Department:

Industrial Welding Technology

Course Description:

This course will focus on the combination of Gas Tungsten Arc Welding (GTAW) and Shielded Metal Art Welding (SMAW) processes specifically related to pipe welding. The course will cover safety issues, application of welding principles, weld quality, repair, and qualification tests.

Course Competencies:

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

1. Perform safety inspections of equipment.
2. Perform nondestructive examination and identify piping symbols.
3. Apply principles of welding to welding, fabrication and inspection.
4. Apply principles of weld quality and repairs to welding.
5. Execute corrective action to repair surface flaws on welds and base metals.
6. Perform a 6G limited thickness performance qualification test on carbon and stainless steels using the Gas Tungsten Arc Welding (GTAW) process and Shielded Metal Arc Welding process.

Course Content:

A. Combination pipe welding carbon steel
   1. 2” schedule 80 pipe
      a. Repair weld defects
      b. AWS2-6 (Qualification test)
   2. 3” schedule 80 pipe
      a. Repair weld defects
      b. AWS2-6 (Qualification test)

B. Combination pipe welding stainless steel
   1. 2” schedule 80 pipe
      a. Repair weld defects
      b. AWS2-6 (Qualification test)
   2. 3” schedule 80 pipe
      a. Repair weld defects
      b. AWS2-6 (Qualification test)

Learning Assessments:

Course competencies will be assessed by quizzes, tests, project work, demonstrations, observation, assignments, and written papers.
Instructional Materials:

ISBN: 9780826930514

Guidelines for Requesting Accommodations Based on Documented Disability or Medical Condition

It is the intention of Highland Community College to work toward full compliance with the Americans with Disabilities Act, to make instructional programs accessible to all people, and to provide reasonable accommodations according to the law.

Students should understand that it is their responsibility to self-identify their need(s) for accommodation and that they must provide current, comprehensive diagnosis of a specific disability or medical condition from a qualified professional in order to receive services. Documentation must include specific recommendations for accommodation(s). Documentation should be provided in a timely manner prior to or early in the semester so that the requested accommodation can be considered and, if warranted, arranged.

In order to begin the process all students must complete the “Disabilities Self-Identification Form” at this link: https://highlandcc.edu/pages/disability-services.

This form can also be accessed at the Highland Community College homepage under Students Services/Student Resources/Disability Service or by contacting the Disabilities Coordinator.