

Machining & Manufacturing Technology

Award Type: Certificate of Achievement

Machining and Manufacturing Technology is an occupational program designed to prepare students for a variety of entry-level positions in a manufacturing environment. These positions may include manual machine operator, computer numerical control operator, computer aided drafting and manufacturing (CAD/CAM) designer, manufacturing generalist or programmer. Classes are designed for first-time college students, re-entry students, and current industry employees requiring skill enhancement or upgrade training. Learned skills may include the ability to operate conventional and computer numerical controlled (CNC) machinery, program CNC machinery, operate various CAD/CAM systems and interpret blueprints. A certificate in Machining and Manufacturing Technology is structured to encourage transfer to a comparable program at a four-year college or university.

The graduate of the Certificate of Achievement in Machining & Manufacturing Technology will:

- Understand the importance of attendance and punctuality.
- Have experience working in collaboration with others.
- Possess essential academic skills in reading, writing, math, using and locating information and basic computer competency.
- Communicate effectively and interpret key instructions.
- Understand the basics of safety, quality assurance and continuous improvement, or lean manufacturing.
- Function effectively in a manufacturing environment containing a variety of production, welding, machining and metal-forming or CNC equipment.
- Possess a variety of basic and high-tech skills consistent with modern manufacturing processes.

Program Requirements

A major of 30 units is required for the certificate.

Required core courses (18 units):

Course Number	Course Title	Units
MT 109	Survey of Machining and Manufacturing	4.0
MT 110	CNC G Code	4.0
MT 111	CNC CAD/CAM	4.0
MT 115	Lean Manufacturing	
MT 117	Print Reading and Interpretation	3.0

Plus 12 units in the following area of specialization:

Course Number	Course Title	Units
MT 112	CNC Multi-Axis	4.0
MT 113	SolidWorks 1	3.0
MT 114	SolidWorks 2	3.0
MT 116	Mastercam 1 (CAD/CAM)	3.0
MT 118	Understanding and Measuring GD&T	3.0
MT 300	Shop Math and Measurement	3.0
MT 301	Introduction to Safety	2.0
MT 302	Quality & Process Improvement	2.0
MT 303	Manufacturing Processes and Production	2.0
MT 304	Maintenance Awareness	2.0