

SYLLABUS
PART I
EDISON COMMUNITY COLLEGE
WLD 102S MANUAL GAS METAL ARC WELDING
3 CREDIT HOURS

COURSE DESCRIPTION

Offers a thorough technical presentation of welding safety, gas metal arc welding, equipment adjustments, metal transfer and shielding gases. Develop the skills necessary to make quality gas metal arc welds in the vertical position on mild steel from 3/16 inch to 3/8 inch plate, single and multiple pass, using short circuit transfer. Illustrates problems associated with welding situations and provides corrective information.

COURSE GOALS

The student will:

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| 1. Produce quality multiple pass fillet welds and groove welds on carbon steel in the vertical position, using short circuiting transfer. Quality is determined through visual inspection and mechanical testing according to AWS requirements. |
| 2. Develop skills for Welder, Arc (DOT 810.384-014), Production Line Welder (DOT 819.684-010), Tack Welder (DOT 810.684-010), and the arc welding portion of Combination Welder (DOT 819.384-010). |

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 those Core Values whenever appropriate.

TOPIC OUTLINE

1. Glossary of Welding Terms
2. Welding Test Positions
3. Weld Nomenclature
4. Joint and Weld Classification
5. Gas Metal Arc Welding Basic, Course Overview
6. Introduction to Gas Metal Arc Welding
7. Safety & Health of Welders
8. Installation, Set Up & Maintenance of Equipment
9. Surfacing Welds, Flat Position
10. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Flat Position
11. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Horizontal Position
12. The Quality of Welds
13. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Vertical Position, Down
14. Square Groove & Fillet Welds, Butt, Lap & T-Joints, Vertical Position, Up
15. Metal Transfer & Shielding Gases
16. Single V-Groove Weld, Butt Joint, Horizontal Position
17. Single V-Groove Weld, Butt Joint, Vertical Position
18. Single V-Groove Weld, Butt Joint, Vertical Position, Guided Bend Test
19. AWS QC10 3G Qualification Test
20. AWS QC10 Destructive Test

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NOTES

This class is held at the Hobart Institute of Welding Technology in Troy, Ohio, during the day or at the Upper Valley Joint Vocational School in Piqua, Ohio, at night.

Students who have the necessary skills to pass the AWS QC10 3G Qualification Test may test out of this class.