Department:

Industrial Welding Technology

Course Description:

This course will provide an introduction to reading blueprints related to industrial welding. The course will cover basic lines, views, and abbreviations, as well as interpretation of basic 3-D sketches. The course will also include applicable mathematical operations, measuring, scale ratios, identification of welding joints and symbols, and interpreting a bill of materials.

Course Competencies:

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

1. Identify basic lines, views, and abbreviations used in blueprints.
2. Interpret basic 3-D sketches using orthographic projection and blueprints.
3. Solve applicable mathematical equations.
4. Use basic measuring tools.
5. Interpret scale ratios on a blueprint.
6. Identify basic welding joints and structural shapes.
7. Interpret a bill of materials.
8. Identify standard AWS weld symbols.

Course Content:

A. Weld Prints
   1. Prints
   2. Conventional Drafting
   3. Computer-Aided Design
   4. Weld Prints
B. Object Representation
   1. Sketching
   2. Pictorial Drawings
   3. Orthographic Projections
   4. Surface Features
C. Welding Symbols
   1. Weld Specification on Prints
   2. Weld Joints
   3. Weld Types
   4. Welding Symbols
D. Joint Design
   1. Mechanical Properties
   2. Physical Properties

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Learning Assessments:

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

Instructional Materials:


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.