

## COURSE SYLLABUS

<b>LAST REVIEW</b>	Fall 2022
<b>COURSE TITLE</b>	Welding Safety/OSHA 10 or 30
<b>COURSE NUMBER</b>	WELD 0100
<b>DIVISION</b>	Career and Technical Education
<b>DEPARTMENT</b>	WELD
<b>CIP CODE</b>	48.0508
<b>CREDIT HOURS</b>	2
<b>CONTACT HOURS/WEEK</b>	Class: 2 Lab:
<b>PREREQUISITES</b>	None

### COURSE 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; and explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS).

### PROGRAM ALIGNMENT

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:

[https://kansasregents.org/workforce\\_development/program-alignment](https://kansasregents.org/workforce_development/program-alignment)

### PROGRAM LEARNING OUTCOMES

1. Students will be able to explain job/site and precautions for job site hazards and will be able to determine the use of Personal Protective equipment (PPE) as well as be able to Identify the safety equipment and procedures related to safe work practices and environment
2. Student will be able to demonstrate the use of good communication skills including listening, following directions, speaking, and using correct grammar in conducting a job search.
3. Student will be able to create fillet and groove welds in flat and horizontal positions and identify common visual discontinuities and defects on welds and determine causes of discontinuities and defects of welds.

### TEXTBOOKS

<http://kckccbookstore.com/>

### METHOD OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

## **COURSE OUTLINE**

- I. Introduction to OSHA - Two Hours
  - A. OSH Act, General Duty Clause, Employer and Employee Rights and Responsibilities, Whistleblower Rights, Recordkeeping basics
  - B. Inspections, Citations, and Penalties
  - C. General Safety and Health Provisions, Competent Person, Subpart C
  - D. Value of Safety and Health
  - E. OSHA Website, OSHA 800 number and available resources
- II. OSH Act Subparts
  - A. Walking and Working Surfaces - including fall protection, Subpart D - One Hour
  - B. Exit Routes, Emergency Action Plans, Fire Prevention Plans, and Fire Protection, Subparts E & L - Two Hours
  - C. Electrical, Subpart S - Two Hours
  - D. Personal Protective Equipment (PPE), Subpart I - One Hour
  - E. Materials Handling, Subpart N - Two Hours
  - F. Hazard Communication, Subpart Z - One Hour
  - G. Hazardous Material (Flammable and Combustible Liquids, Spray Finishing, Compressed Gases, Dipping and Coating Operations), Subpart H
  - H. Permit-Required Confined Spaces, Subpart J
  - I. Lockout/Tagout, Subpart J
  - J. Machine Guarding, Subpart O
  - K. Welding, Cutting, and Brazing, Subpart Q
  - L. Introduction to Industrial Hygiene, Subpart Z
  - M. Bloodborne Pathogens, Subpart Z
  - N. Ergonomics
  - O. Fall Protection
  - P. Safety and Health Programs
  - Q. Powered Industrial Vehicles

## **COURSE LEARNING OUTCOMES AND COMPETENCIES**

Upon successful completion of this course, the student will:

- A. Explain job/site safety and precautions for job/site hazards.
  - 1. Conduct job site analysis.
  - 2. Identifies a task of job to be performed
  - 3. List possible hazards related to the task
  - 4. List precautions that need to be taken to safely perform tasks
- B. Determine the uses of personal protective equipment (PPE).
  - 5. Describe the type of equipment
  - 6. Describe the purpose of the equipment
  - 7. Describe benefit of equipment

- C. Identify the safety equipment and procedures related to safe work practices and environment.
8. Describe industry standards applicable to walkways and working surfaces
  9. Describe industry standards fire hazards, protection, and plans
  10. Describe industry standards electrical hazards, protections, and plans
  11. Describe industry standards applicable to machine guarding
  12. Identify safe lockout and tagout practices
  13. Describe industry standards applicable to lifting
  14. Explain what assured grounding is
  15. Explain when GFCI is needed on a site
- D. Identify fire prevention and protection techniques.
16. Interpret the fire classification system
  17. Identify the three components of a fire triangle
  18. Describe the purpose of various fire extinguishers
  19. Detail fire hazard potentials and system for preventing them
- E. Explore Hazardous Communications (HazCom) including Material Safety Data Sheets (MSDS) .
20. Reference appropriate MSDS
  21. Identify the various sections of an MSDS and its purpose
  22. Identify the section and numbering of a container labeling system

### **ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES**

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

### **COLLEGE POLICIES AND PROCEDURES**

*Student Handbook*

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

*College Catalog*

<https://www.kckcc.edu/academics/catalog/index.html>

*College Policies and Statements*

<https://www.kckcc.edu/about/policies-statements/index.html>

*Accessibility and Accommodations*

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.