WELD-150: METAL FABRICATION 1

Effective Term
Fall 2023

CC Approval
11/18/2022

AS Approval
11/22/2022

BOT Approval
12/15/2022

COCI Approval
5/18/2023

SECTION A - Course Data Elements

CB04 Credit Status
Credit - Degree Applicable

Discipline

Minimum Qualifications	And/Or
Welding (Any Degree and Professional Experience)	

Subject Code
WELD - Welding Technology
Course Number
150

Department
Welding Technology (WELD)

Division
Career Education and Workforce Development (CEWD)

Full Course Title
Metal Fabrication 1

Short Title
Metal Fabrication 1

CB03 TOP Code
0956.50 - *Welding Technology

SECTION C - Conditions on Enrollment

Open Entry/Open Exit
No

Repeatability
Not Repeatable

Grading Options
Letter Grade or Pass/No Pass

Allow Audit
Yes

Requisites

Prerequisite(s)
Completion of WELD-120 or WELD-100 with a minimum grade of C.

Requisite Justification

Requisite Description
Course in a Sequence

Subject
WELD
Course #
100

Level of Scrutiny
Content Review

Upon entering this course, students should be able to:
Student will demonstrate knowledge and ability to work safely with electric arc welding equipment; oxyacetylene equipment and welding shop tools.

Requisite Description
Course in a Sequence

Subject
WELD
Course #
120

Level of Scrutiny
Content Review

Upon entering this course, students should be able to:
Student will demonstrate knowledge and ability to work safely with electric arc welding equipment; oxyacetylene equipment and welding shop tools.

SECTION D - Course Standards

Is this course variable unit?
No

Units
3.00000

Lecture Hours
36

Lab Hours
54

Outside of Class Hours
72

Total Contact Hours
90

Total Student Hours
162

Distance Education Approval

Is this course offered through Distance Education?
Yes

Online Delivery Methods

DE Modalities	Permanent or Emergency Only?
Hybrid	Emergency Only

SECTION E - Course Content

Student Learning Outcomes

	Upon satisfactory completion of the course, students will be able to:
1.	Identify and recognize hazards associated with a welding environment utilizing Oxy-Fuel, SMAW, GMAW, GTAW, PAC, and CAC-A
2.	Apply the use of Personal Protective Equipment (PPE)
3.	Apply common terminology related to safety
4.	Works cooperatively with others in shop setting
5.	Set up SMAW, GTAW, GMAW equipment for welding mild steel, stainless steel and aluminum with appropriate electrodes
6.	Recognize and explain visual defects in an electric arc weld
7.	Identify and use the appropriate process and fabricating techniques for a project
8.	Accurately interpret

2. Tools and Supplies
   a. Economic factors in tool, accessory and supply selection
   b. Appropriate use of power and hand tools
   c. Maintenance and repair cost factors
3. Blueprints
   a. Title block
   b. Visualization and interpretation
   c. Notes and specs
   d. Bill of materials
   e. Dimensioning: fractional, metric, decimal, etc.
   f. Symbols
   g. Views: plan, sectional, elevation, isometrics
   h. Sketches
4. Material preparation, Flame cutting
   a. Check measurements
   b. Economic factors in process choice
   c. Planning: how, when, where and why
   d. Edge preparation (cold surface) and measurement check
   e. Refer to specification and check
5. Fabrication techniques
   a. Planning: how, when, where, why
   b. Use of reference lines
   c. Safety procedures
   d. Use of jigs, fixtures and bracing
   e. Tool selection
   f.

Student-Initiated Online Contact Types
Discussions

Course design is accessible
Yes

Methods of Evaluation

Methods of Evaluation

Types	Examples of classroom assessments
Exams/Tests	Students will be given a mid-term and final examination. (example: tests comprised of multiple choice, identification, short answer and T/F questions)
Skills Demonstration	tudents will design, draft, fabricate and critique a prl2t (example: fabrication os

Edition/Version
2nd

Publisher
Lincoln Electric

Year
2008

Material Type
Other required materials/supplies

Description
Safety glasses and gauntlet style welding gloves.

Proposed General Education/Transfer Agreement

Do you wish to propose this course for a Local General Education Area?
No

Do you wish to propose this course for a CSU General Education Area?
No

Do you wish to propose this course for a UC Transferable Course Agreement (UC-TCA)?
No

Course Codes (Admin Only)

ASSIST Update
No

CB00 State ID
CCC000522951

CB10 Cooperative Work Experience Status
N - Is Not Part of a Cooperative Work Experience Education Program

CB11 Course Classification Status
Y - Credit Course

CB13 Special Class Status
N - The Course is Not an Approved Special Class

CB23 Funding Agency Category
Y - Not Applicable (Funding Not Used)

CB24 Program Course Status
Program Applicable

Allow Pass/No Pass
Yes

Only Pass/No Pass
No