MASTER COURSE OUTLINE **DATE: 4/29/20**

COURSE TITLE: Agricultural Welding

Dept.: Welding	Course Num: 145	(Formerly:)
CIP Code: 01.0205	Intent Code:	Program Code: 123
CREDITS: 4		
Total Contact Hrs Per Qtr.: 88	Lecture Hrs:	Lab Hrs: 88
Distribution Design:		Other Hrs:

Prepared By: Brett Iksic

COURSE DESCRIPTION (as it will appear in the catalog)

This course will cover cutting, repairing and welding metals using a variety of tools and techniques. Students will learn to choose the appropriate metal for various repair situations and techniques to accurately assess the amount of material needed. By course completion, students will be able to MIG and Arc weld proficiently and will be comfortable fabricating and building basic parts and tools. Additionally, this course will introduce students to oxy acetylene welding and brazing.

PREREQUISITES: AGM 102 Agricultural Equipment and Workplace Safety (required) AGM 109 Shop Skills I (recommended).

TEXTBOOK GUIDELINES: Textbook determined by Agriculture Mechanics Faculty (Example: Welding and Cutting: A Guide to Fusion Welding and Associated Cutting Processes, Peter Houldcroft and Robert John).

STUDENT LEARNING OUTCOMES: *Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.*

1. Cut metal using various tools and techniques.
2. Perform welds from various positions and angles.
3. Prepare metal surfaces for repair.
4. Perform welds to industry standards.
5. Fabricate simple parts and tools.

INSTITUTIONAL OUTCOMES

3. Students will be able to demonstrate, teamwork, ethics, appropriate safety awareness and/or workplace specific skills.

COURSE CONTENT OUTLINE

1. Cutting Techniques
   - Oxy Acetylene
   - Plasma
   - Carbon Arc
2. Oxy Acetylene
   - Welding
   - Brazing
3. Arc Welding
4. MIG Welding
5. Fabrication and Repairs

DEPARTMENTAL GUIDELINES *(optional)*

DIVISION CHAIR APPROVAL **DATE**