

Credentials Overview — Mechanical 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 — Mechanical 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 101 Intro. to Machine Shop	Covers safety procedures, use of bench tools, layout tools, power saws, drill presses, precision measurement tools, and various hand tools related to the machine shop.	\$800
MAT 108 Technical Mathematics	Covers mathematical material designed for career and technical students. Topics include measurement, algebra, geometry, trigonometry, and vectors. These are presented at an introductory level.	\$800
ELT 106 Fundamentals: AC/DC	Introduces the basic skills needed for many careers in electronics and related fields. Covers the operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes.	\$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.