Course Outline

COURSE: WELD 703    DIVISION: 90     ALSO LISTED AS:

TERM EFFECTIVE: Fall 2019    CURRICULUM APPROVAL DATE: 11/13/2018

SHORT TITLE: BASIC BLUEPRINTS

LONG TITLE: Basic Blueprints

<table>
<thead>
<tr>
<th>Units</th>
<th>Number of Weeks</th>
<th>Contact Hours/Week</th>
<th>Total Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6</td>
<td>Lecture: 18</td>
<td>Lecture: 108</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab: 0</td>
<td>Lab: 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other: 0</td>
<td>Other: 0</td>
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<td></td>
<td></td>
<td>Total: 18</td>
<td>Total: 108</td>
</tr>
</tbody>
</table>

COURSE DESCRIPTION:

This class covers reading mechanical drawings, including learning how 3-D objects are represented on a 2-D space. ADVISORY: WELD 702.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: N - Non Credit

GRADING MODES

N - Non Credit

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion
STUDENT LEARNING OUTCOMES:

Explain and demonstrate how to read a mechanical drawing.

Measure of assessment: exam, discussion, homework

Year assessed, or planned year of assessment: 2019

Semester: Fall

Institution Outcome Map

1. Communication:
   1.1 Students will communicate effectively in many different situations, involving diverse people and viewpoints.
   1.2 Speaking: Students will speak in an understandable and organized fashion to explain their ideas, express their feelings, or support a conclusion.
   1.3 Listening: Students will listen actively and respectfully to analyze the substance of others' comments.
   1.4 Reading: Students will read effectively and analytically and will comprehend at the college level.
   1.5 Writing: Students will write in an understandable and organized fashion to explain their ideas, express their feelings, or support a conclusion.

2. Cognition:
   2.1 Students will think logically and critically in solving problems; explaining their conclusions; and evaluating, supporting, or critiquing the thinking of others.
   2.2 Analysis and Synthesis: Students will understand and build upon complex issues and discover the connections and correlations among ideas to advance toward a valid independent conclusion.
   2.3 Problem Solving: Students will identify and analyze real or potential problems and develop, evaluate, and test possible solutions, using the scientific method where appropriate.
   2.4 Creative Thinking: Students will formulate ideas and concepts in addition to using those of others.
   2.5 Quantitative Reasoning: Students will use college-level mathematical concepts and methods to understand, analyze, and explain issues in quantitative terms.
   2.6 Transfer of Knowledge and Skills to a New Context: Students will apply their knowledge and skills to new and varied situations.

7. Content Specific:

Demonstrate how 3-D objects are represented on a 2-D space.

Measure of assessment: exam, homework, discussion

Year assessed, or planned year of assessment: 2019

Semester: Fall

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**CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS**

Curriculum Approval Date: 11/13/2018

3 Hours
Content: Introduction, Drawing Language
Student Performance Objectives: Identify the terms used on mechanical drawings. Explain how to convert 2-D drawing views back into 3-D dimensional parts.

3 Hours
Content: Projections, Orthographic Projection and 3rd Angle Rotation
Student Performance Objectives: Define orthographic projection. Describe how models represent a 3-D object on 2-D drawing paper.

4 Hours
Content: Drawing Format, Mono-Detail System, Standards
Student Performance Objectives: 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.

2 Hours
Content: Weld Symbols, Safety
Student Performance Objectives: Identify the various welding symbols. List safety requirements as it relates to welding.

2 Hours
Content: Introduction to Geometric Dimension and Tolerance (GD&T)
Student Performance Objectives: Define Geometric Dimension and Tolerance (GD&T). State the objective of GD&T.

2 Hours
Content: 3rd Angle Compared to 1st Angle Projection
Student Performance Objectives: 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.

**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:**

Percent of total grade: 30.00 %
Reading basic blueprints.
Objective examinations
Percent of total grade: 30.00 %
Terms, Symbols, Problem-Solving
Other methods of evaluation
Percent of total grade: 40.00 %
REPRESENTATIVE TEXTBOOKS:
No textbook required. Handouts will be provided as needed.

ARTICULATION and CERTIFICATE INFORMATION
Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
Not Transferable
UC TRANSFER:
Not Transferable

SUPPLEMENTAL DATA:
Basic Skills: N
Classification: J
Noncredit Category: I
Cooperative Education: N
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: Y
Funding Agency Code: A
In-Service: N
Occupational Course: C
Maximum Hours:
Minimum Hours:
Course Control Number:
Sports/Physical Education Course: N
Taxonomy of Program: 095650