

Revised: Fall 2016

WEL 135 Inert Gas Welding

COURSE OUTLINE

Prerequisites:

Prerequisites WEL 120 or divisional approval

Course Description:

Introduces practical operations in use of inert gas shielded arc welding. Studies equipment operation, setup, safety and practice of GMAW (MIG) and GTAW (TIG).

Semester Credits: 2 Lecture Hours: 1 Lab/Recitation Hours: 3

VIRGINIA WESTERN COMMUNITY COLLEGE
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Course Outcomes

At the completion of this course, the student should be able to:

- 1 Understand shop and welding Safety
- 2 Understand Shield gasses and Electrodes and their applications
- 3 Set up material to be welded
- 4 Demonstrate the ability to weld Butt, Lap, T, Corner, and Edge joints
- 5 Build a 3" square box according to prints
- 6 Weld a T joint (Test for Employment)



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Required Materials:

Safety Glasses (must be worn at all times while in the lab)
Proper shade lens and hood for welding process
All other personal protective equipment

Textbook:

Modern Welding by Althouse, Turnquist, Bowditch, Bowditch, Bowditch.

The following supplementary materials are available:

- 1.
- 2.
- 3.



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Topical Description: (Outline chapters and sections to be covered in the book – may include timeline)

- Week 1 Introduction to GMAW and GTAW
- Week 2 Read Chapter 7, Lessons 7A , 7B
- Week 3 Understand Shield Gasses and Electrodes
- Week 4 Test on Chapter 7
- Week 5 Read Chapter 8, Lessons 8A, 8B
- Week 6 GTAW Welding Technique
- Week 7 Proper set up for material to be welded
- Week 8 Test on Chapter 8
- Week 9 GTAW electrodes discussed
- Week 10 GTAW Weld material discussed
- Week 11 Lab, Weld butt joint flat position
- Week 12 Lab, Weld lap joint flat position
- Week 13 Lab, Weld T joint flat position (Test for Employment)
- Week 14 Lab, Build 3” square box according to print
- Week 15 Lab, Build 3” square box according to print
- Week 16 Final Exam- All projects are due

Questions at the end of each chapter are to be answered and turned in by week 16
Attendance in class and lab are a component of your grade.



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Notes to Instructors

(List information about optional topics, departmental exams, etc)

- 1.
- 2.
- 3.
- 4.

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