no more than two technical areas	15
General electives (as approved by advisor)	2

Phase One: *(complete these courses before advancing to next phase)*

Written Communication (3 hours)
*ENG 120 Technical Composition I 3

Mathematics Elective (3-4 hours)
(MTH 117, 141 or 122 recommended) 3-4

Graphics (2-4 hours)
ART 129 Introduction to Photography I ***or***
ART 222 Introduction to Computer Art ***or***
DFT 111 Drafting I, ***or***
ELT 111 Electronic Drafting, ***or***
EGR 121 Engineering Graphics 2-5

Social Sciences (3 hours)
PSY 122 Psychology in Business and Industry 3

Technical Specialty (3-6 hours) 3-6

15-21

Phase Two: *(begin after finishing all courses in Phase One)*

Written Communication (3 hours)
ENG 121 English Composition I 3

Speech Communication (3 hours)
CMM 121 Fundamentals of Speech, ***or***
CMM 128 Interviewing Practices 3

Mathematics Elective (3-4 hours)
(MTH 118, MTH 123 or MTH 222 recommended) 3-4

Humanities and Fine Arts (3 hours)
PHI 122 Logic ***or***
HUM 127 Critical Thinking ***or***
Humanities & Fine Arts Elective 3

Technical Specialty (3-7 hours) 3-7

15-20

Phase Three: *(begin after finishing all courses in Phase Two)*

Written Communication (3 hours)
*ENG 126 Advanced Composition: Scientific and Technical Communications 3

Social & Behavioral Sciences Elective 3

Graphics (3 hours)
*ART 111 Printing Production 3

Data/Word Processing (3 hours)
AOS 115 or ART 271 or 1-4
CIS Elective or COM 116 1-4

Technical Specialty (3-6 hours) 3-6

16-19

*Required core course

Phase Four: *(begin after finishing all courses in Phase Three)*

Written Communication (6 hours)
*ENG 113 Technical Communication Practicum ***or*** 3
*EWE 220 Cooperative Work Experience I ***and***
ENG 266 Professional Communication 3-4

NOTE: At this point the required total of 60 hours can be made up by taking additional approved mathematics, graphics or technical specialty electives.

Total Hours 60

Choosing a Technical Specialty
Students who pursue a degree in Technical Communication may choose to specialize in a technical field such as engineering, data processing, electronics or software development. Students interested in careers in advertising, sales management, sales promotion, publicity or public relations should select 15-20 hours from these courses:

BUS	121	Introduction to Business
BUS	122	Principles of Marketing
BUS	212	Business to Business Marketing
BUS	213	Principles of Salesmanship
BUS	221	Business Law

Choosing a dual degree
A student may elect to receive two Associate Degrees, one in Technical Communication and one in a technical field (such as electronics, engineering, etc.). This option is possible because many of the same general education courses are required in both programs, and because 15-20 credit hours of technically specialized courses count towards the A.A.S. in Technical Communication. Thus, a student may achieve this degree in connection with another degree program by adding the necessary written communications and graphics courses.

Technical Communication

(Certificate) • Plan 23TG

Written Communication (15 hours)

*ENG	120	Technical Composition I	3
*ENG	126	Advanced Composition: Scientific and Technical Communication	3
*ENG	113	Technical Communication Practicum	3
ENG	266	Professional Communication	3
ENG	121	English Composition I	3

Speech Communication (3 hours)

CMM	128	Interviewing Practices	3

Graphics (8 hours)

*ART	111	Printing Production	3
COM	116	Developing Web Pages	3
ART	222	Introduction to Computer Art	3

Elective (3 hours)

		Technical Specialty	3
		Total Hours	30

*Required core course

Professional Technical Communication

(Certificate) • Plan 23TI

Available to students who have already completed a degree in another field, and wish to retrain and re-enter the job force.

ENG	120	Technical Composition I	3
ENG	126	Advanced Composition:Scientific and Technical Composition	3
ENG	266	Professional Communication	3
ENG	113	Technical Communication Practicum	3
ART	111	Printing Production	3
COM	116	Developing Web Pages	3
		Total Hours	18

For more information on this course of study, students may contact the division office listed, or the following faculty member:

Name	Office	Phone Number	E-mail Address
Judy Rosenberg	B252	(847) 543-2546	jrosenb@clcillinois.edu

WELDING

(Certificate) • Plan 24WL
Engineering, Math, Physical Sciences Division
Room T102, (847) 543-2044

This certificate program and the specialty certificates prepares the student for employment and advancement in welding and welding related occupations. Advanced standing in the program can be arranged for experienced welders.

Phase One

WLD	170	General Welding	2
WLD	171	Gas Welding, Cutting and Brazing	3
WLD	172	Shielded Metal Arc Welding	3
WLD	113	Welding Blueprint Reading	3
MCD	112	Basic Metallurgy	3
MTH	114	Applied Mathematics I	3
			17

Phase Two

WLD	174	Advanced Shielded Metal Arc Welding....	3
WLD	175	Gas Metal Arc Welding	3
WLD	176	Welding Certification.....	1-3
WLD	117	Applied Fabricating & Processing.....	3
WLD	178	Gas Tungsten Arc Welding	3
MCD	111	Manufacturing Processes ***or***	
MCD	113	Basic Metallurgy II	3
		Technical Elective*	2-3
			18-21

Total Hours 35-38

*Electives may be chosen from the following with advisor approval.

DFT	111	Drafting I
CAD	110	CAD/CAM Concepts
EGR	121	Engineering Graphics
ELC	172	Applied AC Circuit Theory
ELT	170	DC Circuit Fundamentals
EWE	220	Cooperative Work Experience I
IMR	111	Machine Components and Repair
IMR	113	Plumbing and Pipefitting I
MTT	111	Machine Shop I
ROB	111	Introduction to Robotics

Welding Specialty Certificates

Each of the three "specialty" certificates allows an individual to attain proficiency to meet more specific job requirements or career objectives in welding and welding related occupations.

Gas Tungsten Arc Welding (Specialty Certificate)
Plan 24WM

WLD	170	General Welding.....	2
WLD	113	Welding Blueprint Reading	3
MTH	114	Applied Mathematics I.....	3
WLD	171	Gas Welding, Cutting and Brazing	3
WLD	176	Welding Certification.....	1-3
WLD	117	Applied Fabricating & Processing.....	3
WLD	178	Gas Tungsten Arc Welding	3

Total Hours 18-20

Gas Metal Arc Welding (Specialty Certificate)
Plan 24WN

WLD	170	General Welding.....	2
WLD	113	Welding Blueprint Reading	3
MTH	114	Applied Mathematics I.....	3
WLD	175	Gas Metal Arc Welding	3
WLD	176	Welding Certification.....	1-3
WLD	117	Applied Fabricating & Processing.....	3

Total Hours 15-17

Shielded Metal Arc Welding (Specialty Certificate)
Plan 24WO

WLD	170	General Welding.....	2
WLD	113	Welding Blueprint Reading	3
MTH	114	Applied Mathematics I.....	3
WLD	172	Shielded Metal Arc Welding	3
WLD	174	Advanced Shielded Metal Arc Welding....	3
WLD	176	Welding Certification.....	1-3
WLD	117	Applied Fabricating & Processing.....	3

Total Hours 18-20

or more information on this course of study, students may contact the division office listed, or the following faculty member:

Name	Office	Phone Number	E-mail Address
Randall Roettger	T010	(847) 543-2512	rroettger@clcillinois.edu