



WELD 2210

Division: Career and Technical Education

Department: Industrial Technology

Course: WELD 2210

Title: Blueprints for Welders

Catalog Description:

This course studies basic print interpretation and visualization for industrial applications. It includes weld symbols and covers layout techniques from shop drawings to fabrication of sheet metal, plate, pipe, and structural shapes. Lab experience is included.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 6; Lecture: 5; Lab: 3

Clock/Hour Requirements: 120

Offered for Non-Credit: Yes

Prerequisites: DRFT 1010 or instructor approval

Corequisites: N/A

Justification:

The program advisory committee has approved this course.

Student Learning Outcomes:

Upon successful completion, students will be able to:

- read and interpret blueprints, including visualization of objects for industrial usage
- use accepted drafting techniques
- lay out shop drawings to show basic sheet metal construction, plate, pipe, and structural shapes
- use two-dimensional blueprints to properly show three-dimensional shapes accurately for fabrication
- develop patterns using parallel line, radial line, and triangulation.

Content:

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

- basic lines and views

- sketching
- notes and specifications
- dimensions
- bill of materials
- structural shapes
- other views
- sectional views
- detail and assembly prints
- welding symbols and abbreviations
- joints for weldment fabrications
- fillet welds
- groove welds
- back or backing and melt-thru welds
- plug and slot welds
- surface welds
- edge welds
- spot welds
- projection welds
- seam welds
- stud welds
- pipe welding symbols
- inspection and examination.

General Education Outcomes:

- 1) Read effectively, constructively, and critically.

Students will read the required text, as well as other assigned readings. Students must be able to answer questions on exams and synthesize information into laboratory experiences.

- 6) Apply computational skills to a variety of contexts.

Students will perform measurement, design, and fabrication functions as they pertain to laboratory experiences and welding projects. Students must be familiar with basic computational functions.

Applied Education Outcomes:

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

Students will learn basic drafting techniques and weld symbols and to correctly interpret blueprints used in industry.

Key Performance Indicators:

Student Learning Outcomes will be assessed by two or more of the following Key Performance Indicators:

- assignments
- tests
- quizzes
- competency in subsequent courses and on the job.

Representative Text and/or Supplies:

- A. E. Bennett and Louis J. Siy, *Blueprint Reading for Welders*, current edition, Delmar Publishers.

Optimum Class Size: 10

Maximum Class Size: 20

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)