



**MANUFACTURING TECHNOLOGY**  
**Machine Tool Concentration**  
**Degree Program**

Career Curriculum 00CIM0091  
 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 113 Introduction to Contemporary Mathematics OR	3-4 16-17	___
MAT 106 Technical Mathematics OR		___
MAT 107 Technical Math with Applications OR		___
MAT 120 Elementary Statistics		___

**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	___

<sup>1</sup> Requires a grade of "C" or higher.

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

The minimum general education component for the Associate in Applied Science degree requires satisfactory completion of at least 15 semester credits of coursework distributed over the disciplines of Communications, Mathematics, Arts and Humanities, Physical and Life Sciences, and Social and Behavioral Sciences. The curriculum guide for each Associate in Applied Science degree program will spell out the course requirements or options available for satisfying the general education component. With appropriate justification and in consultation with your academic advisor, a request to substitute a course for one recommended in this guide may be granted with the appropriate approvals from the Department Chair, Dean for Instruction and Vice-President for Instruction. However, no substitutions are allowed in Groups I-III (General Education Component; GECC) of the curriculum guide (see the Associate in Applied Science general degree requirements worksheet in the John A. Logan College Catalog).

Students planning to transfer and pursue a baccalaureate degree should, when given a choice, enroll in the general education course that is IAI GECC approved and articulated with participating Illinois institutions.

*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: Fall 2008**

**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 draftsman; robot programmer; shop floor manager; computer-aided machine tool operator; CAD/CAM operator; electronics technician; software support staff.

**SECOND YEAR – FALL SEMESTER**

Dept. No.	Hrs.	Gr.
ENG 113 Professional Technical Writing OR	3	___
ENG 101 English Composition I <sup>1</sup>		___
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	3	___
SPE 115 Speech	3 18	___

**OPTIONAL**

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