

### Course Outline

**COURSE:** WELD 203                      **DIVISION:** 50                      **ALSO LISTED AS:**

**TERM EFFECTIVE:** Summer 2024                      **CURRICULUM APPROVAL DATE:** 06/11/2024

**SHORT TITLE:** BASIC BLUEPRINTS

**LONG TITLE:** Basic Blueprints

<u>Units</u>	<u>Number of Weeks</u>	<u>Type</u>	<u>Contact Hours/Week</u>	<u>Total Contact Hours</u>
1	18	Lecture:	1	18
		Lab:	0	0
		Other:	0	0
		Total:	1	18

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Out of Class Hrs:                      36.00

Total Learning Hrs:                      54.00

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**COURSE DESCRIPTION:**

This class covers reading mechanical drawings, including learning how 3-D objects are represented on a 2-D space.

**PREREQUISITES:**

**COREQUISITES:**

**CREDIT STATUS:** C - Credit - Degree Non Applicable

**GRADING MODES**

L - Standard Letter Grade

P - Pass/No Pass

**REPEATABILITY:** N - Course may not be repeated

**SCHEDULE TYPES:**

02 - Lecture and/or discussion

05 - Hybrid

71 - Dist. Ed Internet Simultaneous

72 - Dist. Ed Internet Delayed

**STUDENT LEARNING OUTCOMES:**

By the end of this course, a student should:

1. Explain and demonstrate how to read a mechanical drawing.
2. Demonstrate how 3-D objects are represented on a 2-D space.

**COURSE OBJECTIVES:**

By the end of this course, a student should:

1. Explain the difference between the 3rd angle projection and the 1st angle projection. Discuss what the 3rd angle projection means. Show the symbol for the 1st angle projection.
2. Define Geometric Dimension and Tolerance (GD&T). State the objective of GD&T.
3. Identify the various welding symbols. List safety requirements as it relates to welding.
4. Explain how to read the requirements and interpret the drawings on a blueprint. Discuss what is meant by the mono-detail system. Discuss the drawing standards that appear on a blueprint.
5. Define orthographic projection. Describe how models represent a 3-D object on 2-D drawing paper.
6. Identify the terms used on mechanical drawings. Explain how to convert 2-D drawing views back into 3-D dimensional parts.

**COURSE CONTENT:**

Curriculum Approval Date: 06/11/2024

3 Hours

Content: Introduction, Drawing Language

3 Hours

Content: Projections, Orthographic Projection and 3rd Angle Rotation

4 Hours

Content: Drawing Format, Mono-Detail System, Standards

2 Hours

Content: Weld Symbols, Safety

2 Hours

Content: Introduction to Geometric Dimension and Tolerance (GD&T)

2 Hours

Content: 3rd Angle Compared to 1st Angle Projection

2 Hours

Final Exam.

**METHODS OF INSTRUCTION:**

Lecture, discussion

**OUT OF CLASS ASSIGNMENTS:**

Required Outside Hours: 36

Assignment Description: Out of Class Assignments: Such as - Terms/Symbols/Safety worksheet. Read handouts provided on how to read basic blueprints. Problem-solving assignments.

**METHODS OF EVALUATION:**

Problem-solving assignments

Evaluation Percent 30

Evaluation Description

Reading basic blueprints.

Objective examinations

Evaluation Percent 30

Evaluation Description

Terms, Symbols, Problem-Solving

Other methods of evaluation

Evaluation Percent 40

Evaluation Description

Student participation in discussion and class activities.

**REPRESENTATIVE TEXTBOOKS:**

No textbook required. Handouts will be provided as needed.

**ARTICULATION and CERTIFICATE INFORMATION**

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Not Transferable

Not Transferable

UC TRANSFER:

Not Transferable

Not Transferable

**SUPPLEMENTAL DATA:**

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:

Program Status: 1 Program Applicable

Special Class Status: N

CAN:

CAN Sequence:

CSU Crosswalk Course Department:

CSU Crosswalk Course Number:

Prior to College Level: Y

Non Credit Enhanced Funding: N

Funding Agency Code: Y

In-Service: N

Occupational Course: C

Maximum Hours:

Minimum Hours:

Course Control Number: CCC000598666

Sports/Physical Education Course: N

Taxonomy of Program: 095650