# Introduction to Welding Course No. 13207 Credit: 0.5

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| --- | --- | --- | --- |
| **Student name:**  |  | **Graduation Date:** |  |

Pathways and CIP Codes:Manufacturing (48.0000)- Production & Maintenance Strand

Course Description: An **introductory level** course designed to instruct students in basic welding skills.

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Safety Practices

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Identify hazards associated with welding. |  |
| 1.2 | Identify Personal Protective Equipment (PPE) used in welding. |  |
| 1.3 | Identify the parts of a fire triangle. |  |

## Benchmark 2: Welding Theory

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Recognize joint design and welding terminology. |  |
| 2.2 | Identify and describe welding symbols. |  |
| 2.3 | Identify/select welding electrodes used for arc welding. |  |
| 2.4 | Identify metals, their typical form and metallurgical properties. |  |
| 2.5 | Differentiate the different types of arc welding processes. |  |
| 2.6 | Explore various industries and occupations related to welding. |  |
| 2.7 | Describe GMAW modes of transfer. |  |

## Benchmark 3: Welding Processes

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Demonstrate proper set up of welding equipment. |  |
| 3.2 | Manually operate an oxyfuel torch to cut carbon steel. |  |
| 3.3 | Manually operate a plasma torch to cut carbon steel. |  |
| 3.4 | Weld joints in the F and H positions using SMAW. |  |
| 3.5 | Weld joints in the F and H positions using GMAW carbon steel. |  |
| 3.6 | Weld joints in the F and H positions using GTAW carbon steel with and without filler (autogenous) metal. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

CTE Pathways Help Desk

(785) 296-4908

pathwayshelpdesk@ksde.org



900 S.W. Jackson Street, Suite 102

Topeka, Kansas 66612-1212

[https://www.ksde.org](https://www.ksde.org/)

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