

Course Code: MFT 131**Course Title:** Introduction to Manufacturing and Industrial Safety**Department:** Applied Sciences and Technologies**Effective Date:** Summer 2026**PCS Code:** 1.2 - Occupational/Technical Instruction**CIP Code:** 15.0613**Repeatability:** 0

Credit Hours

Catalog Notation: 3-0-3**Credit Hour Distribution:**

Lecture: 3

Lab: 0

Clinical: 0

Total: 3

General Course Information

Catalog Description

History, economics, employability skills, processes, and quality measurement as related to manufacturing. Emphasis on preparing student for co-op experience.

General Course Objectives

Students will learn what manufacturing is about to understand what is expected of a new co-op employee.

Minimum Placement Levels**English**

Placement into ENG 098

Reading

Placement into CCS 098

Math

Placement into MAT 060

Prerequisites

None

Methods of Evaluation

The minimum number of evaluation methods will include: 1 complete resume/cover letter, 2 3-4 page research papers with 6 peer-reviewed articles on manufacturing trends/innovations, 3 plant tours, graded work ethics discussion groups, and 1 graded mock interview.

Instructional Materials and Additional Supplies

None.

Course Content

General Learning Outcomes (GLOs)

- Communication: Students will demonstrate the ability to read, write, listen, and speak effectively.
- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
History and Economics of Manufacturing	1. State how a business is organized and capitalized. 2. Apply economic decisions regarding manufacturing operations. 3. Describe the history of particular manufacturing operations. 4. Describe the industry's evaluation model. 5. Contrast the Deming model with the industrial revolution. 6. State the norms and values of the work culture. 7. Prepare and follow work schedules. 8. Contrast cooperation and competition in the work setting.	6	0	0
Employability Skills	1. Model employability skills to enhance employment opportunities and job satisfaction. 2. Match interests and aptitudes to employment area. 3. Match physical capabilities to a job area. 4. Demonstrate a drug-free status. 5. Identify steps in applying for a job. 6. Locate employment opportunities. 7. Exhibit personal skills, such as attendance, time management, and individual responsibility. 8. Adapt to changing situations. 9. Apply technology skills as needed. 10. Discuss various career options and the preparation required for them. 11. Describe the range of services offered. 12. Recognize the need for lifelong learning to enhance skills and learn new skills. 13. Demonstrate self-control and self-discipline. 14. Demonstrate the ability to be adaptable and flexible. 15. Maintain good physical, mental, and emotional health. 16. Show appropriate personal appearance and attitude. 17. Demonstrate a positive attitude toward work. 18. Summarize how technology affects quality of life.	8	0	0
Ethics	1. Integrate accepted ethical practices with respect to cultural, social, and ethnic differences. 2. Perform duties within established ethical guidelines. 3. Report any activities that adversely affect the health, safety, and/or welfare of customers or fellow workers. 4. Follow rules, regulations, and policies as established, including interpreting employer/employee handbook and procedures. 5. Display initiative in undertaking new tasks. 6. Show assertiveness appropriate to the situation. 7. Recognize and demonstrate integrity.	4	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Teamwork	1. Plan and work together in meetings. 2. Identify interactive relationships required for effective teamwork. 3. Apply team operating procedures. 4. Adapt as necessary to complete the team task. 5. Evaluate outcomes. 6. Show good working relationships with superiors and coworkers in an occupational role. 7. Teach others new skills. 8. Apply group problem-solving strategies. 9. Prepare and follow schedules and manage time efficiently.	3	0	0
Manufacturing Processes	1. Identify these processes and associated technologies at local manufacturing facility site visits: molding, stamping, welding, bending, heat treating, turning, computer integrated manufacturing (CIM), computer aided design (CAD), computer aided manufacturing (CAM), computerized numerical control (CNC), and coordinate measuring machine (CMM).	18	0	0
Measuring Quality	1. State categories of customers and categories of customer needs. 2. Outline the developmental history and accompanying concepts of significant manufacturing processes in local use. 3. Interpret charts, tables, and graphs. 4. Recognize the needs of the customer. 5. Access and use electronically-produced information.	4	0	0
Industrial Safety	1. Evaluate OSHA's policies and protections put in place to ensure plant and factory worker protection from hazards that could cause injury at a company.	2	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	0	0