



INSTITUTION: Highlands College
COURSE TITLE: Welding II, NCCER Welding Level II*
COURSE NUMBER: Welding 270
COURSE CREDITS: 13
INSTRUCTOR: Dennis Noel

OFFICE HOURS:
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Office hours: Office hours by appointment

I COURSE DESCRIPTION

In Welding II, the student will learn Welding symbols, Welding detail drawings, Physical Characteristics and mechanical properties of metals, Pre-heating and post heating, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW) and Flux Core Arc Welding (FCAW) Equipment and Filler Metals, GMAW and FCAW on plate. Students will also learn Gas Tungsten Arc Welding (GTAW) Equipment and Filler Metals as well as GTAW on plate.

II COURSE MATERIALS

- NCCER Weld Level II
- Tool kit

Books and handouts are available to purchase at the Bookstore.

III COURSE OBJECTIVES

The students will be able to:

1. Interpret welding symbols, specifications and weld procedure specifications.
2. Employ the basic elements of a welding detail drawing.
3. Identify metallurgical considerations for welding metals.
4. Explain and identify the effects of pre-heat and post heat on metal.
5. Employ the use of the GMAW and its different transfers in all positions.
6. Employ the use of the FCAW processes in all position.
7. Demonstrate the GTAW process and produce welds in all positions.

Note: all course objectives will be performed to AWS welding industry standards.



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IV COURSE OUTLINE

NCCER Weld Level 2 www.nccer.org/

Module 1	Welding symbols
Module 2	Reading welding detail drawings
Module 3	Physical characteristics and mechanical properties of metal
Module 4	Pre-heating and post-heating of metals
Module 5	GMAW and FCAW: Equipment and filler metals
Module 6	GMAW and FCAW: Plate
Module 7	GTAW: Equipment and filler metals
Module 8	GTAW: Plate

This is a continuation of NCCER Level I. All rules, standards and testing will be the same as Level I.

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