

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

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

**Leadership and
Employability Skills**

1 Demonstrate professionalism by meeting expectations of promptness, attendance, being prepared, completing tasks, and following safety procedures. 7108.D3.1

2 Demonstrate the skills needed to successfully collaborate within teams, departments, and organizations. 7108.D3.2

3 Demonstrate an awareness and understanding of responsible, ethical, and professional networking. 7108.D3.3

4 Examine personal, wellness, and stress management strategies. 7108.D3.4

**College and Career
Readiness Skills**

1 Demonstrate computer literacy skills and basic computer functions. 7108.D4.1

2 Communicate clearly, effectively, and with reason through speaking, writing, using visuals, and active listening in formal and informal settings. 7108.D4.2

3 Demonstrate decision-making and problem-solving skills using critical thinking and relevant math and data knowledge. 7108.D4.3

4 Demonstrate research, study skills, and self-learning strategies needed to be successful in a career pathway. 7108.D4.4