SMART MANUFACTURING

PROFESSIONAL DEVELOPMENT

SAFER, FASTER, MORE EFFICIENT MANUFACTURING WITH INDUSTRY 4.0

Manufacturing is quickly evolving and now requires new knowledge and skills. Technologies such as digital security, robotics, IIOT solutions, and 5G networks and infrastructure are changing the industry and the way manufacturers work, creating demand for workers who are skilled in these advanced technologies. Forward-thinking manufacturers are investing in training programs to build the Industry 4.0 capabilities needed to remain competitive

FLEXIBLE AND CONVENIENT

Online classes are self-paced, typically taking 60 minutes to complete. They are easily and conveniently accessible on desktops and laptops, and on tablets and phones with the Tooling U-SME app.

Online Training offers:

- Content developed by industry experts
- Accessible anytime, anywhere
- Self-paced
- Predefined curriculum for each job role
- Engaging and interactive content
- Pre- and post-training knowledge assessments
- Access to Tooling U-SME's Learning Management System (LMS)
- Guidance from our Client Success team, including advice, insights, and ideas built on best practices and years of experience

EFFECTIVE COMBINATION OF CLASSES

This Industry 4.0 training program offers a comprehensive overview of the competencies needed to take advantage of the smart manufacturing technologies that are driving the industry forward. This series includes the following classes:

- Introduction to Additive Manufacturing
- Additive Manufacturing Safety
- The Basic Additive Manufacturing Process
- Additive Manufacturing Methods and Materials
- Introduction to Hybrid Manufacturing
- Rapid Prototyping
- Additive Manufacturing: Prototype to Production
- Design for Additive Manufacturing
- Additive Manufacturing Materials Science
- Integrating Additive Manufacturing with Traditional Manufacturing
- Additive Manufacturing as a Secondary Process
- Nondestructive Testing for Additive Manufacturing
- The Additive Manufacturing Supply Chain
- Managing the Additive Manufacturing Supply Chain
- Hybrid Manufacturing with Directed Energy Deposition
- Lightweighting with Additive Manufacturing
- Design for Fused Deposition Modeling
- Design for Material Jetting
- Design for Directed Energy Deposition
- Design for Laser Powder Bed Fusion
- Design for Binder Jetting
- Overview of Additive Manufacturing (3D Printing) Technologies
- Additive Manufacturing – Implementation and Best Practices
- Cybersecurity for Manufacturing Basics
- Cybersecurity for Manufacturing: Malware Overview
- Introduction to the Industrial Internet of Things
- Data Collection Fundamentals
- Automatic Identification Technology
- Cybersecurity for Manufacturing: Hacking Overview
- Cybersecurity for Manufacturing: Wireless Networks
- Introduction to Digital Networks
- Data Collection: Inventory and Maintenance
- Introduction to Digital Twin
- Introduction to Digital Thread
- Introduction to Machine Learning and Artificial Intelligence
- Machine Learning and Artificial Intelligence Applications
- Applications for Robots
- Automated Systems and Control
- Robot Axes
- Robot Maintenance
- Introduction to Robotics
- Robot Safety
- Robotic Drives, Hardware, and Components
- Robot Components
- End Effectors
- Robot Installations
- Industrial Network Integration
- Introduction to Collaborative Robots
- Robot Sensors
- Robot Control Systems
- Vision Systems
- Robot Troubleshooting
- Concepts of Robot Programming

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To begin your training program or for more information, call Eileen Donovan, Workforce Development Specialist, at **315.474.4201, ext. 22** or email **edonovan@macny.org**.