

- Use concepts of the scientific and mathematical method in areas such as biological and physical sciences in applications of electrical theory, rigging, and hydraulics commonly used in modern world class manufacturing processes,
- Apply various theories of interpersonal and individual relationships and constructive team participation in work situations where common goals exist.

- Be able to integrate scientific and mathematical concepts in diagnosis and repair of industrial equipment,
- Apply scientific and mathematical concepts as well as technological applications in the improvement of work process and disciplines to aid team-building, process and product improvement, as well as assist in other life roles.

MIT Certificate Requirements

All courses in Career Pathways certificates count toward the AAS degree in Manufacturing and Industrial Technology. When you have finished the pathway certificate, you have completed the first step in the degree.

Manufacturing Technician Certificates

The following certificates in **Manufacturing Technician** all share the same core courses. After completing the core, students may choose to complete one emphasis area or complete all emphasis areas in the following areas: **Welding, Machining, Electrical** or **Millwright**. Students who are considering apprenticeships may also start here.

CORE courses for Manufacturing Technician: Welding, Machining, Electrical, & Millwright Certificates:

IMT 106	Hand Tool/Power Tool Use & Safety	1
IMT100	Exploring Manufacturing & Apprenticeship	1
IMT102	Industrial Safety	4
IMT103	Industrial Math	4
IMT222	Practices and Measurement	3
IMT230	Preventative Maintenance	3
MCH102	Intro to Manufacturing	3
WLD102	Blueprint Reading	4

AND complete the following courses in either one or all areas of emphasis:

Machining Emphasis

MCH130	Machine Shop Trigonometry	3
MCH135	Basic Measuring and Layout Tools	3

Welding Emphasis

WLD111	SMAW/Oxy-acel Cutting	4
WLD112	SWAW (7018)	4

Electrical Emphasis

ELT110	Electricity for the Non-electrician	2
ELT125	Basic Programmable Controllers (PC-Based)	2
ELT126	Intermediate Programmable Controllers (PC-Based)	2

Millwright Emphasis

DRF270	SolidWorks Fundamentals	3
IMT104	Rigging	3
IMT105	Industrial Hydraulics I	3

In addition to the Manufacturing Technician Certificates, the program carries the Certified Production Technician Certificate. Students who successfully complete this certificate will also earn national certification through the Manufacturing Skills and Standards Council (MSSC). MSSC certification establishes the student's competence in Safety, Quality, Continuous Improvement, Manufacturing Processes & Production, and Maintenance Awareness.

Certified Production Technician: 13 Credits

IMT102	Industrial Safety	4
IMT222	Practices and Measurement	3
IMT230	Preventative Maintenance	3
MCH102	Intro to Manufacturing	3

You may complete more than one of these certificates and the core will count toward all of them.