AGRICULTURE

FUNDAMENTALS OF AGRICULTURAL SCIENCE AND BUSINESS

2 semesters, 2 credits
Grades 9-12
Pre: None
A Core 40 directed elective

This yearlong course is highly recommended as a prerequisite and foundation for all other agriculture classes. An activity and project based approach is used along with team building to enhance the effectiveness of the student learning activities. The nature of this course is to provide students with an introduction to the fundamentals of agricultural science and business. Topics that may be covered include: animal science, plant and soil science, food science, horticultural science, agribusiness management, natural resources, agricultural mechanics, SAE - Supervised Agricultural Experience- and leadership development based on FFA. FFA membership is highly recommended to maximize benefit. FFA is an integral part of the class for personal development, leadership and career skills. Time will be devoted in other agriculture classes to maintain the SAE records and encourage FFA participation. SAE records are important criteria to maintain eligibility to participate in some FFA activities.

*Individual SAE records will be started based on personal financial rewards and work experience.

AGRIBUSINESS MANAGEMENT

2 semesters, 2 credits
Grades 10-12
Pre: “C” in Fundamentals of Agricultural Science and Business or Instructor Approval
A Core 40 directed elective

This yearlong course presents the concepts necessary for managing a business. Students will use the FFA organization as the model to experience management skills in finance, ideas, time and people. The course also includes marketing and current events. Students will be expected to maintain SAE records and prepare yearly reports. FFA leadership career development event experience is expected.

This course can be repeated. Second and third year students are expected to supplement the course with independent study from one or more of the other listed classes in the agriculture curriculum.

SAE (SUPERVISED AGRICULTURAL EXPERIENCE)

1 semester, .5 credit
Grades 9-12
Pre: Instructor Approval
Also offered during summer months

SAE is designed to provide students with opportunities to gain experience in the agriculture field(s) in which they are interested. Students should experience and apply what is learned in the classroom, laboratory, and training site to real-life situations. Students work closely with their agricultural science and business teacher(s), parents, and/or employers to get the most out of their SAE program.

AGRICULTURAL MECHANIZATION

2 semesters, 2 credits
Grades 10-12
A Core 40 directed elective
Pre: None, but Fund. of Agricultural Science and Business is recommended

This yearlong, lab intensive course is designed to develop skills and knowledge around the following topics: arc welding, torch operation, concrete, wood, metal, electricity and electronics, small gas engine operation.

ANIMAL SCIENCE
This yearlong course provides students with an overview of animal science. Students participate in a large variety of activities and laboratory work including real and simulated animal science experiences and projects. All areas that the students study can be applied to both large and small animals. Topics to be addressed include: anatomy and physiology, genetics, reproduction, nutrition, careers in animal science, common diseases and parasites, social and political issues related to the industry, and management practices for the care and maintenance of animals. Students will be expected to maintain SAE records and prepare yearly reports, and prepare related FFA career development events.

FOOD SCIENCE

Grades 10-12
2 semesters, 2 credits
A Core 40 directed elective
Pre: “C” in Fundamentals of Agricultural Science and Business or Instructor Approval

This yearlong course provides students with an overview of food. Introduction to principles of food processing, food chemistry, nutrition, food packaging, food commodities, food regulations, and careers in the food science industry help students understand the role that food science plays in securing a safe, nutritious abundant food supply. A project-based approach is utilized along with laboratory, team building, and problem solving activities. Students will be expected to maintain SAE records and prepare yearly reports, and prepare related FFA career development events.

LANDSCAPE MANAGEMENT

1 semester, 1 credit
Grades 10-12
A Core 40 directed elective
Pre: “C” in Fundamentals of Agricultural Science and Business or Instructor Approval

This semester course provides the student with an overview of career opportunities in landscape management. Students are introduced to the procedures used in the planning and design of a landscape using current technology practices, the principles and procedures involved with landscape construction, the determination of maintenance schedules, communications and management skills necessary in landscaping operations, and the care and use of equipment utilized by landscapers. Students will be expected to maintain SAE records and prepare yearly reports, and prepare related FFA career development events.

HORTICULTURAL SCIENCE

1 semester, 1 credit
Grades 10-12
A Core 40 directed elective
Pre: “C” in Fundamentals of Agricultural Science and Business or Instructor Approval

This semester course is designed to give students a background in the field of horticulture and career opportunities. It addresses the biology and technology involved in the production, process, and marketing of horticultural plants and products. Topics covered include: reproduction and propagation of plants, plant growth, growth media, floriculture, management practices for field and greenhouse production, marketing concepts, production of herbaceous, woody, and nursery stock, fruit, nut, and vegetable production, and pest management. Students will be expected to maintain SAE records, prepare yearly reports, and prepare related FFA career development events.

NATURAL RESOURCES MANAGEMENT

1 semester, 1 credit
Grades 10-12
Pre: “C” in Fundamentals of Agricultural Science and Business or Instructor Approval
A Core 40 directed elective

Natural resource management is a semester course focused on the importance and use of natural resources. Topics will include natural resources, the environment, agriculture impact, career opportunities and current events with a focus on local issues. Students will be expected to maintain SAE records, prepare yearly reports, and prepare related FFA career development events.

PLANT AND SOIL SCIENCE
2 semesters, 2 credits
Grades 10-12
Pre: “C” in Fundamentals of Agricultural Science and Business or Instructor Approval
A Core 40 directed elective

This yearlong course is based on agronomy, the study of soil and crops. Topics include soil formation, laboratory study of soil composition, evaluation, soil surveys, scientific evaluation of soil erosion, use of the Universal Soil Erosion Formula, land use for agriculture and urban development and career opportunities. Related topics will include soil samples, calculation of fertilizer applications rates and procedures, tillage and conservation, drainage, land measurement, and GPS/precision agriculture. Crop production topics may include crop and weed identification, plant development and soil interaction. Students will be expected to maintain SAE records, prepare yearly reports, and prepare related FFA career development events.