

Course Code: IRW 112

Course Title: Occupational Safety and Health

Department: Applied Sciences and Technologies

Effective Date: Summer 2026

PCS Code: 1.2 - Occupational/Technical Instruction

CIP Code: 15.0701

Repeatability: 0

Credit Hours

Catalog Notation: 0.5-1.5-1

Credit Hour Distribution:

Lecture: 0.5

Lab: 1.5

Clinical: 0

Total: 1

General Course Information

Catalog Description

Occupational Safety and Health Act 29 CFR 1926, common causes of accidents and fatalities in industry. Students practice applications of standards.

General Course Objectives

- Students will know and understand the OSHA act.
- Students will be able to identify common causes of accidents and fatalities.
- Students will be able to demonstrate proper application of standards.

Minimum Placement Levels

English

None

Reading

None

Math

None

Prerequisites

Admission into the Ironworkers Apprenticeship program

Methods of Evaluation

The minimum evaluation tools are: 4 written exams, 2 quizzes, 2 lab return demonstrations, and 1 final written and 1 practical exam.

Instructional Materials and Additional Supplies

OSHA Safety, U.S. Department of Labor, latest edition

Safe-Mark, St. Louis Building and Trades Council, latest edition

Course Content

General Learning Outcomes (GLOs)

- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
General Safety and Health Provisions	1. Develop a safety management program using both management commitment and employee involvement to reduce injuries, illness, and fatalities.	2	0.5	0
Electrical	1. Demonstrate electrical safety requirements that are necessary for the practical safeguarding of employees involved in construction work.	1	2	0
Fall Protection	1. Explain how to prevent workers from falling off, onto, or through working levels, and protect from falling objects.	0.5	2	0
Scaffolding	1. Identify and comply with regulations and general industry requirements for the safe design, erection, and use of scaffolding platforms used in the construction industry.	0.5	2	0
Stairways and Ladders	1. Specify when stairways and ladders must be provided when used for construction including alteration, repair, and demolition.	0.5	2	0
Material Handling	1. Identify potential hazards in handling, rigging, storage, moving, and disposal of materials used in construction activities.	0.5	2	0
Confined Space	1. Explain the nature of hazards involved, the necessary precautions to be taken, and the use of protective and emergency equipment required for confined spaces.	0.5	2	0
Personal Protective Equipment	1. List the protective equipment that must be used and maintained in a clean and useable condition whenever necessary due to hazardous conditions in the workplace.	0.5	2	0
Fire Safety	1. Describe the requirements for fire brigades and all portable and fixed fire suppression equipment, fire detection systems, and fire or employee alarm systems.	0.5	2	0
Excavations	1. Design and construct an adequate protective system which will prevent employees in excavations and trenching operations from cave-ins.	0.5	3	0
Cranes, Derricks, Hoists, Elevators, Conveyors	1. Specify the requirements, specifications, and limitations applicable to the operation of any and all cranes, derricks, hoists, elevators, and conveyors.	0.5	3	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
7.5	22.5	0