

Credentials Overview — Industrial Engineering Technician



Credential Options

Certified Manufacturing Associate/SME+ToolingU

*recommended

SME's Certified Manufacturing Associate (CMfgA) is an industry certification focused on basic manufacturing concepts, demonstrating an individual's potential for high-demand, entry-level manufacturing roles. It was designed for individuals with little or no exposure to manufacturing or those with some foundational knowledge who may not currently possess enough knowledge or experience for more advanced technical certifications.

Covering fundamental topics such as shop math, assembly, maintenance, machining, inspection, and more, this nationally recognized certification demonstrates that the individual has a basic knowledge of manufacturing and may be an ideal candidate for entry-level manufacturing employment.

After earning the CMfgA, individuals are encouraged to explore a variety of available career pathways in manufacturing.

Completion Time: **Testing available year-round; preparation time will vary. 20-25 hours recommended preparation time for online coursework.**

Difficulty Level (*Low, Moderate, High, Very High*): **High.**

Certified Production Technician/MSSC

The purpose of the Certified Production Technician (CPT) program is to recognize through certification individuals who demonstrate mastery of the core competencies of manufacturing production at the front-line through successful completion of assessments.

Completion Time: **12-18 months.**

Difficulty Level (*Low, Moderate, High, Very High*): **Very High.**

Cost Details

Preparation+Exam:

\$215.00

- Includes 1-year subscription to ToolingU.
- Subscription includes all learning modules, exam, and retake.

Preparation+Exam:

\$2,200

- Includes MSSC learning through Front Range Community College.
- Includes exams for all four modules.



Credentials & Coursework — Industrial Engineering Technician

Higher Ed Coursework (Year 3)

Course	Description	Approx. Cost*
MAC 105 Safety/Manufacturing Environment	Introduces Occupational Safety and Health Administration (OSHA) federal and state regulations, industrial practices, and accident investigation techniques.	\$800
MTE 106 Print Reading+Machinists	Instructs students in reading and understanding industrial prints. This course covers basic drafting and print standards, fundamentals of shape description, size description, industrial drawing types, and specialized parts and prints,	\$800
MAC 120 Manufacturing Processes	Introduces basic lathe applications which will consist of identifying lathe components and controls, understanding turning safety, calculating speeds and feeds, using various tools and tool holders.	\$800
MTE 135 Lathe Operations	Introduces basic lathe applications which will consist of identifying lathe components and controls, understanding turning safety, calculating speeds and feeds, using various tools and tool holders.	\$800
MAC 145 Production Manufacturing	Teaches students to identify the major parts of the vertical mill, align a vise, use an indicator, edge finder, and boring head, perform simple indexing, mill flat, square surfaces and slots, drill, bore, and tap holes.	\$800

*Training and Higher Ed Coursework may vary based on the needs of the employer and the trajectory of the apprentice. The above information suggests a sample of what the apprenticeship would entail.