

# Agricultural Education

## **Introduction to Agriculture and Natural Resources I (Pre-requisite for all Ag courses)-010100**

**Grade Level: 9-10**                      **Credit: 1**

**Description:** Students are provided with knowledge, skills, and competencies needed to enter various occupations in agriculture and natural resources. Units of study include animal and plant science, agricultural mechanics, computer applications, leadership, and supervised agricultural experience programs. The program combines knowledge and skills with experiential learning and FFA for a total program effect. Students have the opportunity to participate in leadership activities through FFA.

## **The Science of Agriculture-010200**

**Grade Level: 10-12**                      **Credit: 1**

**Description:** This course focuses on the basic scientific principles and processes related to the production of plants and animals for the food and fiber systems. Topics of instruction include basic understanding of the livestock/poultry industry and its various components, career opportunities, soil science, crop science/agronomy, weed science, basic agricultural mechanics and related industry careers, environmental stewardship, entrepreneurship, and leadership/personal development. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, FFA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **Horticulture-021200**

**Grade Level: 10-12**                      **Credit: 1**

**Description:** Horticulture includes art, science, and technology. This field of study explains concepts of plant growth and how plants are used in our environment for aesthetics, ecosystems, and as plant products for human consumption. Student will gain skills for entry-level employment or entrance into an advanced training/degree program.

## **Fundamentals of Ag Mechanics-011200**

**Grade Level: 10-12**                      **Credit: 1**

**Description:** This area of study is designed to provide learners with job entry-level skills in the agricultural mechanics industry. Major instructional concepts include an orientation to careers and agricultural mechanics, safety, engines and equipment, drawing and blueprinting, and hand and power tools. Safety instruction is integrated into all activities. Teachers should provide each student with real world learning opportunities and instruction related to selection, development, and maintenance of individual Supervised Agricultural Experience (SAE) programs. Students are encouraged to become active members of FFA, the national youth organization for those enrolled in agricultural education. FFA is an integral component of the program and provides curricular opportunities that enhance student achievement. Teachers should utilize relevant FFA activities to support experiential learning.

## **Agricultural Structures-011300**

**Grade Level: 10-12**                      **Credit: 1**

**Pre-Requisite:** *Intro to Ag; Fundamentals of Ag Mechanics*

**Description:** Students will use computer skills to develop simple sketches and plans, read and relate structural plans to specifications and building codes, estimate project costs, use construction/fabrication equipment and tools, and plan and design machinery, equipment, buildings and facilities. Students utilize problem-solving techniques and participate in hands-on activities to develop an understanding of course concepts. Teachers should provide each student with real world learning opportunities and instruction. Students are encouraged to become active members of the student organization, FFA. All West Virginia teachers are responsible for classroom instruction that integrates learning skills, technology tools, and skill sets.

## **Agricultural Experience Program-013400**

**Grade Level: 9-12**                      **Credit: 1**

**Description:** The Supervised Agricultural Experience program is a hands-on, student planned way for them to apply skills learned in the classroom to real world agricultural experiences. With help from their agricultural teachers, students develop an SAE project based on one or more SAE categories: Entrepreneurship, Placement, Research and Experimentation and Exploratory.