

Principles of Advanced Manufacturing (2025)

Advanced Manufacturing

- 1 Understand the importance of the manufacturing industry, and introduction to common manufacturing concepts through direct interaction with industry. 7108.D1.1
- 2 Conduct assigned tasks in a safe and workmanlike manner while working independently or in small groups. 7108.D1.2
- 3 Discuss the need for workplace safety and workplace safety training programs as covered by the OSHA 10 Hour program: 7108.D1.3
- 4 Attain readiness to take OSHA 10 Hour General Industry Certification exam. 7108.D1.4
- 5 Discuss quality systems and reference common manufacturing examples 7108.D1.5
- 6 Use quantitative analytical skills to evaluate and process numerical data. 7108.D1.6
- 7 Discuss basic blueprint reading fundamentals 7108.D1.7
- 8 Discuss basic measurement systems. 7108.D1.8
- 9 Perform basic measurements using precision measuring tools. 7108.D1.9
- 10 Demonstrate the ability to read and interpret technical documents. 7108.D1.10
- 11 Utilizing and applying software where appropriate to the course. 7108.D1.11
- 12 Attain readiness to take MSSC Safety and Quality Certification exam. 7108.D1.12

Career Navigation

- 1 Explore career opportunities related to the program of study and understand how they relate to the global economy and marketplace. 7108.D2.1
- 2 Understand the specialized skills needed for different career opportunities related to the program of study. 7108.D2.2
- 3 Examine licensing, certification, and credentialing requirements for different career opportunities related to the program of study. 7108.D2.3

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- 4 Identify a career goal and develop an action plan, including opportunities available while in high school, for obtaining the specialized skills and credentials needed for a career related to the program of study. 7108.D2.4**
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**Leadership and
Employability Skills**

- 1 Demonstrate professionalism by meeting expectations of promptness, attendance, being prepared, completing tasks, and following safety procedures. 7108.D3.1**
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- 2 Demonstrate the skills needed to successfully collaborate within teams, departments, and organizations. 7108.D3.2**
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- 3 Demonstrate an awareness and understanding of responsible, ethical, and professional networking. 7108.D3.3**
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- 4 Examine personal, wellness, and stress management strategies. 7108.D3.4**
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**College and Career
Readiness Skills**

- 1 Demonstrate computer literacy skills and basic computer functions. 7108.D4.1**
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- 2 Communicate clearly, effectively, and with reason through speaking, writing, using visuals, and active listening in formal and informal settings. 7108.D4.2**
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- 3 Demonstrate decision-making and problem-solving skills using critical thinking and relevant math and data knowledge. 7108.D4.3**
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- 4 Demonstrate research, study skills, and self-learning strategies needed to be successful in a career pathway. 7108.D4.4**
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