

## **CTE: AGRICULTURE EDUCATION** **COURSE DESCRIPTIONS**

- 0910 / 0911 AGRICULTURE EDUCATION 1** **GRADE LEVEL: 9, 10, 11, 12** **CREDIT: 1**  
 Agriculture Education 1, Exploring Agriculture, is an introductory course in which the student is taken on a journey through today's modern agricultural world and will explore a variety of subject matter including plant science, animal science, soil science, and environmental technology. The student will also have learning experiences with basic cold metals, woodworking, and proper tool use. Activities dealing with leadership, FFA, public speaking, and parliamentary procedure will also be a focus of this course. Students will apply new technologies, computers, varied learning experiences, and agricultural recordkeeping.
- 0920 / 0921 AGRICULTURE EDUCATION 2** **GRADE LEVEL: 10, 11, 12** **CREDIT: 1**  
***Prerequisite: Ag Ed 1 or Instructor consent***  
 Agriculture Education 2, Principles of Agriculture Food and Natural Resources, is designed to emphasize skills in welding, electricity, and global information systems. A comprehensive view of range, crop, and soil science will be highlighted, giving students the basic technological concepts associated with today's modern agriscience. Aquaculture and water quality will be components of this class. Computers and modern communication technologies will be incorporated with the many segments of the course. The course will have strong focus on student leadership skills and FFA activities.
- 0930 / 0931 AGRICULTURE EDUCATION 3** **GRADE LEVEL: 11, 12** **CREDIT: 1**  
***Prerequisite: Ag Ed 1 or Instructor consent***  
 In Agriculture Education 3, Agricultural Systems, students will take a more in-depth look at mechanical systems related to agriculture. The course is designed for the student interested in animal production, crop production, veterinary science, finance, agricultural mechanics, surveying, and construction. Students are provided an opportunity to be involved in school and community activities in FFA. Students receive hands-on experience through their Supervised Agricultural Experience (SAE) project.
- 0940 / 0941 AGRICULTURE EDUCATION 4** **GRADE LEVEL: 12** **CREDIT: 1**  
***Prerequisite: Ag Ed 1 or Instructor consent***  
 Ag Ed 4, Advanced Agricultural Systems, is where upper-level students will develop academic and technical skills and knowledge related to power structure and technical agricultural systems and the agriculture industry. Students develop an understanding of food processing, power, plant science, and animal science. Students investigate the relationship between agriculture, health, and the environment. Students also learn financial planning skills and about agricultural economics. Students will have an opportunity to use advanced skills to develop individual projects. Preventative engine maintenance, machinery management, computer application, and supervised agriculture experience are major components of this course.
- 0960 HORTICULTURE & GREENHOUSE MANAGEMENT** **GRADE LEVEL: 10, 11, 12** **CREDIT: ½**  
 Students will develop an understanding of basic plant science including plant identification, plant structure, plant health, and soils. A major portion of the class will involve using the greenhouse to grow a variety of plants, both seedlings and cuttings. Unique experiments in plant and soil science will be conducted. Students will also be responsible for propagation, horticulture care, greenhouse operation, and the marketing and sale of flowers and bedding plants. This class will be limited to fifteen students with preference given to juniors and seniors.
- 0970 AGRICULTURE METALS 1** **GRADE LEVEL: 10, 11, 12** **CREDIT: ½**  
***Prerequisite: Ag Ed 1 or EIT 1***  
 In Agriculture Metals 1, we will develop basic skills in forge work, arc welding, and oxyacetylene welding. This class involves developing skills in the design and construction of projects, welding techniques, and cutting hot and cold metal. It will include construction of small metal projects and introductory welding methods. Basic computer-assisted design and plasma cam cutout will also be a component of this course.
- 0972 AGRICULTURE METALS 2** **GRADE LEVEL: 10, 11, 12** **CREDIT: ½**  
***Prerequisite: Ag Metals 1***  
 In this course, students will develop advanced welding and fabrication skills in Arc, TIG, MIG, and oxyacetylene. Students will be required to complete large metal fabrication projects. Advanced skills using TIG and MIG welding will be stressed, and students will also learn to use a computer-assisted plasma cutter. *Ag Metals 2 is a Dual Enrollment option course. Dual enrollment students will be given enrollment preference in this course.*
- 0946 AGRICULTURE MECHANICS AND EQUIPMENT** **GRADE LEVEL: 10, 11, 12** **CREDIT: ½**  
***Prerequisite: Ag Ed 1 or Exploring Industrial Technology***  
 The Agriculture Mechanics and Equipment course will provide students with the engineering and power technology principles, skills, and knowledge that are specifically applicable to the agriculture industry. Typical topics include the operation, maintenance, and repair of power, electrical, hydraulic, and mechanical systems. The primary focus of the course will be on small engine operation. Students will learn all aspects of small engines, as well as have the opportunity to disassemble and reassemble a small engine by the end of the semester course. Students will also have projects related directly to hydraulic systems and function.