Course Information Form (CIF)

Course Code: MFX 110

Course Title: Industrial Mechanics Safety

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 15.0613
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 1-0-1
Credit Hour Distribution:

Lecture: 1	Lab: 0	Clinical: 0	**Total: 1**

General Course Information

Catalog Description

Safety organization, personal protective equipment, HazCom, confined spaces, electrical safety, fire safety, accident response, workplace ergonomics, and maintenance organization.

General Course Objectives

Improved awareness of potential hazards in the industrial workspace and strategies for reducing the hazards.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 059

Prerequisites

None

Methods of Evaluation

There will be a minimum of 5 quizzes.

Instructional Materials and Additional Supplies

Armatrol access code

Course Content

General Learning Outcomes (GLOs)

- Critical Thinking and Information Literacy: Students will demonstrate the ability to evaluate perspectives, evidence, and implications, and to locate, assess, and use information 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
Safety Responsibilities	1. Explain the importance of health and safety in the industrial workplace. 2. Describe the importance of safety policies. 3. Describe the results of unsafe behavior.	0.5	0	0
Safety Agencies	1. Describe the purpose of the Occupational Safety and Health Administration (OSHA). 2. Describe the purpose of the Environmental Protection Agency (EPA). 3. Describe the purpose of National Institute for Occupational Safety and Health (NIOSH) and state safety agencies. 4. Describe the purpose of the Emergency Planning and Community Right-to-Know Act (EPCRA).	0.5	0	0
OSHA Regulations	1. Describe OSHA regulations for general workplace safety. 2. Describe OSHA regulations regarding first aid and fire safety. 3. Describe OSHA regulations for personal protective equipment. 4. Describe OSHA regulations regarding material handling. 5. Describe OSHA regulations for tools and machines.	2	0	0
Safety Culture	1. Explain how to create a culture of safety in the workplace. 2. Identify common types of injuries. 3. Define an accident. 4. Identify common types of accidents.	0.5	0	0
Workplace Hazards	1. Define personal protective equipment (PPE). 2. Identify seven types of personal protective equipment. 3. Describe an employer's PPE responsibilities. 4. Describe how to identify hazards in the workplace. 5. Describe 11 types of hazards found in the workplace.	0.5	0	0
PPE I: Eye, Head, and Ear	1. Describe the types of head PPE. 2. Describe the types of eye PPE. 3. Describe the types of ear PPE.	0.5	0	0
PPE II: Hand, Arm, Foot, Respiratory, and Whole Body	1. Describe the types of hand and arm PPE. 2. Describe the types of foot PPE. 3. Describe the types of respiratory PPE. 4. Describe the types of body PPE.	0.5	0	0
Hazardous Materials Standards	1. Describe three categories of hazardous materials and give examples of each. 2. Define the Globally Harmonized System (GHS) and Hazard Communication Standard (HCS). 3. Describe how to interpret the HazCom labeling system. 4. Describe the NFPA and HMIS Hazardous Material Identification Systems. 5. Define a Safety Data Sheet. 6. Explain the use of a Safety Data Sheet.	0.5	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Hazardous Material Handling and Storage	1. Describe the guidelines for handling hazardous materials. 2. Describe the guidelines for storing hazardous materials. 3. Describe how to dispose of hazardous materials.	0.5	0	0
Hazardous Material Shipment	1. Describe the Department of Transportation (DOT) Hazardous Material Identification System. 2. Describe the guidelines for shipping hazardous materials.	0.5	0	0
Confined Spaces and the Hazards Associated With Them	1. Define a confined space. 2. Define and provide characteristics of a permit-required confined space. 3. Describe two types of confined space hazards. 4. Describe three types of atmospheric hazards. 5. Describe five physical hazards associated with confined spaces.	0.5	0	0
Confined Space Requirements	1. Describe OSHA requirements for a permit-required confined space entry program. 2. Describe the equipment required for working in confined spaces. 3. Describe worker roles and responsibilities when working in confined spaces.	0.5	0	0
Fire Prevention Safety	1. Describe the elements of a fire. 2. Describe the four types of fires. 3. Describe combustible and flammable fire prevention guidelines.	0.5	0	0
Fire Extinguishing Equipment	1. Describe how to select a fire extinguisher for a fire type. 2. Describe how to use a fire extinguisher. 3. Describe how to maintain fire safety equipment and facilities.	0.5	0	0
Electrical Safety	1. Describe electrical safety guidelines. 2. Describe the function of a lockout/tagout system. 3. Describe how to perform an electrical lockout/tagout. 4. Describe the requirements of an energy control program (ECP).	1	0	0
Emergency Response	1. Describe categories of emergencies. 2. Describe the elements of an emergency action plan. 3. Describe how to respond to an emergency.	0.5	0	0
Accident Response	1. Describe how to respond to a workplace accident. 2. Describe how to use an eyewash station. 3. Describe how to report a workplace accident.	0.5	0	0
Tool Safety	1. Describe types of hand tools and power tools. 2. Describe the hand tool safety guidelines. 3. Describe the portable power tool safety guidelines. 4. Describe compressed gas safety guidelines.	0.5	0	0
Machine Safety	1. Describe clothing safety guidelines for machine operators. 2. Describe the machine operation safety guidelines. 3. Describe the types of machine guards. 4. Describe the operation of machine interlocks. 5. Describe the operation of emergency stop controls.	1	0	0
Material Handling Safety	1. Describe types of manual material handling equipment. 2. Describe basic safety rules for hoist and crane use. 3. Describe basic safety rules for forklift use.	0.5	0	0
Work Station Safety	1. Describe the elements of a safe workstation. 2. Describe how to maintain a safe workstation. 3. Describe the benefits of workplace organization. 4. Describe visual management tools used in the workplace.	0.5	0	0
Fall Safety	1. Describe the guidelines for walkway safety. 2. Describe the guidelines for platform safety. 3. Describe the guidelines for ladder safety.	0.5	0	0

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Workplace Ergonomics	1. Define ergonomics. 2. Describe the guidelines for ergonomic safety. 3. Describe the guidelines for lifting objects.	0.5	0	0
5S Workplace Implementation	1. Describe the 5S Program. 2. Describe the first step in the 5S Program: Sort. 3. Describe the second step in the 5S Program: Straighten. 4. Describe the third step in the 5S Program: Shine.	0.5	0	0
5S Workplace Maintenance	1. Describe the fourth step in the 5S Program: Standardize. 2. Describe the fifth step in the 5S Program: Sustain.	0.5	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
15	0	0