



AGTC 106: AGRICULTURE WELDING

Proposer:**Name:**

Charles Abee

Email:

charlesa@cos.edu

Effective Term:

Fall 2027

Does this course use a CA Common Course Number

No

Credit Status:

Credit - Degree Applicable

Subject:

AGTC - Agricultural Technology

Course Number:

106

Discipline:

And/Or	(Discipline)
	(Agricultural Engineering (Equipment and machinery, farm mechanics))
Or		Agricultural Production (Animal science, plant science, beekeeping, aquaculture))

Catalog Title

Agriculture Welding

COS Course Description

Agriculture Welding will teach students the basics of welding found in agriculture. Agriculture Welding is part of the Equipment Technician program and is not designed to be a Certified Welding course to obtain American Welding Society certification or welder qualification, but rather to provide basic welding skills for those who may need to make in field repairs to equipment. Students will learn the basics of shielded metal arc welding, oxyfuel cutting and gas metal arc welding. No prior experience in welding is needed to be in this course.

Method of Instruction:

Laboratory
Lecture and/or Discussion

Course Units/Hours:**Course Units Minimum:**

3

Lecture Hours Minimum (week)

2

Lab Hours Minimum (week)

3

Total Contact Hours Minimum (semester)

87.5

**Total Outside Hours Minimum (semester)**

70

Total Student Learning Minimum Hours (semester)

157.5

Repeatability:

No

Open Entry/Exit:

No

Field Trips:

Not Required

Grade Mode:

Standard Letter

TOP Code:

011600 - * Agricultural Power Equipment Technology

SAM Code:

C - Clearly Occupational

Course Content**COS Methods of Evaluation:**

Multiple choice tests
 Problem solving assignments or activities
 Skill demonstrations

COS Course Topics:

COS Course Topics	
1	Shop and industrial safety.
2	Basic Tool and Equipment Identification
3	Good manufacturing practices
4	Shielded Metal Arc Welding Equipment and Process
5	Oxy-Fuel Cutting and Welding Equipment and Processes
6	Gas Tungsten Arc Welding
7	Gas Metal Arc Welding Equipment and Process
8	Welding Joints
9	Welding Positions
10	Production of Metals and Metal Properties

COS Course Objectives:

COS Course Objectives	
1	Explain the concepts of safe working practices in an industrial setting.
2	Identify tools used in industry and use them safely.
3	Identify proper settings for shielded metal arc welding equipment and setup adjust and use equipment accordingly.
4	Identify proper settings for gas metal arc welding equipment and setup adjust and use equipment accordingly.
5	Identify proper settings for oxy fuel cutting and welding/brazing equipment and setup adjust and use equipment accordingly.
6	Weld the five basic joints in various positions.

- 7 Learn and practice good manufacturing processes
- 8 Properly prepare metals for welding.

Course Outcomes:

Course Outcomes	
1	Students will be able to explain or demonstrate safe practices in an industrial setting.
2	Students will be able to setup, adjust and operate welding/cutting equipment in the shop.
3	Students will complete welds in various positions.

Assignments:

Assignment Type:	Details
Reading	Students may have to read chapters from the textbook and answer questions.
Lab	Students will have various welding assignments they must complete throughout the semester.
Homework	Students will have to answer questions from technical documents regarding specific pieces of welding equipment and processes.
Writing	Students may write a report on welding process and how to improve their technique.

Representative Texts, Manuals, and/or OER that is equivalent, Other Support Materials:

Texts used by individual institutions and even individual sections will vary. The list of representative texts must include at least one text with a publication date within five (5) years of the course outline approval date.

COS Textbooks or other support materials

Resource Type:	Details
Books	Modern Welding Thirteenth Edition; William Bowditch, Kevin Bowditch, Mark Bowditch Goodheart-Wilcox January 2023 ISBN-13 978-1685845711

Transferable to CSU

Yes - Approved

Transferable to CSU Justification

Would like to request articulation with CSU Fresno MEAG 50 and IT 71
ITEC 112 is listed in Assist

This course will also be proposed for UC transfer.

No

Other Degree Attributes

Degree Applicable
Not a Basic Skills Course

Banner Title:

Agriculture Welding

Course Control Number:

CCC000205410

Equity Review

Select elements of the COR that were reviewed for equity. Must select at least one:

Objectives