

INTRODUCTION TO ADVANCED MANUFACTURING

Course Description

Students will be provided with an overview of Advanced Manufacturing in their everyday life and what careers are possible with the skills learned in an Advanced Manufacturing program. This course focuses on Advanced Manufacturing in CT, types of manufacturing, industrial materials used in manufacturing, manufacturing processes, a brief overview of blueprints and diagrams, quality control processes, hazards and safety in manufacturing, and what will the future of advanced manufacturing might look like. Students will also learn about the CT State Community College Advanced Manufacturing Technology programs. This course will culminate in a Final Project.

Prerequisite

None

Credit Requirement Area

Vocational Education

Learning Objectives

- Students will explain what Advanced Manufacturing entails.
- Students will research CT State Community Colleges Advanced Manufacturing Technology Programs.
- Students will explore the different types of manufacturing.
- Students will explain the types of industrial materials used in the world of advanced manufacturing.
- Students will compare manufacturing processes that are part of the advanced manufacturing field.
- Students will understand how blueprints are a necessary component of advanced manufacturing.
- Students will explain what a Quality Management System is and the important part it plays in a manufacturing company.
- Students will identify workplace hazards and safety procedures that are necessary to adhere to in order to keep a safe working environment.
- Students will research the opportunities and need for more women in the field of advanced manufacturing.
- Students will investigate different career opportunities available in the field of Advanced Manufacturing.
- Students will discover where the future of Advanced Manufacturing is heading.

Suggested Weekly Schedule

Week	Graded Activities	Suggested Due Date	% Points
1	Assignment 1: Overview of Manufacturing Quiz	Wednesday of Week 1	50%
	Assignment 2: Program Finding	Friday of Week 1	50%
Week 1 Total Percentage Towards Final Grade			15%
2	Assignment 1: Additive Manufacturing	Wednesday of Week 2	50%
	Assignment 2: Industrial Materials Quiz	Friday of Week 2	50%
Week 2 Total Percentage Towards Final Grade			15%

Week	Graded Activities	Suggested Due Date	% Points
3	Assignment 1: Manufacturing Processes Quiz	Wednesday of Week 3	50%
	Assignment 2: Blueprint	Friday of Week 3	50%
Week 3 Total Percentage Towards Final Grade			15%
4	Assignment 1: ISO 9000 Research	Wednesday of Week 4	50%
	Assignment 2: Hazards and Safety Quiz	Friday of Week 4	50%
Week 4 Total Percentage Towards Final Grade			15%
5	Assignment 1: Women in Manufacturing	Wednesday of Week 5	50%
	Assignment 2: Manufacturing Careers Quiz	Friday of Week 5	50%
Week 5 Total Percentage Towards Final Grade			15%
6	Assignment 1: Industry 4.0 and Industry 5.0	Wednesday of Week 6	50%
	Assignment 2: Manufacturing Career Final Project	Friday of Week 6	50%
Week 6 Total Percentage Towards Final Grade			25%
WEIGHTED TOTAL			100%