



MONROE COUNTY
COMMUNITY COLLEGE

Course Outcome Summary

Standard Course

WELD115 AWS QC10
Entry Level Welder Certification

Course Information

Division	Applied Science & Engineering Technology
Contact Hours	250
Theory	85
Lab Hours	165
Total Credits	12

Prerequisites **RDG 090 and qualifying score on accepted placement test**

Course Description

This course is designed to meet or exceed the skill and knowledge requirements for the welding and cutting processes established by the “American Welding Society” for the qualification of “QC10 Level I Entry Level Welder” certification. AWS reference document EG2.0-2017 mandates requirements of this course. Additional “Welding Exercises” are included to assure each participant the greatest possible opportunity to successfully complete all “Performance Qualifications Tests” for the AWS Level I Certification. WELD115 is an introduction to various welding processes and procedures with emphasis on developing safe work habits in a lab/shop environment. Topics may include: machine functions, filler metal chemistry, blue print and welding symbol interpretation, basic fabrication techniques, as well as code and procedure requirements for a variety of industrial needs. Welding/cutting processes covered with laboratory applications include: OFC, PAC, CAC-A, CNC-PAC, SMAW, GTAW, FCAW, and GMAW. Welder performance qualification tests must meet AWS QC10 standards in addition to passing written examinations to receive each process certification.

Course Outcomes

In order to evidence success in this course, students will be able to:

1. Practice safe welding and thermal cutting habits in a lab environment.
2. Follow verbal and written instructions to complete work assignments.
3. Demonstrate proper use and inspection of personal protection equipment (PPE).
4. Identify gases relevant to welding/cutting operations.
5. Identify electrodes suitable for welding process and proper metal applications using AWS Classification.
6. Identify weld defects and how to apply corrective actions.
7. Demonstrate ability to set up and operate GMAW-S, GMAW-Spray, FCAW-S, FCAW-G, SMAW E7018, GTAW-CS, GTAW-SS, and GTAW-AL equipment for making sound welds on common joints, in multiple positions, on ferrous and nonferrous materials as applicable.
8. Interpret and apply welds as indicated on a blueprint to a fabricated work piece.
9. Evaluate common weldability issues and apply corrective actions.
10. Evaluate and repair welding and cutting equipment as well as perform safety inspections before use.
11. Integrate thermal cutting and gouging operations as required to complete work.

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