



Business & Industry Endorsement Agriculture, Food, and Natural Resources

Applied Agricultural Engineering-Welding

The Applied Agricultural Engineering program of study explores the occupations and educational opportunities associated with applying knowledge of engineering technology and biological science to agricultural problems concerned with power and machinery, electrification, structures, soil and water conservation, and processing agricultural products. This program of study may also include exploration into diagnosing, repairing, or overhauling farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.

Levels	Courses
Level 1	Principles of Agriculture, Food & Natural Resources 9
Level 2	Agricultural Mechanics and Metal Technologies/Lab 10-12
Level 3	Agricultural Structures, Design and Fabrication/Lab 10-12
Level 4	Practicum in Agriculture, Food & Natural Resources 11-12 <i>+NCCER Core Curriculum</i> <i>+AWS D1.1 and D9.1 Certification</i>

Occupation	Median Wage	Annual Openings	% Growth
Outdoor Power Equipment and Other Small Engine Mechanics	\$32,406	366	16%
Welders	\$41,350	6,171	09%
Farm Equipment Mechanics and Service Technicians	\$39,915	304	17%
Mobile Heavy Equipment Mechanics	\$47,299	1,627	16%
Agricultural Engineers	\$64,792	9	13%

Industry Based Certifications

+NCCER Core Curriculum

The student is required to show competency not just in welding on various base metals and ranges, but also demonstrates understanding of welding theory and practice.

+AWS D1.1 and D9.1 Certification

If a student obtains the qualification, the document certifies that the student is qualified to produce specific welds in accordance with AWS D1.1 and D9.1.

To earn a CTE endorsement, students must take a minimum of 3 classes for 4 or more credits in the same Program of Study, and must end with one Level 3 or Level 4 CTE course.