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**Course Prefix/No.:** WLD 104  
**Course Title:** Gas Welding and Cutting  
**Lecture Hours/Week:** 1.0  
**Lab Hours/Week:** 3.0  
**Credit Hours/Semester:** 2.0

[Distance Learning Attendance/VA Statement](#)  
[Textbook Information](#)

**COURSE DESCRIPTION:**

This course covers gas welding, brazing, soldering, and cutting of metals.

**COURSE COMPETENCIES:**

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

**Module 1 – OxyFuel Cutting**

- Demonstrate personal and shop safety at all times.
- Identify all components of an OxyFuel Cutting system.
- Demonstrate the proper startup procedures and pressure settings.
- Produce quality cuts on carbon steel plate and/or pipe.
- Demonstrate the proper shutdown procedures.
- Demonstrate the proper storage and maintenance of equipment .

**Module 2 – OxyFuel Welding**

- Demonstrate personal and shop safety at all times.
- Identify all components of an OxyFuel welding system.
- Demonstrate the proper startup procedures and pressure settings.
- Describe the proper configuration and characteristics of the following weld joints:
  1. Butt Joint with Filler Rod.
  2. Lap Joint with Filler Rod.
  3. Tee Joint with Filler Rod.
  4. Corner Joint with Filler Rod.

**Module 3 – OxyFuel Welding – Butt Joint with Filler Rod**

- Produce a quality weld of a Butt Joint weld using Filler Rod in each of the following positions:
  1. Flat position.
  2. Vertical position.
  3. Horizontal position.

**Module 4 – OxyFuel Welding – Lap Joint with Filler Rod**

- Produce a quality weld of a Lap Joint weld using Filler Rod in each of the following positions:
  1. Flat position.
  2. Vertical position.
  3. Horizontal position.

## **Module 5 – OxyFuel Welding – Tee Joint with Filler Rod**

- Produce a quality weld of a Butt Joint weld using Filler Rod in each of the following positions:
  1. Flat position.
  2. Vertical position.
  3. Horizontal position.

## **Module 6 – OxyFuel Welding – Corner Joint with Filler Rod**

- Produce a quality weld of a Corner Joint weld using Filler Rod in each of the following positions:
  1. Flat position.
  2. Vertical position.
  3. Horizontal position.

### **MINIMAL STANDARDS:**

Assignments and attendance must be completed as designated in “Evaluation Strategies/ Grading.” Criteria for minimal acceptable performance will be provided by the instructor.

### **REQUIREMENTS:**

#### **Attendance Policy**

The college attendance policy stated in the college handbook will be honored. The instructor will provide specific requirements for the course.

#### **Academic Honesty**

Students are expected to adhere to the college policy regarding student conduct as stated in the college handbook.

#### **Assignments**

Students are expected to complete all assignments and any supplementary exercises designated by the instructor.

### **EVALUATION STRATEGIES/GRADING:**

Successful completion of the course requires the completion of each of the eight modules, all tests/projects (minimum of eight total), and all assignments with an average of 70 points in each area. In addition, the student must score a minimum of 70 points each in the area of Lab Work and Work Attitude.

#### **Grading Scale:**

A = 90 – 100

B = 80 – 89

C = 70 – 79

D = 60 – 69

F = 00 – 59

#### **Evaluation Method:**

Lab/Shop Projects      75% of each Module

Work Attitude            25% of each Module

100% Final Grade

**Work Attitude is defined as:**

- Participation
- Cooperation
- Appearance
- Effort
- Safety
- Responsibility
- Professionalism
- Attendance
- Self Motivation
- Works Independently

**METHODS OF INSTRUCTION:**

Lectures, reading assignments, projects, discussions, video presentations, multimedia presentations, and web content are the major teaching methods used in this course. See instructor for specifics.

**ENTRY LEVEL SKILLS:**

The student must exhibit traits of maturity (e.g. responsibility, seriousness of work, etc.) and should be able to read and write English, have good manual dexterity, good eyesight, and good eye-hand coordination.

**PREREQUISITE:** RDG 031 or equivalent

**CO-REQUISITE:** None

**Disabilities Statement:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.

Effective: 2011SP