Industrial Manufacturing (617)

ASSOCIATE OF APPLIED SCIENCE

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 health and safety instruction and an internship where students develop skills while applying the knowledge gained while earning their degree.

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.

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.

Program Contacts

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

- Scott Anderson, Vice President of Business, Technology, and Community Programs
- Aaron Sargent, Industrial Technology Faculty
- Vicki Schulz, Student Advisor/Transfer Coordinator

First Semester — 14 Credit Hours

	DRAF	105	Computer Aided Drafting	3
	DRAF	110	Print Reading and Inspection	2
*	MATH	111	Technical Math (or higher level)	3
*	MTEC	151	Introduction to CNC Machining	3
*	MTEC	270	CNC Mill	3

Second Semester — 14 Credit Hours

*	DRAF	260	CAD-3D Solid Modeling	4
*	INFT	180	Introduction to Information Systems	3
	MTEC	164	Manufacturing Processes	3
*	MTEC	280	CNC Lathe	3
	OCED	117	Occupational Safety	1

Summer — 4 Credit Hours

*	OCED	290	Workplace Experience	4

Third Semester — 14 Credit Hours

*	MTEC	285	Advanced CNC Machining	3
*	OCED	290	Workplace Experience	2
	SPCH	191	Fundamentals of Speech Communications	3
	WELD	130	Introduction to Welding (or WELD 135)	3
			Technical Elective	3

Fourth Semester — 14 Credit Hours

*	BUSN	141	Business Communications (or ENGL 121 or COMM 101)	3
*	MTEC	165	3D Printing	2
*	WELD	232	Intermediate Welding and Fabrication	3
			Technical Elective	3
			Diversity Elective	3

Total Credit Hours = 60

* Course has a prerequisite. See course description.