



WELD 2600

Division: Career and Technical Education

Department: Industrial Technology

Course: WELD 2600

Title: Principles of Welder Certification

Catalog Description:

This course is for experienced welding professionals and those who employ or supervise welding personnel. It presents skills and techniques to assist welders to better perform their duties. The meaning and value of welding procedures, welder qualification, and welder certification are studied. Weld inspection techniques covered include destructive and non-destructive test methods. Opportunity to take a welding certification test is included.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 0; Lecture: 0; Lab: 0

Clock/Hour Requirements: 0

Offered for Non-Credit: Yes

Credit/Clock Comments: Non credit

Grading: Pass/Fail

Justification:

This course provides regional industry personnel an understanding of national and international standards for measuring the skill level of welding personnel and ensuring the quality of their work. It also provides opportunity for welders to advance their careers by taking a Welder Certification test that meets American Welding Society, or other nationally recognized, criteria.

Student Learning Outcomes:

Upon successful completion, students will be able to:

- read and understand welding procedures
- obtain a working knowledge of codes and specifications
- perform non-destructive tests on weldments
- perform destructive tests on weldments
- understand the value and limitations of welder certification.

Content:

Course objectives will be accomplished by providing students with learning experiences in the following

subject areas:

- understanding and working knowledge of welding codes, specifications, and written procedures
- qualification and testing of welders and welding operators
- welder certification and its essential variables
- performing visual inspection of welds
- performing destructive mechanical testing of welds.

General Education Outcomes:

Applied Education Outcomes:

1) Students will acquire entry-level skills specific to and appropriate for employment in their chosen field of study.

Students will visually inspect weld quality for appearance, uniformity, and consistency. Professional welding is judged heavily on the aesthetic aspect.

2) Students will become aware of industry specific certification and develop skills sufficient to acquire the same.

Certification standards and documents will be studied. Lab time will enable students to practice hands-on skills and perform a certification test.

3) Students will demonstrate safe practices and awareness of potential hazards in their field of expertise.

Students must pass a shop safety test prior to entering the lab. Continued compliance with safe practices is monitored by the instructor.

Key Performance Indicators:

Student Learning Outcomes will be assessed by the following Key Performance Indicators:

- Students will prepare weld specimens according to a written procedure.
- Students will visually inspect and destructively test their own welds and compare the results to the requirements of nationally recognized welding standards including AWS D1.1- Structural Welding Code- Steel. Results will be graded Pass/Fail; those who pass will receive Certified Welder documentation.

Representative Text and/or Supplies:

- In class handouts.

Optimum Class Size: 12

Maximum Class Size: 12

Signatures:

I hereby submit this course syllabus:

Alan Palmer, M. Ed., Associate Professor

I hereby find this course consistent with the goals and resources of the Industrial Technology Department:

Alan Hart, AAS, Instructor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)