



Applied Agricultural Engineering *Statewide Program of Study*



The Applied Agriculture 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 system.

Gladewater Pathway Courses

Level 1 (9th grade)

- **PRINCIPLES OF AGRICULTURE, FOOD, AND NATURAL RESOURCES**

Level 2 (10th grade)

- **AGRICULTURAL MECHANICS AND METAL TECHNOLOGIES/LAB**

Level 3 (11th grade)

- **AGRICULTURAL STRUCTURES DESIGN AND FABRICATIONS/LAB**

Level 4 (12th grade)

- **AGRICULTURAL EQUIPMENT DESIGN AND FABRICATIONS/LAB**

Industry-Based Certification

Applied Agricultural Engineering

Course Information



Principles of Agriculture, Food, and Natural Resources Credit: 1

- **TSDS PEIMS Code:** 13000200 (PRINAFNR)
- **Grade Placement:** 9-12
- **Prerequisite:** None.
- **Course Description:** Principles of Agriculture, Food, and Natural Resources will allow students to develop knowledge and skills regarding career and educational opportunities, personal development, globalization, industry standards, details, practices, and expectations.

Agricultural Mechanics and Metal Technologies Credit: 1

- **TSDS PEIMS Code:** 13002200 (AGMECHMT)
- **Grade Placement:** 10-12
- **Prerequisite:** None. **Recommended Prerequisite:** Principles of Agriculture, Food, and Natural Resources.
- **Course Description:** Agricultural Mechanics and Metal Technologies is designed to develop an understanding of agricultural mechanics as it relates to safety and skills in tool operation, electrical wiring, plumbing, carpentry, fencing, concrete, and metalworking techniques. To prepare for careers in agricultural power, structural, and technical systems, students must attain academic skills and knowledge; acquire technical knowledge and skills related to power, structural, and technical agricultural systems and the industry; and develop knowledge and skills regarding career opportunities, entry requirements, industry certifications, and industry expectations.

Agricultural Structures Design and Fabrication Credit: 1

- **TSDS PEIMS Code:** 13002300 (AGSDF)
- **Grade Placement:** 11-12
- **Prerequisite:** None. **Recommended Prerequisites:** Agricultural Mechanics and Metal Technologies.
- **Course Description:** In Agricultural Structures Design and Fabrication, students will explore career opportunities, entry requirements, and industry expectations. To prepare for careers in mechanized agriculture and technical systems, students must attain knowledge and skills related to agricultural structures design and fabrication.

Agricultural Equipment Design and Fabrication Credit: 1

- **TSDS PEIMS Code:** 13002350 (AGEQDF)
- **Grade Placement:** 11-12
- **Prerequisite:** None. **Recommended Prerequisites:** Agricultural Mechanics and Metal Technologies.
- **Course Description:** In Agricultural Equipment Design and Fabrication, students will acquire knowledge and skills related to the design and fabrication of agricultural equipment.

