

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES

Introduction to Agriculture, Food and Natural Resources is a two semester course that is highly recommended as a prerequisite to and a foundation for all other agricultural classes. The nature of this course is to provide students with an introduction to the fundamentals of agricultural science and business. Topics to be covered include: animal science, plant and soil science, food science, horticultural science, agricultural business management, landscape management, natural resources, agriculture power, structure, and technology, careers in agriculture, leadership, and supervised agricultural experience. An activity and project based approach is used along with team building to enhance the effectiveness of the student learning activities.

Career and Technical Student Organizations

Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education courses. They enhance the knowledge and skills students learn in a course by allowing a student to participate a unique program of career and leadership development. Students in this course should be encouraged to participate in FFA.

Course Specifications

- DOE Code: 5056
- Recommended Grade Level: Grade 9-10
- Recommended Prerequisites: None
- Credits: 1 credit per semester, maximum of 2 credits
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas

Content Standards

Domain – Careers

Core Standard 1 Students examine the scope of career opportunities in and the importance of agriculture to the economy.

Standards

- IAFNR-1.1 Define and explore agriculture and agribusiness and their role in the economy
- IAFNR-1.2 Evaluate and explore the career opportunities in agriculture
- IAFNR-1.3 Identify how key organizational structures and processes affect organizational performance and the quality of products and services
- IAFNR-1.4 Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society

Domain – Leadership

Core Standard 2 Students validate the necessity of leadership skills development in conjunction with participation in The National FFA Organization (FFA) as a critical component to a well rounded agricultural education.

Standards

- IAFNR-2.1 Acquire and demonstrate communication skills such as writing, public speaking, and listening while refining oral, written, and verbal skills
- IAFNR-2.2 Recognize and explain the role of the FFA in the development of leadership, education, employability, communications and human relations skills
- IAFNR-2.3 Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment
- IAFNR-2.4 Acquire the skills necessary to positively influence others
- IAFNR-2.5 Develop a skill set to enhance the positive evolution of the whole person

Domain – Supervised Agriculture Experience

Core Standard 3 Students validate the necessity of a Supervised Agricultural Experience (SAE) program as a critical component to a well rounded agricultural education.

Standards

- IAFNR-3.1 Explain the nature of and become familiar with those terms related to an SAE program
- IAFNR-3.2 Explore the numerous possibilities for an SAE program which a student might develop
- IAFNR-3.3 Develop an individual SAE program and implement record keeping skills

Domain – Plant & Soil Science

Core Standard 4 Students connect the necessity of plant and soil science to modern agriculture.

Standards

- IAFNR-4.1 Apply knowledge of plant classification, plant anatomy and plant physiology to the production and management of plants
- IAFNR-4.2 Prepare a plant management plan that addresses environmental factors, nutrients and soil on plant growth
- IAFNR-4.3 Identify the physical qualities of the soil that determine its use

Domain – Natural Resource

Core Standard 5 Students confirm the importance of preserving and replenishing our natural resources through natural resource management.

Standards

- IAFNR-5.1 Explain interrelationships between natural resources and humans necessary to conduct management activities in natural environments
- IAFNR-5.2 Apply knowledge of natural resources to production and processing industries
- IAFNR-5.3 Utilize effective methods and venues to communicate natural resource processes to the public

Domain – Animal Science

Core Standard 6 Students prove the necessity for the modern animal science industry.

Standards

- IAFNR-6.1 Examine the components, historical development, global implications and future trends of the animal systems industry
- IAFNR-6.2 Classify, evaluate, select, and manage animals based on anatomical and physiological characteristics
- IAFNR-6.3 Apply principles of animal nutrition to ensure the proper growth, development, reproduction, and economic production of animals
- IAFNR-6.4 Evaluate and select animals based on scientific principles of animal production
- IAFNR-6.5 Examine the components of the meat industry

Domain – Agribusiness

Core Standard 7 Students explore the basic economic principles which are used in agricultural business management.

Standards

- IAFNR-7.1 Recognize principles of capitalism as related to agricultural businesses
- IAFNR-7.2 Describe the meaning, importance and economic impact of entrepreneurship
- IAFNR-7.3 Execute supply-and-demand principles in AFNR businesses
- IAFNR-7.4 Recognize quality AFNR business plan components that have been developed using the SMART (specific, measurable, attainable, realistic and timely) format

Domain – Food Science

Core Standard 8 Students apply concepts of agriculture to the various aspects of the food science industry.

Standards

- IAFNR-8.1 Examine components of the food industry
- IAFNR-8.2 Apply principles of science to the food products and processing industry
- IAFNR-8.3 Select and process food products for storage, distribution and consumption
- IAFNR-8.4 Understand food safety and management techniques in the food products and processing industry

Domain – Power, Structure, and Technology

Core Standard 10 Students establish a basic knowledge of agricultural power, structure, and technology and physical science.

Standards

- IAFNR-9.1 Use physical science principles and engineering applications with power, structural and technical systems to solve problems and improve performance
- IAFNR-9.2 Apply technology principles in the use of agricultural technical systems
- IAFNR-9.3 Investigate power, structure, and technological systems as they relate to the modern agriculture industry