

# INDUSTRIAL MANUFACTURING: MACHINE PROCESSES, CERTIFICATE (607)

## About Our Program

The Machine Processes certificate provides students with the opportunity to gain basic and intermediate level experience in the areas of computer numerical control (CNC) and computer-aided drafting (CAD).

## Nature of Work and Employment

Completers of this program will be fluent in CNC machine operation and will have entry-level setup skills. They will have the knowledge and skill to gain employment in manufacturing facilities utilizing CNC machining.

## Requirements

First Semester		Hours
DRAF 105	Computer Aided Drafting I	3
DRAF 110	Print Reading and Inspection	2
MTEC 151	Introduction to CNC Machining <sup>1</sup>	3
MTEC 280	CNC Lathe I <sup>1</sup>	3
Select one of the following:		3
MATH 111	Technical Math <sup>1</sup>	
higher level math course		
<b>Hours</b>		<b>14</b>

### Second Semester

MTEC 164	Manufacturing Processes	3
MTEC 270	CNC Mill I <sup>1</sup>	3
WELD 130	Introduction to Welding	3
Select one of the following:		3
BUSN 141	Business Communications <sup>1</sup>	
ENGL 121	Rhetoric and Composition I <sup>1</sup>	
COMM 101	Technical Communications <sup>1</sup>	
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>26</b>

<sup>1</sup> Course has a prerequisite. See course description.

## Program Outcomes

- Interpret and utilize technical drawings as they apply to both manufacturing and quality control.
- Identify the processes required to manufacture a component.
- Use calipers, micrometers, and other basic inspection gauges to measure, inspect, and document features on a manufactured component.
- Apply industry related mathematics.
- Operate and troubleshoot CNC lathes and mills.

## Program Contacts

Call Highland at 815-235-6121 for the following program contacts:

- Dr. Matt Magee, Dean of Agriculture, Business & Technology
- Aaron Sargent, Industrial Technology Faculty
- Vicki Schulz, Student Advisor/Transfer Coordinator