

Welding Core: Safety

Course Outcome Summary

Course Information

Description

Through a variety of classroom and/or lab learning and assessment activities, students in this course will: explain job/site safety and precautions for job/site hazards; determine the uses of personal protective equipment (PPE); identify the safety equipment and procedures related to safe work practices and environment; identify fire prevention and protection techniques; explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

Types of Instruction

Instruction Type

Credits

Course (or OSHA 10 - minimum)

1

OR

Course (or OSHA 30 - minimum)

3

Exit Learning Outcomes

External Standards

- A OSHA 10-HOUR GENERAL INDUSTRY DESIGNATED TRAINING TOPICS The 10-hour General Industry Outreach Training Program is intended to provide an entry level general industry workers broad awareness on recognizing and preventing hazards on a general industry site. The training covers a variety of safety and health hazards which a worker may encounter at a general industry site. OSHA recommends this training as an orientation to occupational safety and health. Workers must receive additional training on hazards specific to their job. Training should emphasize hazard identification, avoidance, control and prevention, not OSHA standards. Learning objectives on many of these topics are on the 10-hour CD-ROM which is distributed in the train-the-trainer class, and also available for download at the Outreach Training Program website. Instructional time must be a minimum of 10 hours. Break down of the topics as follows: Mandatory (M:1 hour) - 6 hours (left column): Six topics to be taught, for one hour each Elective (E-2 hours) - 2 hours (right column top): Choose at least two of these topics to teach, for a minimum of one-half hour each. Must cover at least two hours. Optional (O-2 hours) - 2 hours (right column bottom): Teach any other construction industry hazards or policies and/or expand on the mandatory or elective topics, minimum of one-half hour each.
- B M1.a - Introduction to OSHA
- C M1.b - Walking and Working Surfaces, Subpart D - including fall protection
- D M1.c - Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection, Subpart E & L
- E M1.d - Electrical, Subpart S
- F M1.e - Personal Protective Equipment, Subpart I
- G E2.a - Hazardous Materials, Subpart H
- H E2.b - Materials Handling, Subpart N
- I E2.c - Machine Guarding, Subpart O
- J E2.d - Introduction to Industrial Hygiene, Subpart Z
- K E2.e - Bloodborne Pathogens, Subpart Z
- L E2.f - Ergonomics

- M E2.g - Safety and Health Program
N O2.a - general industry hazards or policies and/or expand on the mandatory or elective topics

Competencies

1. Explain job/site safety and precautions for job/site hazards.

Properties

Domain: Cognitive Level: Synthesis

Linked External Standards

M1.a - Introduction to OSHA

E2.g - Safety and Health Program

O2.a - general industry hazards or policies and/or expand on the mandatory or elective topics

You will demonstrate your competence:

- o by presenting a written or oral analysis
- o OR
- o by complying with the OSHA 10 General Industry Outreach Training Program

Your performance will be successful when:

- o your analysis identifies a tasks of job to be performed
- o your analysis includes a list of possible hazards related to the task
- o your analysis includes a list of precautions that need to be taken to safely perform tasks

2. Determine the uses of personal protective equipment (PPE)

Properties

Domain: Cognitive Level: Evaluation

Linked External Standards

M1.e - Personal Protective Equipment, Subpart I

You will demonstrate your competence:

- o through a written or oral evaluation of appropriate equipment for the job task
- o OR
- o by complying with the OSHA 10 General Industry Outreach Training Program

Your performance will be successful when:

- o you describe the type of equipment
- o you describe the purpose of the equipment
- o you describe benefit of equipment

3. Identify the safety equipment and procedures related to safe work practices and environment

Properties

Domain: Cognitive Level: Analysis

Linked External Standards

M1.a - Introduction to OSHA

M1.b - Walking and Working Surfaces, Subpart D - including fall protection

E2.b - Materials Handling, Subpart N

E2.c - Machine Guarding, Subpart O

E2.g - Safety and Health Program

O2.a - general industry hazards or policies and/or expand on the mandatory or elective topics

You will demonstrate your competence:

- o through a written or oral instructor-provided evaluation tool
- o OR
- o by complying with the OSHA 10 General Industry Outreach Training Program

Your performance will be successful when:

- o you describe industry standards applicable to walkways and working surfaces
- o you describe industry standards fire hazards, protection and plans
- o you describe industry standards electrical hazards, protections and plans
- o you describe industry standards applicable to machine guarding
- o you identify safe lockout and tagout practices
- o you describe industry standards applicable to lifting
- o you explain what assured grounding is
- o you explain when GFCI is needed on a site

4. Identify fire prevention and protection techniques

Properties

Domain: Cognitive Level: Analysis

Linked External Standards

M1.c - Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection, Subpart E & L

M1.d - Electrical, Subpart S

E2.a - Hazardous Materials, Subpart H

E2.b - Materials Handling, Subpart N

E2.g - Safety and Health Program

O2.a - general industry hazards or policies and/or expand on the mandatory or elective topics

You will demonstrate your competence:

- o using an instructor-provided oral or written evaluation tool
- o OR
- o by complying with the OSHA 10 General Industry Outreach Training Program

Your performance will be successful when:

- o you interpret the fire classification system
- o you identify the three components of a fire triangle
- o you describe the purpose of various fire extinguishers
- o you detail fire hazard potentials and system for preventing them

5. Explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS)

Properties

Domain: Cognitive Level: Analysis

Linked External Standards

E2.a - Hazardous Materials, Subpart H

E2.b - Materials Handling, Subpart N

O2.a - general industry hazards or policies and/or expand on the mandatory or elective topics

You will demonstrate your competence:

- o through an instructor-provided oral or written evaluation tool
- o OR
- o by complying with the OSHA 10 General Industry Outreach Training Program

Your performance will be successful when:

- o you reference appropriate MSDS
- o you identify the various sections of an MSDS and its purpose
- o you identify the section and numbering of a container labeling system