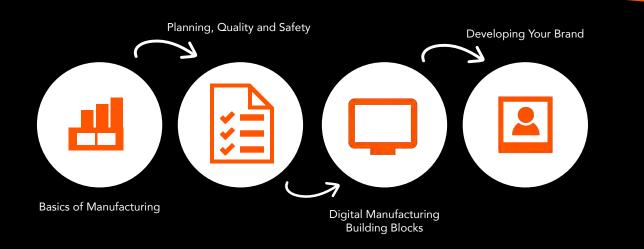# Manufacturing & Digital Fundamentals

Certificate Program

This program is for individuals looking to enter the manufacturing field or those who are entry level and are looking to grow, strengthen or refresh their manufacturing future-ready skills to be competitive in the field.

Planning, Quality and Safety

Developing Your Brand

Basics of Manufacturing
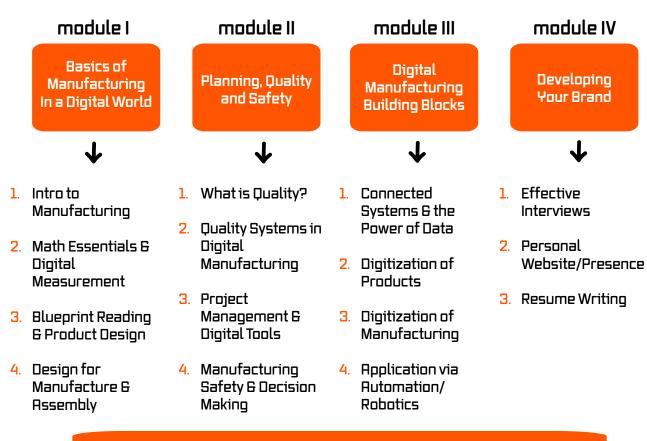
Digital Manufacturing Building Blocks

Outcomes:

- Receive an overview of the manufacturing field and related topics
- Understand design and manufacturing capabilities
- Strengthen essential skills such as critical thinking, communication, problem solving, creative thinking, ideation, teamwork & more
- Understand quality principles – planning, assurance, control and improvement
- Learn about lean manufacturing and thinking concepts
- Apply data analysis and visualization to decision making processes
- Understand various digital design tools and learn the basics of digital twins in a smart manufacturing environment

Starts January 5, 2022 at 3:30 p.m.

In-person classes (3 hours each) start on Wednesday, January, 5, 2022 at 3:30 p.m.
and will be held weekly for 14 weeks.

module I
Basics of Manufacturing In a Digital World

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1. Intro to Manufacturing
2. Math Essentials & Digital Measurement
3. Blueprint Reading & Product Design
4. Design for Manufacture & Assembly

module II
Planning, Quality and Safety

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1. What is Quality?
2. Quality Systems in Digital Manufacturing
3. Project Management & Digital Tools
4. Manufacturing Safety & Decision Making

module III
Digital Manufacturing Building Blocks

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1. Connected Systems & the Power of Data
2. Digitization of Products
3. Digitization of Manufacturing
4. Application via Automation/ Robotics

module IV
Developing Your Brand

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1. Effective Interviews
2. Personal Website/Presence
3. Resume Writing

You'll learn by doing through hands-on demonstrations and understand practical applications through success stories from industry users and experts.

Completion of all four modules will earn a Manufacturing & Digital Fundamentals Program Certificate from Penn State and 4.5 CEUs. For information regarding individual modules, please contact us.

Online, interactive assignments each week, powered by ToolingU, can help a participant progress to a Certified Manufacturing Associate (CMfgA) program recognition. Completion of the 25 required courses and successful completion of a final certification exam will result in a nationally-recognized certification from the Society of Manufacturing Engineers (SME).

An individual's local CareerLink will work with companies to coordinate and help with receiving appropriate funding. Please contact Phil Grove, CareerLink, at (724) 334-8600 for further details.

Program Fee per Individual: $2,100

For questions about the course, contact Steve Leonard, Digital Foundry at 412-759-3113 or steve@digitalfoundry.com.
For registration assistance, contact Beth Nury, Penn State New Kensington, at 724-334-6011 or bxn10@psu.edu.