

## Second Year (continued from inside)

Fall Semester			Credits
ELT	102	Industrial Electricity	4
ENG	113	Professional Technical Writing**	3
MFT	103	Industrial Robots and PLCs	3
MAC	158	Machine Tool Laboratory	2
MAC	159	CAM Operations	2
MAC	160	Machine Tool Laboratory	2
MAC	161	Machine Tool Laboratory	2
			18

Spring Semester			Credits
PHY	121	Technical Physics	3
PSY	132	General Psychology***	2-3
SPE	115	Speech	3
MFT	110	Statistical Process Control	2
MFT	201	PLC Manufacturing Systems	3
MAC	162	Machine Tool Laboratory	2
MAC	163	Machine Tool Laboratory	2
MAC	164	Machine Tool Laboratory	2
			19-20

\*May be substituted with HIS 201 or 202—U.S. History I or II

\*\*May be substituted with ENG 101—English Composition

\*\*\*May be substituted with PSY 126—Human Relations

## 2+2 with SIUC (Capstone)

Students that have completed the two-year manufacturing technology degree (machine tool concentration) may wish to continue their education by completing a B.S. degree in industrial technology through Southern Illinois University Carbondale. Major employers in manufacturing are seeking four-year industrial technology graduates.

Third Year			Fall	Spring
IT	375	Production and Inventory Control	3	-
IT	383	Motion and Time Study	3	-
MAT	125	Data Interpretation	4	-
		Fine Arts Elective	3	-
		Senior Institution Credits	2	-
IT	305	Industrial Safety	-	3
IT	390	Cost Estimating	-	3
IT	392	Facilities Planning	-	3
IT	307	Calculus Applications	-	3
		Humanities Elective	-	3
			15	15

Fourth Year			Fall	Spring
IT	475	Quality Control	3	-
PHYS	230A	Mechanics and Heat	3	-
PHYS	253A	Lab	1	-
		Biological Science Elective	3	-
		Social Science Elective	3	-
		Senior Institution Credits	2	-
IT	240	First Line Supervision	-	3
IT	440	Manufacturing Policy	-	3
IT	485	Quality Control II	-	3
		Technical Elective	-	3
		Multi-cultural Elective	-	3
			15	15

For more information, call one of the following toll-free numbers:

Carbondale.....	549-7335
Cartersville .....	985-3741
Crab Orchard.....	1-800-851-4720
DeSoto.....	549-7335
Du Quoin .....	542-8612, 542-9210
Elkville .....	542-8612
Gorham.....	1-800-851-4720
Herrin.....	985-3741
Johnston City.....	985-3741
Marion.....	985-3741
Murphysboro.....	549-7335
Trico Area.....	1-800-851-4720
West Frankfort .....	937-3438, 932-6639
TTY (Hearing Impaired).....	985-2752



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John A. Logan College website  
<http://www.jalc.edu>

John A. Logan College  
 Cartersville, Illinois 62918

John A. Logan College does not discriminate on the basis of race, religion, color, national origin, disability, age, or gender.

# Computer-Aided Machining



Leading to an Associate Degree in  
**Manufacturing Technology**



John A. Logan College  
 Cartersville, Illinois

## Career Opportunities

Graduates from this program can expect to be employed as job-shop machinists, production machinists, maintenance machinists, machine setters, operators and tenders, metal, wood, and plastic computer-control programmers and operators, and apprentice tool and die makers.

Job opportunities for machinists continue to be excellent. Compared to other production occupations, technology is not expected to significantly affect the employment of machinists. Due to the modern high-tech production techniques, employers prefer machinists who have a wide range of skills and are capable of performing a variety of tasks.

**Salary:** The median hourly earnings of machinists range from \$12.50 to \$25.00 per hour, depending upon their skill level.

## Facilities

The Computer-Aided Machining Program at John A. Logan College is equipped with the latest state-of-the-art equipment. The machining lab is equipped with two computer numerical controlled machining centers, a 3-axis milling center, a wire EDM machine, state-of-the-art CAD/CAM software, and the necessary conventional lathes, milling, drilling, and grinding machines to train our students in the necessary skills and practices needed for today's high-tech industrial environment.

## 3-in-1 Computer-Aided

### Machinist Program

The Computer-Aided Machinist Program is divided into three steps to earn an associate degree. Students may achieve a one-year certificate degree, an advanced certificate degree, or an associate degree in manufacturing technology.

## Step One — Computer-Aided Machining (One-Year Certificate) Program

Fall Semester		Credits
MAC 150	Machine Tool Operations	2
MAC 151	Machine Tool Laboratory	2
MAC 152	Machine Tool Laboratory	2
MAC 153	Machine Tool Laboratory	2
MAC 180	Blueprint Reading	3
DRT 185	Computer Graphics I	2
MAT 106	Technical Mathematics or MAT 107	4
		17

Spring Semester		Credits
MFT 101	Production Technology	3
MAC 154	Introduction to CNC	2
MAC 155	Machine Tool	2
MAC 156	Machine Tool Laboratory	2
MAC 157	Machine Tool Laboratory	2
IND 122	CAD/CAM Operations	2
IND 201	Metallurgy	2
		15

Optional	Credits
ATI 200 Applied Technologies Internship	1-4

## Step Two — Computer-Aided Machining (Advanced Certificate) Program

Fall Semester		Credits
MAC 150	Machine Tool Operations	2
MAC 151	Machine Tool Laboratory	2
MAC 152	Machine Tool Laboratory	2
MAC 153	Machine Tool Laboratory	2
MAC 180	Blueprint Reading	3
DRT 185	Computer Graphics I	2
MAT 106	Technical Mathematics or MAT 107	4
		17

Spring Semester		Credits
PSY 128	Human Relations*	2-3
MFT 101	Production Technology	3
MAC 154	Introduction to CNC	2
MAC 155	Machine Tool Laboratory	2
MAC 156	Machine Tool Laboratory	2

Spring Semester (continued)		Credits
MAC 157	Machine Tool Laboratory	2
IND 122	CAD/CAM Operations	2
IND 201	Metallurgy	2
		17-18

Fall Semester		Credits
CIM 102	Machine Tool Operations	4
ENG 113	Professional Writing**	3
MAC 158	Machine Tool Laboratory	2
MAC 159	CAM Operations	2
MAC 160	Machine Tool Laboratory	2
MAC 161	Machine Tool Laboratory	2
ELT 103	Industrial Robots and PLCs	3
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\*May be substituted with PSY 132—General Psychology

\*\*May be substituted with ENG 101—English Composition

## Step Three — Manufacturing Technology (Machine Tool Concentration) Program

First Year Fall Semester		Credits
DRT 185	Computer Graphics I	2
MAT 106	Technical Mathematics or MAT 107	4
MAC 150	Machine Tool Operations	2
MAC 151	Machine Tool Laboratory	2
MAC 152	Machine Tool Laboratory	2
MAC 153	Machine Tool Laboratory	2
MAC 180	Machine Trades Blueprint Reading	2
		16

Spring Semester		Credits
IND 122	CAD/CAM Operations	2
PSC 131	American Government*	3
MFT 101	Production Technology	3
MAC 154	Introduction to CNC	2
MAC 155	Machine Tool Laboratory	2
MAC 156	Machine Tool Laboratory	2
MAC 157	Machine Tool Laboratory	2
		16

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