

SYLLABUS  
PART I  
EDISON COMMUNITY COLLEGE  
WLD 111S BASIC WELDING  
2 CREDIT HOURS

**COURSE DESCRIPTION**

An introduction to welding and cutting processes. Welding processes include shielded metal arc, gas metal arc, gas tungsten arc, and oxyacetylene welding. Cutting processes include oxyacetylene and plasma cutting. Students will develop welding and cutting skills and knowledge by performing the basic processes on steel and aluminum. Lab fee.

**COURSE GOALS**

The student will:

| Bloom's Level |                                                                                                                                                                                                                                                              | Program Outcomes |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 2             | 1. Explain the principles and equipment involved in welding                                                                                                                                                                                                  | 6                |
| 2             | 2. Explain safety procedures related to the welding and cutting process                                                                                                                                                                                      | 6                |
| 3             | 3. Demonstrate the techniques necessary to perform the following types of welding: <ul style="list-style-type: none"><li>• Shielded metal arc (SMAW)</li><li>• Gas metal arc (GMAW)</li><li>• Gas tungsten arc (GTAW)</li><li>• Oxyacetylene (OAW)</li></ul> | 6                |
| 3             | 4. Demonstrate the techniques necessary to perform the following types of cutting: <ul style="list-style-type: none"><li>• Oxyacetylene</li><li>• Plasma</li></ul>                                                                                           | 6                |

**CORE VALUES**

The Core Values are a set of principles which guide in creating educational programs and environments at Edison. They include communication, ethics, critical thinking, human diversity, inquiry/respect for learning, and interpersonal skills/teamwork. The goals, objectives, and activities in this course will introduce/reinforce these Core Values whenever appropriate.

**TOPIC OUTLINE**

1. Introduction to Welding
2. Welding Safety
3. Welding Processes
4. SMAW Process
5. GMAW Process
6. GTAW Process
7. OAW Process
8. Aluminum Welding
9. Oxyacetylene Cutting
10. Plasma Cutting