



MICHIGAN

MANUFACTURING

TECHNOLOGY

CENTER

CERTIFICATION

GLOBAL ROBOTICS MARKET EXPECTED TO REACH \$74 BILLION BY 2026*

To help meet the high demand for advanced manufacturing and robotics talent in our country, Tooling U-SME is introducing The Robotics in Manufacturing Fundamentals certification training program. It is designed to help prepare high school and college students, dislocated workers, under-employed individuals, veterans, at-risk youth and others to start a new career in the field of robotics.

The 22-class online training program from Tooling U-SME can be bundled with the industry recognized Robotics in Manufacturing Fundamentals credential. The training program prepares those currently looking to upskill or reskill into manufacturing careers before pursuing equipment-specific or career pathway-specific training in robotics. It can be used by manufacturers as an effective onboarding program for new employees.

SHORT-TERM, COMPREHENSIVE TRAINING

The online classes from Tooling U-SME cover topics agreed upon by manufacturing experts as being relevant for foundational robotics knowledge across a wide-range of industries. The information is presented in an engaging and interactive format for maximum effectiveness, and pre-and post-assessments measure a student's increased knowledge.

Classes are self-paced, typically taking 60 minutes to complete. The 22-class training program can be completed in just a few weeks (typically less than one month). They are conveniently accessible anytime, anywhere on desktops and laptops, and on tablets and phones with the Tooling U-SME app.

BUILD A COMPREHENSIVE FOUNDATION OF KNOWLEDGE

This program focuses on the fundamentals of robotics required as a starting point for any career pathway a candidate may pursue in the field of robotics:

- Introduction to Manufacturing
- Applied Mathematics
- Robotic Applications
- Robotic Systems and Components
- Robotic Programming Concepts

EARN A NATIONALLY RECOGNIZED CERTIFICATION

The SME Robotics in Manufacturing Fundamentals (RMF) credential, developed with the Robotics Education & Competition (REC) Foundation and FIRST®, is focused on the fundamentals of manufacturing robotics. The credential can help individuals begin a lifelong career in an industry where there is opportunity for advancement and good-paying jobs.

* Global Robotics Market — Growth, Trends, Covid-19 Impact, and Forecasts (2022-2027), Mordor Intelligence.

Choose a starting point based on employee's experience or company goals for a quick-start training solution.

ROBOTICS IN MANUFACTURING FUNDAMENTALS (RMF)



ROBOTICS IN MANUFACTURING FUNDAMENTALS

Suggested order to complete the 22-online courses:

Manufacturing **101**

Units of Measurement **112**

Introduction to Robotics **201**

Robotic Safety **211**

Ergonomics **102**

Bloodborne Pathogens **161**

Fire and Safety Prevention **181**

Forces of Machines **121**

Cell Design and Pull Systems **161**

Production System Design and Development **136**

Robot Applications **215**

Robot Components **221**

End Effectors **225**

Limit Switches and Proximity Sensors **231**

Robot Power and Drive Systems **265**

Introduction to Collaborative Robots **275**

Introduction to Automation **291**

Logic and Line Diagrams **312**

Robot Sensors **315**

Robot Control Systems **317**

Visions Systems **320**

Concepts and Robot Programming **341**