INDUSTRIAL MANUFACTURING, ASSOCIATE OF APPLIED SCIENCE (617)

About Our Program

Industrial Manufacturing graduates will enter industry with the wide range of skills that local and regional employers are seeking.

In addition to experience with CNC machining and CAD, they will be versed in welding and other manufacturing processes.

The degree includes an internship where students develop skills while applying the knowledge gained while earning their degree.

Nature of Work and Employment

Completers of this program will be fluent in CNC machine setup, programming, and operation. Students will also be well versed in CAD and welding, which will prepare graduates for employment in facilities utilizing various methods of manufacturing.

Requirements

First Semester		Hours
DRAF 105	Computer Aided Drafting I	3
DRAF 110	Print Reading and Inspection	2
MTEC 101	Int Geometric Dimen/Tolerance (offered every other Fall)	1
MTEC 151	Introduction to CNC Machining [1]	3
MTEC 270	CNC Mill I [1]	3
Select one of the following:		3
MATH 111	Technical Math [1]	
or higher level math course		
	Hours	**15**
Second Semester		
DRAF 260	CAD-3D Solid Modeling [1]	4
INFT 180	Intro to Information Systems [1]	3
MTEC 164	Manufacturing Processes	3
MTEC 280	CNC Lathe I [1]	3
	Hours	**13**
Summer		
OCED 290	Workplace Experience [1]	4
	Hours	**4**
Third Semester		
MTEC 285	Advanced CNC Machining [1]	3
OCED 290	Workplace Experience [1]	2
SPCH 191	Fund of Speech Communication	3
WELD 130 or WELD 135	Introduction to Welding or Shield Arc/Oxyacetylene Weldng	3
Technical Elective		3
	Hours	**14**
Fourth Semester		
MTEC 165	3D Printing [1]	2
WELD 232	Interm Welding/Fabrication [1]	3
Technical Elective		3
Diversity Elective		3
Select one of the following:		3
BUSN 141	Business Communications [1]	
ENGL 121	Rhetoric and Composition I [1]	
COMM 101	Technical Communications [1]	
	Hours	**14**
	Total Hours	**60**

[1] Course has a prerequisite. See course description.

Program Outcomes

Students who complete this program of study will be able to:

- 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.
- Program, set-up, operate, and troubleshoot CNC machine tools utilizing G-code programming.
- Use CAD/CAM software to generate a part model and a G-code program tool path.
- Create technical drawings with proper views, dimensions, tolerances, and specifications.

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