MANUFACTURING TECHNOLOGY
Machine Tool Concentration
Degree Program

Career Curriculum
Associate in Applied Science
Minimum Hrs. 70
Major Code: 1.2 150411C

FIRST YEAR – FALL SEMESTER

Dept.	No.		Hrs.	Gr.
DRT	185	Computer Graphics I	2	____
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	____
MAT	106	Technical Math OR	4	____
		MAT 107 Technical Math with Applications	17	

FIRST YEAR – SPRING SEMESTER

Dept.	No.		Hrs.	Gr.
IND	122	CAD/CAM Operations	2	____
MAC	154	Introduction to CNC	2	____
MAC	155	Machine Tool Laboratory	2	____
MAC	156	Machine Tool Laboratory	2	____
MAC	157	Machine Tool Laboratory	2	____
MFT	101	Production Technology	3	____
PSC	131	American Government OR	3	____
		HIS 201 United States History I OR		
		HIS 202 United States History II		
WEL	150	Oxy-Acetylene Fusion Welding	1	____
			17	

[1]Requires a grade of "C" or higher.

WEL 162 T. I. G. Welding highly recommended.

***Note:** Students attending a 4-year university will need PSY 132 and SPE 116.

SECOND YEAR – FALL SEMESTER

Dept.	No.		Hrs.	Gr.
ENG	113	Professional Technical Writing OR ENG 101 English Composition I[1]	3	____
IDM	210	Hydraulics and Pneumatics	3	____
IND	201	Metallurgy	2	____
MAC	158	Machine Tool Laboratory	2	____
MAC	159	CAM Operations	2	____
MAC	160	Machine Tool Laboratory	2	____
MAC	161	Machine Tool Laboratory	2	____
MFT	103	Industrial Robots and PLCs	3	____
			19	

SECOND YEAR – SPRING SEMESTER

Dept.	No.		Hrs.	Gr.
MAC	162	Machine Tool Laboratory	2	____
MAC	163	Machine Tool Laboratory	2	____
MAC	164	Machine Tool Laboratory	2	____
MFT	201	PLC Manufacturing Systems	3	____
PHY	121	Technical Physics	3	____
PSY	132	General Psychology* OR	2-3	____
		PSY 128 Human Relations		
SPE	115	Speech OR	3	____
		SPE 116 Interpersonal Communications*	17-18	

Optional

Dept.	No.		Hrs.	Gr.
ATI	200	Applied Technologies	1-3	____

John A. Logan College reserves the right to modify this curriculum guide as needed.
Please verify with your academic advisor the accuracy and time lines of this document.

Effective Date: Spring, 2006

Additional Information: Manufacturing Technology is the study of all of the technologies used to operate a manufacturing business and to increase overall efficiency and productivity in manufacturing. The concern is for how the product is manufactured, distributed, documented, and supported. The following are included in the study of Manufacturing Technology: industrial robots, CAD, CAM, CAD-CAM, PLCs, materials handling, storage and retrieval, payroll, invoicing, receiving, bid specs, production scheduling, record keeping, order entry, and inventory control.

Both two-year associate degree and certificate programs are offered. The degree programs are designed to prepare men and women for a variety of positions in manufacturing. The student will be exposed to the total manufacturing environment, including computer-aided design (CAD), computer-aided manufacturing (CAM), and manufacturing resource planning (MRP). Students will be exposed to a broad knowledge of the basic aspects of manufacturing including these: CAD/CAM, industrial electricity, industrial robots, PLCs, material handling systems, storage and retrieval systems, quality control, production control, manufacturing control, and computer machine tool set-up and operation. Students will design and manufacture a product on an integrated CIM cell.

Career Opportunities: Entry level position as a CAD operator or draftsperson; robot programmer; shop floor manager; computer-aided machine tool operator; CAD/CAM operator; electronics technician; software support staff.